Bulletin of Institutie of Science & Technology

An Official Publication of Dean's Office, Institute of Science & Technology, Tribhuvan University, Vol VII, December 2025

विज्ञान तथा प्रविधि अध्ययन संस्थानको बुलेटिन २०२५

A Talk with Eminent Personality of Science & Technology

Prof. Suresh Raj Chalise


Ph.D. Orientation Program


T.U. Central Library


T.U. Central Library


Scientific Writing and Publications

Volume VII, 2025

Bulletin IoST

An annual Publication of IoST, TU

Publisher

Institute of Science & Technology

Tribhuvan University

Email: info@iost.tu.edu.np

Website: https://iost.tu.edu.np/

Print

TU Press, TU

Message from the Dean

It gives me immense pleasure to introduce Bulletin of the Institute of Science and Technology (IoST), Tribhuvan University, Volume-VII-2025. This volume of bulletin represents our goals and efforts, various activities conducted and news related to IoST and publications in national and international peer reviewed journals from various Central Departments and constituent colleges. I believe this document serves as an important record of academic, scientific, and institutional success at IoST, TU. IoST, TU remains forefront of Science and Technology education in Nepal. Today, IoST expands with 13 Central Departments, one School of Mathematical Sciences, 24 constituent campuses, and around 90 affiliated campuses running undergraduate, postgraduate, MPhil, and Ph. D. program.

The past year has been important for our institute in terms of research and innovation. Central Departments and some constituent colleges under IoST successfully implemented research projects supported by national and international funding agencies. IoST also revised the mini research grant guidelines and promoted mini-research grants for faculty members, and improved Journal of the Institute of Science and Technology (JIST) and departmental publications for timely dissemination of the research findings. More than 17 patent registration of faculty members of IoST, the growth of research collaboration through Memorandums of Understanding (MOU), increased number of publication and per year increase of SCImago indexed manuscripts and the implementation of scientific writing and capacity enhancement workshops to Ph.D. scholars proves our dedication to a strong research culture based on quality and ethics.

The establishment of the Ethical Review Committee at IoST, mandatory plagiarism checks, improvements to examination systems and timely publishing results of exams within 90 days of conduct and office automation represent our progress towards transparency and accountability. Last month, we had the privilege of meeting the esteemed former Dean Prof. Suresh Raj Chalise, one of the pioneer meteorologist, climate change expert, and researcher with long-standing contributions to climate science, environmental policy, & sustainable development in Nepal. A detailed interview with Prof. Chalise with his academic career, history and various issues related to IoST in his tenure and his suggestions, advice, vision and concept for the development of Nepal by using tools of Science and Technology is included in this bulletin.

As Dean of IoST, I take this opportunity to express my heartfelt gratitude to faculty members, researchers, students, parents, administrative staff, and other supportive hands and collaborators for their strong help and support to bring these successes at our institute. I would like to express my regards to prior academic leaders for their efforts and dedication for the improvement of this institute at this stage.

Looking ahead, IoST is committed to upgrading infrastructure, increasing digital learning, modifying curricula in response to global and market demands, and supporting high-impact research that tackles national and global issues. I am convinced that with shared dedication and vision, IoST will continue toflourish as a national center of excellence in Science and Technology.

Prof. Dr. Shankar Prasad Khanal

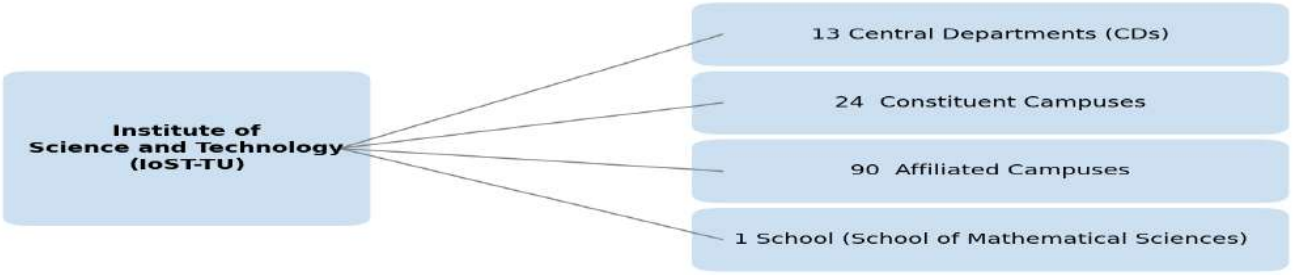
Dean, IoST

Contents

Overview of Annual Report- FY 2080/081 Institute of Science and Technology (IoST)

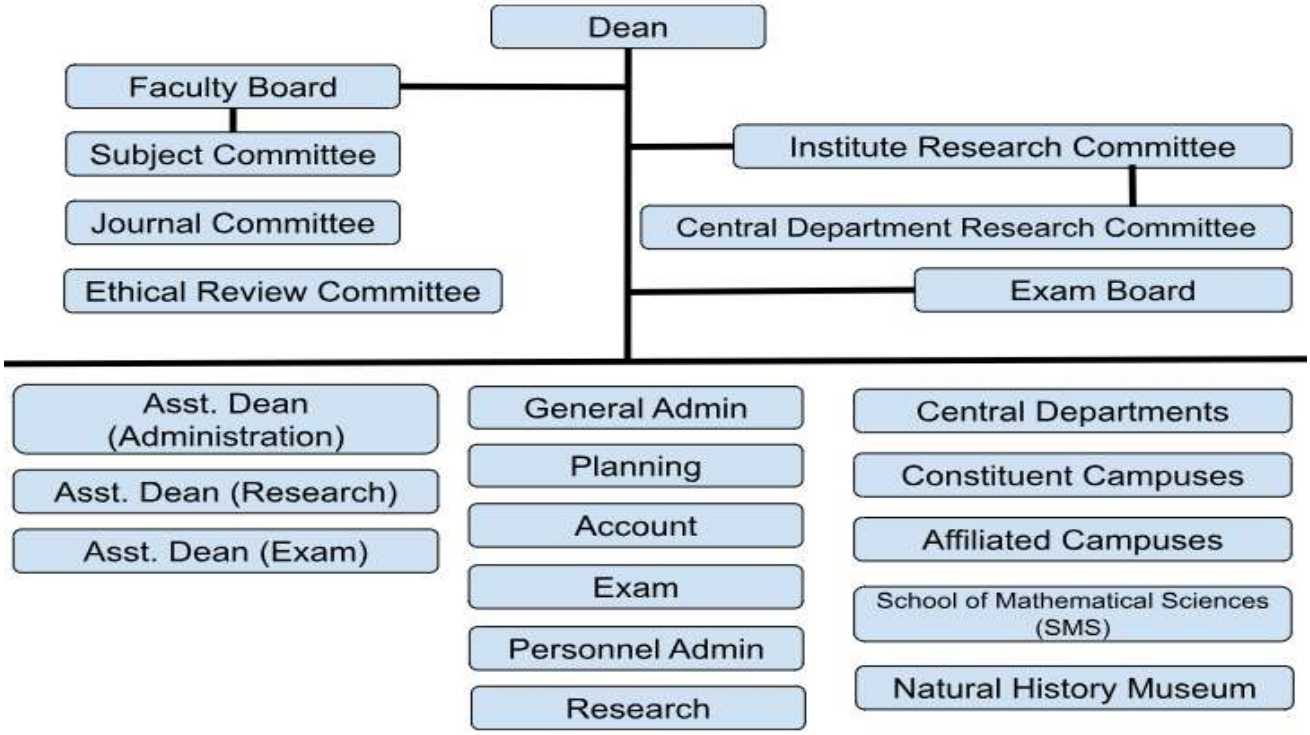
Prof. Dr. Shankar Khanal, Dean, IoST

The Institute of Science and Technology (IoST), Tribhuvan University, has a long and evolving history dating back to its inception in 1961. Initially established as the Faculty of Science, it underwent several transformations before acquiring its current form in 1989. Today, IoST is one of Nepal's premier institutions for science and technology education and research.



It comprises 13 Central Departments (12 in Kirtipur and 1 in Dharan), 1 School of Mathematical Sciences, 24 constituent campuses, and 90 affiliated campuses. These units operate under a unified vision aligned with "TU Vision 2030," striving to be a Centre of Excellence for science and technology education and innovation.

Organizational Structure of Institute of Science and Technology:



Academic Programs:

IoST offers a range of academic programs:

a. General B.Sc. (Annual System): Major in Botany, Chemistry, Environmental Science, Geology, Hydrology & Meteorology, Mathematics, Microbiology, Physics, Statistics, Zoology,
b. Bachelor level (Semester System): B.Sc. CSIT (Computer Science and Information Technology), BDS (Bachelor in Data Science), B.Tech. (Food Technology), BIT (Bachelor in Information Technology), B. Math Sc. (Bachelor in Mathematical Sciences), B.Sc. (Nutrition and Dietetics).
c. Masters in 19 Programs: M.Sc. Biodiversity and Environmental Management, M.Sc. Biotechnology, M.Sc. Botany, M.Sc. Chemistry, M.Sc. CSIT, MDS (Master in Data Science), M.Sc. Engineering Geology, M.Sc. Environmental Science, M.Sc. in Environmental Health in Disaster, M.Tech. (Food Technology), M.Sc. Geology, M.Sc. Hydrology & Meteorology, MIT (Master in information Technology), M.Sc. Mathematics, M.Sc. Microbiology, M.Sc. MMS (Mountain & Mountaineering Science) M.Sc. Physics, M.Sc. Statistics, M.Sc. Zoology,
d. MPhil in Mathematics
e. Ph.D. programs in 13 disciplines: Biotechnology, Botany, Chemistry, CSIT, Environmental Science, Food Technology, Geology, Hydrology & Meteorology, Mathematics, Microbiology, Physics, Statistics, Zoology.

New initiatives include:

a) Initiation: Bachelor's in Data Science (BDS) and B. Tech. (Food Technology) in semester system.
b) Proposed: B.Sc. Biotechnology in semester system and a Master course in cyber security

Program-wise student's information (Fiscal Year 2080/2081)

Program Level	Total Students	Male Students	Female Students	Remarks
B.Sc. (Annual)	17,406	8,304	9,102	Based on the yearly system
B.Sc. (Semester)	11,700	8,328	3,372	Includes CSIT, BIT, BDS, etc.
M.Sc.	2,186	1,332	854	
MPhil (Mathematics)	7	7	0	Currently in 2nd year
Ph.D. (Ongoing)	441	353	88	Across 13 subjects
Total	31,740	18,324	13,416	

Research and Innovations:

The Institute of Science and Technology (IoST) is actively engaged in national and international research collaborations, reflecting its strong commitment to research, innovation, and academic excellence. Key highlights include the successful implementation of 21 externally funded research projects supported by reputed organizations such as ICTP (Italy), IAEA, and UGC, along with 28 mini-research projects conducted during 2080 and 2081. IoST promotes scholarly dissemination through the biannual publication of the Journal of the Institute of Science and Technology (JIST) as well as several departmental journals. The institute has also demonstrated innovation capacity through the registration of 17 patents. In addition, continuous professional development is ensured through workshops and training programs, including six cohorts of Faculty Capacity Enhancement (FCE) and three recently conducted two-day scientific workshops, which have significantly strengthened faculty skills. Research and academic collaboration are further enhanced through 16 active Memoranda of Understanding (MoUs) with national and international institutions.

Human Resources:

The Institute of Science and Technology (IoST) has a total of 1,149 staff members. This includes 95 Professors, 245 Readers, and 782 Lecturers who are involved in teaching and research. In addition, there are 27 administrative staff members working in the Dean's Office to support academic and administrative activities.

Infrastructure and Facilities:

Operations are based in the old TU central office, with the examination section in Balkhu. Each central department and campus are equipped with laboratories and libraries. Additional resources include: TU central library with e-library, Webmail and website services, Office automation and e-attendance, iThenticate for plagiarism checking, Online entrance exam application system, LMS System lunched in the FCE Program and the DPR for a new IoST Dean's office building is in progress

Financial Status (FY 2080/081):

Budget Category	Amount (NPR)
Total Budget	78,681,382
Salary & Allowances	22,958,303
Research Activities	1,404,993
Training/Seminars	8,124,618
Examination & Other Expenses	46,193,468

Governance and Management:

Various committees (Research, Journal, Examination) met regularly to address academic and administrative matters. Key initiatives are Ph.D. semester system, Mandatory plagiarism checks from the undergraduate level, Feedback and grievance mechanisms and Governance adheres strictly to TU regulations with an emphasis on accountability.

Student Affairs and Support Services:

IoST provides: Scholarships (merit and need-based), Career counseling and placement, Research grants, Alumni engagement activities and Institutionalized student feedback systems
These services aim to bridge academia with industry and enhance the overall student experience.

Community Engagement and Extension Activities:

IoST departments and colleges run initiatives in health and education outreach, Environmental sustainability, Disaster preparedness, Mathematical literacy programs and Postdoctoral research opportunities have also been initiated.

Achievements and Recognition:

IoST has significantly elevated TU's standing through numerous Ph.D. graduates, High-quality research and citations and Innovation and active public engagement.

Future Plans and Recommendations:

Key priorities include: Constructing the IoST dean's office building, expanding LMS, regular curriculum review with industry input and Promoting high-impact faculty research. These plans aim to modernize infrastructure, digitalize education, and enhance academic quality.

IoST Activities

Ethical Review Committee (ERC) Under IoST

The Institute of Science and Technology (IoST), Tribhuvan University, is one of Nepal's largest scientific academic institutions, consisting 13 Central Departments, 24 constituent campuses, 90 affiliated campuses, and annually more than 60 Students were enrolled under PhD Program. Therefore, IoST required a formal mechanism to ensure that research is conducting at IoST adheres to ethical principles, protects participant rights, and aligns with national and international standards. Initially, with strong initiative of Central Department of Microbiology, Tribhuvan University, Institutional Research committee (IRC) was established at IoST Since September 2019.This IRC has been operating with the approval of NHRC since September 2019." The IRC's main office was at the Central Department of Microbiology (CDM), Kirtipur, as Member Secretary was Head of the Central Department of Microbiology and Chairperson was Assistant Dean (Academic) of IoST. After the Introduction of *Tribhuvan University Research Conduct Review Procedure, 2078 (First Amendment 2081)*, clearly mentioned that Every Dean office has its own ERC for maintaining ethical principles, protects participant rights, and aligns with national and international standards while conducting Research. Therefore, as per rules of *Tribhuvan University Research Conduct Review Procedure 2078 (First Amendment 2081),* following New Ethical Review Committee has been formed by Dean on Mangsir, 2081.

Ethical Review Committee (ERC) formulated at Mangsir, 2081.

Name	Position
Prof. Dr. Sangeeta Rajbhandari	Chairperson
Prof. Dr. Kumar Sapkota	Member
Prof. Dr. Srijan Lal Shrestha	Member
Dr. Megh Raj Banjara	Member
Mr. Bharat Raj Sharma	Member
Dr. Supriya Sharma	Member Secretary
Mr. Upendra Subedi	Official- Secretary

Standard Operating Procedures of ERC

Title: Formation, functions and duties of the ERC IoST

Version No.: 1.1, Date: March 17, 2025

1.1 Dean of Institute of Science and Technology, Tribhuvan University will appoint the members and chairman of the ERC and the member secretary of ERC.

1.2 The members will have received training in ethics and the ethical review process and served in an ERC as a member for four years.

1.3 While making the appointment, at least 33% to 50% of the members of the existing ERC will be retained in order to ensure continuity of experience.

1.4 The Chairman and members of the ERC will be professor or associate professor or lecturer

with more than 10 years of service at Tribhuvan University. They must hold a PhD degree and working experience as principal or co-investigator in the research projects. The members of the ERC will also have at least two publication of articles in Scimago SJR journals.

1.5 The ERC reviews research proposals according to the National Ethical Guidelines for Health Research in Nepal and ERB of Tribhuvan University with a view to approve, amend or reject the proposal. The ERC reviews and approves PhD, Master and Bachelor level students' proposals, mini-research proposals funded by IoST, and funded research projects of faculties, staffs and students of IoST with funds upto Nepalese Rupees fifty lakhs.

1.6 The ERC supervises or monitors the implementation of research projects approved by ERC.

1.7 The ERC conducts training programmes for members and reviewers of ERC on the ethical review process.

1.8 The ERC resolves ethical issues arising out of reviewing, approving, supervising and disseminating the research findings.

1.9 Member accepting to serve in the ERC will have to sign a confidentiality agreement regarding meeting deliberations, applications, information on research participants and related matters.

1.10 All administrative staff working for ERC will also have to sign a confidentiality agreement regarding meeting deliberations, applications information on research participants and related matters.

1.11 The office of the ERC will be in the premises of office of Institute of Science and Technology, Tribhuvan University. Dean of the IoST manages physical and financial requirements of the ERC.

1.12 ERC of IoST will have its own phone, fax, photocopy cupboard and administrative staff.

1.13 If any member of the ERC is absent in the three consecutive meetings with prior notice, the member will be automatically ebidicted.

Title: Application submission to ERC
Version No.: 2.1, Date: March 17, 2025

a.1 The Principal Investigator (PI) and/or the one responsible for the research involving human participants will submit the research proposal for review.

a.2 Application should be addressing to the Member Secretary of ERC.

a.3 Application should be submitted in the format provided by ERC, IoST.

a.4 All Applications should be submitted in English.

a.5 Application should include one hard copy and an electronic copy of the proposal.

a.6 Only those applications fulfilling the requirements will be accepted for review. Deficits in the application shall be informed to the applicants within two weeks of submission. Incomplete applications will have to be resubmitted.

a.7 A receipt of the accepted application will be provided to the researcher.

a.8 Application Fee: Applications should be submitted along with processing fee as per IoST rule/ decision made by the Dean's Office Institute of Science and Technology.

a.9 Additional documents or changes: ERC can request the applicant for supplementary documents/ or changes to the proposal during the review which will be communicated to the applicant and the application will be considered in the subsequent meeting after those changes are made by the researcher.

a.10 Amendments: If any amendments are made in the proposal already submitted and approved, the researcher must submit in writing the changes made with reasoning. The proposal will be reviewed again in the ERC, taking the amendments into consideration during the re-approval process.

a.11 Informed consent: Application should include the Informed Consent Form as a separate copy which is to be used while undertaking the research. In addition, this should include a translation copy, in a Nepali language.

a.12 The application form should be submitted with the signature and date of submission using the ERC of IOST format.

a.13 Application must include the most current version of the curriculum vitae of the Principal Investigator and co-investigators with special mention of academic qualification and research experiences

a.14 Application must include the protocol of the proposed research project in the provided format together with the supporting documents. (A copy of research tools, questionnaires etc)

a.15 A copy of informed consent form should be included in the application. This should include a detail description of the process of giving the information to the research participant and its content, process of obtaining the consent, the person responsible for obtaining the informed consent and documentation of the signature of the researcher/research participant and /witness if applicable.

a.16 Any compensation to be given to the research participant should be clearly mentioned. (e.g. any transportation costs, food, free health care or insurance coverage etc that is to be borne by the researcher)

a.17 A signed statement by the researcher stating that he or she will abide by the ethical principles of research.

a.18 A declaration of the conflict of interest, should be mentioned in the application.

Meeting of the ERC

Version No.: 3.1, Date: March 17, 2025

1.1 Member Secretary of the ERC will prepare the agenda for the meeting in consultation with the Chairman of the ERC. The Member Secretary will also keep minutes of the meeting and notify decisions to the researcher. The Member Secretary will be assisted in his or her tasks by an administrative secretary.

1.2 ERC will prepare a regular annual report which will be published after its approval by ERB of Tribhuvan University.

1.3 At least 50% members must be present to compose a quorum. Presence of members of only one gender will not constitute a quorum.

1.4 At least one-member present should have expertise in areas other than the subject under discussion. Preferably a member from outside of the science background must be present.

1.5 In the absence of the chairperson of ERC, the senior member of the ERC will chair the meeting.

1.6 The meeting of ERC will be planned in accordance with the workloads and number of proposals received for review. Normally, ERC will meet once in two months.

1.7 ERC members will be informed about the meeting at least 72 hours prior to the scheduled date.

1.8 If felt necessary by the ERC, the applicant researcher or sponsor of the research can be invited to present the proposal or elaborate on specific issues of the proposal. Similarly, if necessary, experts can also be invited to the meeting for expert opinion about the research.

1.9 Minutes will be kept of all decisions and procedures of the meeting.

1.10 All the members and invitees present in the meeting should sign the minutes to indicate their presence.

Title: Ethical review process
Version No.: 4.1, Date: March 17, 2025

1.1 Once the application is submitted and screened for completeness of documents, technical review of the proposal is done by the internal reviewers for the scientific and technical contents. The application received after internal review is then subjected for review by the external reviewers.

1.2 Those applications which qualify are then submitted to the Member-Secretary of the ERC and then discussed in ERC meeting for ethical review.

Title: Decision making
Version No.: 5.1, Date: March 17, 2025

1.1 The ERC will make the decision only if the meeting has met required quorum.

1.2 Normally the decision will be taken by consensus, (if consensus is not possible then a vote will be taken).

1.3 The ERC member should withdraw from the decision process when conflict of interest arises; the member should declare the conflict of interest.

1.4 The ERC may approve the proposal conditionally with specific suggestions to the researcher.

1.5 The negative decision on a proposal should be supported by clearly stated reasons.

Title: Communication of decision
Version No.: 6.1, Date: March 17, 2025

1.1 The clear identification of the protocol of the proposed Research or amendment, date and version number (if applicable) on which the decision is based;

1.2 The names and (where possible) specific identification numbers (version numbers/dates) of the documents reviewed, including the potential research participant information sheet/material and informed consent form;

1.3 The name and title of the applicant;

1.4 The name of the research site(s)

1.5 The date and place of the decision

1.6 A clear statement of the decision reached

1.7 Any advice by the ERC

1.8 In the case of a conditional decision, any requirements by the ERC, including suggestions for revision and the procedure for having the application re-reviewed

1.9 In the case of a positive decision the following is required:

1.9.1 A statement of the responsibilities of the applicant. Confirmation of the acceptance of any requirements imposed by the ERC

1.9.2 Deadlines for the submission of progress report(s)

1.9.3 The need to notify the ERC in cases of protocol amendments (other than amendments involving only logistical or administrative aspects of the study)

1.9.4 The need to notify the ERC in the case of amendments to the recruitment material, the potential research participant information, or the informed consent form

1.9.5 The need to report serious and unexpected adverse events related to the conduct of the study.

1.9.6 The need to report unforeseen circumstances, the termination of the study, or significant decisions by other Ethical Committees

1.9.7 The information the ERC expects to receive in order to perform ongoing review and deadlines for the submission of final report

1.10 The schedule/plan of ongoing monitoring by the ERC
1.11 In the case of a negative decision, clearly stated reason(s) for the negative decision
1.12 Signature (dated) of the Member Secretary (or other Authorized person) of the ERC

Title: Post approval process
Version No.: 7, Date: March 17, 2025

The proposal after approval will undergo follow-up review depending on the nature and the events of the study.

1.1 Any protocol amendment
1.2 If there are serious consequences or unexpected adverse events related to the conduct of the study, the response taken by investigators will be followed up.
1.3 A decision of a follow-up review will be issued and communicated to the applicant, indicating a modification, suspension, or termination of the ERB"s original decision or confirmation that the decision is still valid.
1.4 In the case of the premature suspension/termination of a study, the applicant should notify the ERC of the reasons for suspension/termination; a summary of results obtained in a study prematurely suspended/terminated should be submitted to the ERC.
1.5 The applicant will inform the ERC at the time of the completion of a study.
1.6 The applicant will submit to the ERC a copy of the final summary or final report of a study

Title: Documentation and archiving
Version No.: 8.1, Date: March 17, 2025

1.1 All documentation and communication of ERC will be dated, filed, and archived according to written procedures. The documents will be archived for a minimum period of 5 years following the completion of a study.
1.2 The written standard operating procedures of the ERC, guidelines of ERB will be kept in ERC office.
1.3 The curriculum vitae of all ERC members, signed confidentiality agreement and published articles will be placed in individual file and kept in the office cabinet.
1.4 The agenda of the ERC meetings, the minutes of the ERC meetings will be documented.
1.5 The proposal and all related materials of the application of the proposal submitted by an applicant will be archived.
1.6 The correspondence by ERC with applicants or concerned department or institutions regarding application, decision, and follow-up, if needed will also be documented and archived.
1.7 A copy of the decision and any advice or requirements sent to an applicant as well as copy of ethical approval letter will be documented.
1.8 All written documentation received during the follow-up such as amendment of the proposal, the notification of the completion, premature suspension, or premature termination of a study will be archived.
1.9 The final summary or final report or thesis of the student conducted after receiving ethical approval from ERC will be archived.

IoST Activities

Workshop on Exam Question Preparation and Answer Book Evaluation.

The Institute of Science and Technology (IoST), Tribhuvan University organized Workshop on Exam Question Preparation and Answer Book Evaluation, which was conducted in three phases with collaboration of KCRE-TU, CAS. The first two phases were held at KCRE from 14th to 19th Chaitra. The first phase was focused on enhancing the teaching and assessment skills of faculty members from Central Departments, Head and faculties and examination board members of IoST and Second Phase was targeted for faculties of constituent's colleges from KTM valley. The final phase, conducted from 21st to 22nd of Chaitra, 2081, was specifically organized for teachers working at campuses outside the Kathmandu Valley. The main objective of this workshop was to strengthen faculty capacity in preparing high-quality examination questions, and making uniformity in copy checking and overall improve education system, and promote effective and fair examination practices at IoST, TU.

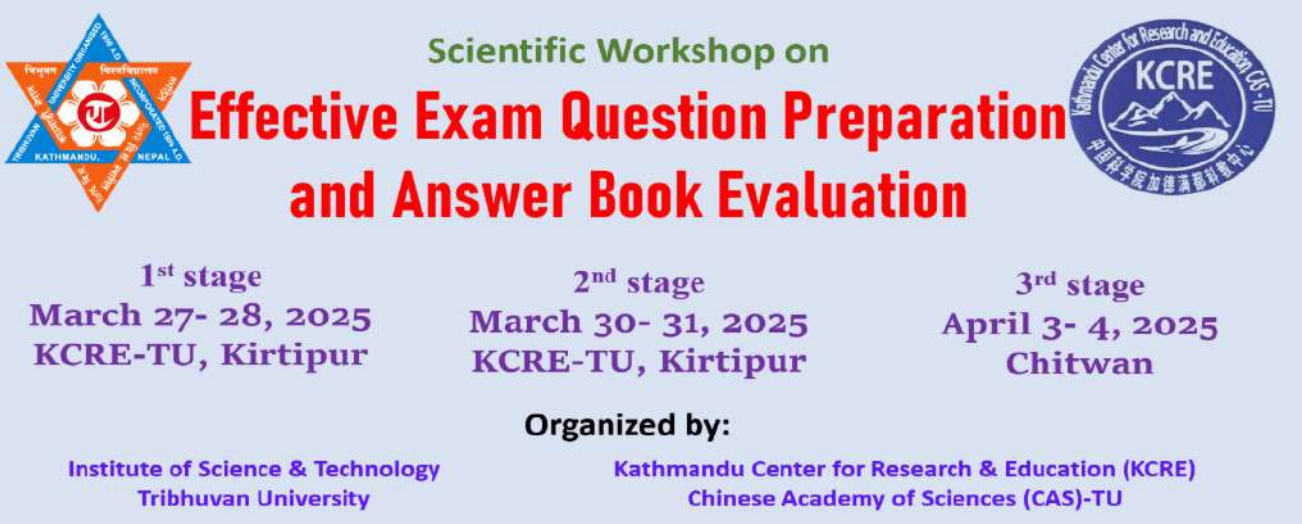


Figure:1 Flyer of Workshop for effective Exam Question Preparation and Answer Book Evaluation.

Photograph 1: First Phase of Workshop at KCRE

Photograph 2: First Phase of Workshop at KCRE

Photograph 3: 2nd Phase of Workshop at KCRE

Photograph 4: Workshop at Hotel Crown, Sauraha

The resource persons for all three phases of workshop are Dr. Shree Ram Khadka, Dr. Sunil Pokhrel, and Dr. Ramesh Prasad Sapkota and former dean Prof. Dr. Ram Prasad Khatiwada.

Tribhuvan University, Institute of Science and Technology (IoST), and the Kathmandu Center for Research and Education (KCRE–TU, CAS) collaborated to successfully host all the three phase (two in KCRE) and the third phase of workshop on "Effective Exam Question Preparation and Answer Book Evaluation" at Hotel Crown in Sauraha, Chitwan. The first two phases of the program were conducted at KCRE. In the inaguaration program at KCRE-TU, former dean of IoST, Prof. Dr. Bisal Nath Uprety, Prof. Dr. Chirika Shova Tamrakar and Prof. Dr. Ram Prasad Khatiwada were also delivered their views. Asst. Dean Dr. Surendra Gautam is the master of ceremony of the Program and Asst. Dean Prof. Dr. Mahendra Maharjan and Asst. Dean Khageshwor Mandal also delivered their views. In this third session of the workshop, 30 faculty members teaching science subjects at constituent campuses outside the Kathmandu Valley were participated. Adressing the Program Registrar Prof. Dr. Kedar Prasad Rijal, Tribhuvan University emphasized that unfair answer book evaluation and negligent question paper setting must stop. He underlined that test questions had to be straightforward and enable students to articulate their knowledge and abilities in an understandable manner. He also emphasized the necessity of evaluating answer books in a methodical, realistic, and scientific manner. Prof. Dr. Shankar Prasad Khanal, dean of IoST, said curricula need to be updated and the test system needs to be modernized to an international level in order to satisfy international standards. Dean Dr. Khanal further emphasized the significance of the workshop and university instructors need to be heavily involved in upholding the quality of answer book evaluation and putting marking and grading standards into practice. He added that this workshop was arranged with KCRE's cooperation since it is the obligation of professors to modernize and make the examination system scientific by seriously addressing issues connected to university exams and question papers. Asst. Dean Prof. Dr. Mahendra Maharjan was aslo addressed the program.

During the workshop, Associate Professor Dr. Binod Dawadi, Deputy Director of KCRE mentioned that the Chinese Academy of Sciences, through KCRE, has been making significant contributions to enhancing Tribhuvan University's academic and scientific capacity. He said that the workshop was organized to help prevent and reduce errors in question paper design and answer copy evaluation in line with needs and expectations of University. Dr. Tianli Xu, Deputy Director of KCRE, expressed his commitment that KCRE, through the Chinese Academy of Sciences, will continue supporting various capacity enhancement programs and scientific collaborations with IoST in the future.

IoST Activities
Mini Research Grant 2025

The goal of the mini-research project is for faculties to invest in researching a new topic, and then share the outcomes they found. It can be a foundation work for his/her Ph.D. Dean Office, Institute of Science & Technology, Tribhuvan University announced proposal for mini-research grant to Science and Technology faculties. Proposals are evaluated by the subject experts and short-listed according as the score given. Finally, shortlisted candidates are invited for the proposal presentation. In 2025, Dean office has awarded 16 faculties for the for the mini research grant. The name, affiliation and the title of the accepted project work are given in the table below:

S.N	Name	Campus	Title
1	Meera Prajapati	Khwopa College	Phytoremediation Potential of Native Floating Wetlands for Nutrient and Heavy Metal Removal in Kamal Pokhari, Bhaktapur.
2	Prabha Paudel	Butwal Multiple Campus	Assessing Autism Risk: A Case- Control Study of Prenatal and Perinatal Factor
3	Jasana Maharjan	Padma Kanya Multiple Campus	Investigation of saponin – CPC interactions in mixed solvent media by conductivity method
4	Pramod Sen Oli	Trichandra Multiple Campus	Status, distribution and impact of invasive alien plant species on forests of Madane Protected Forest, Gulmi district, Central Nepal
5	Anjana Kharbuja	Bhaktapur multiple campus	"Ethno veterinary Knowledge and Practices Among Livestock Farmers in Changunarayan Municipality, Bhaktapur"Dr. Narayan Prasad Ghimire
6	Anjal Mahat	Patan Multiple Campus	Physicochemical and Micobial Assessment of water Quality for Drinking and Irrigation: A case study of the Tinau River Basin, Lumbini Province, Nepal."
7	Tila Ram Gurung	Birendra Multiple Campus	Exploration of Non-Timber Tree Species in Nawa Jagriti Community Forest, Chitwan, Nepal
8	Navin Gautam	Central Campus of Technology	Deodorize Curcumin Extraction Techniques and Their Application in Stick Noodles for Color Improvement, Antioxidant and Anti-bacterial Property

9	Pradeep Kumar Pandey	Bhairahawa multiple campus	Corrosion Inhibition Performance of Separated Compounds from Litchi chinensis onto Copper
10	Saruna Shrestha Amatya	Tri-chandra Multiple Campus	Green Synthesis and Characterization of Anti-microbial Chitosan/ZnO Nanocomposite using Leaf Extracts of Cinnamomum Tamala for Water Purification
11	Kedar Nath Chhatkuli	Amrit Campus	Two-layered Blood Flow Model in Artery with Bell-Shaped Stenosis
12	Sushant Paudel	Bhaktapur Multiple Campus	Low-Resource NLP Model Optimization: Enhancing Transformer Performance for the Nepali Language
13	Nar Bahadur Thami	Trichandra Multiple Campus	Exploring Physical Behaviors Of Double Perovskites Lu2bb'o6 (B And B' =3d Transition Elements: An Ab Initio Study) For Sustainable Energy Applications.
14	Raghu Nath Chaudhary	Mahendra Multiple Campus, Nepalgunj	Status and impacts of invasive alien plant species in Nepalgunj Sub-Metropolitan City, Banke, Nepal
15	Khadka Bahadur Pal	Tri-Chandra Multiple Campus	Chemical And Microbial Characterization Of Water Quality In Balaju Pokhari And Gahana Pokhari, Kathmandu, Nepal
16	Iswar Prasad Koirala	Tri-Chandra Multiple Campus	Long Range Surface Plasmon Resonance Sensor for the formaline Detection:A numerical approach

Last year, in 2024, 12 faculties were granted. Mid-term evaluation of the progress of the project work were discussed through online. All the faculties submitted his/her report of the poject work in the given period. The plagiarism level was checked and finally invited participants for the oral presentation. Following faculties defended their project outcome at the Dean Office in the presence of experts.

1	Sabina Shrestha	Chemistry	Tri-Chandra Multiple Campus, Kathmandu,	Green Synthesis Of Zno Nanoparticles Using Aloe Vera Leaf Extract And Evaluation Of Their Antimicrobial And Photocatalytic Activities
2	Ratna Bahadur Thapa	Chemistry	Damak Multiple Campus, Damak	Green Synthesis, Characterization, And Evaluation Of Antimicrobial Activities Of Silver Nanoparticles From The Roots Of Aswagandha.

3	Nilam Kharel	Mathematics	Mechi Multiple Campus, Bhadrapur	Modeling the Impacts of Climate Change on Dengue Transmission in the Koshi Province of Nepal
4	Kunjal Shrestha	Food Technology	Central Campus of Technology, Dharan	OPTIMIZATION OF PLUM AND GRAPE JUICE TO PREPARE WINE
5	Anjana Kharbuja	Botany	Bhaktapur Multiple Campus, Bhaktapur	Exploring the Lichen Flora Diversity: A Preliminary Study in Suryabinayak Forest, Bhaktapur
6	Subash Nyaupane	Botany	Amrit Campus	Taxonomic Inventory And Comprehensive Documentation Of Orchid Diversity In The Jukethali Community Forest, Lalitpur District, Central Nepal
7	Navin Gautam	Food Technology	Central Campus of Technology, Dharan	Impact Of Cooking Techniques And Refrigeration Storage On Glycemic Index And Resistant Starch Of Cooked Rice
8	Umesh Kumar Yadav	Statistics	Mahendra Bindeshwori Multiple Campus, Rajbiraj	Analysis of air quality dataset of Kathmandu using probability distribution.
9	Shashi Bhushan Chaturwedi	Microbiology	Tri-Chandra Multiple Campus, Kathmandu,	Evaluation of Yarsagumba (Ophiocordyceps sinensis) for Antimicrobial Activities
10	Surya Dev Prasad Yadav	Chemistry	Dhankuta Multiple Campus, Dhankuta	Study Of Anti-Corrosion Properties Of Biosurfectant On Steel Surface
11	Ajay Neupane	Botany	Mechi Multiple Campus, Bhadrapur	Ecological and Socio-economic Impacts of Mimosa diplotricha in Eastern Tarai
12	Kamal Prasad Kapri	Chemistry	Amrit Campus, Kathmandu	Phytochemical Screening And Antimicrobial Studies Of *Aloe Vera* Leaf Extracts With Anthraquinone Detection

From this year, Dean Office provided a certificate to them. Awardee will receive NRs. 75,000/- in three installments. Awardee need to submit report of his/her mini-research within 9 months from the period of grants received. These reports will be evaluated by the experts followed by oral presentations. IoST encourages awardee to publish his/her research in the peer review Journals.

IoST Activities
Ph.D. Program: Award & Enrolment

In the last year (October 2024 to December, 2025), IoST awarded 53 Ph.D. degree in various 10 subjects. The name of the candidates, subject, and supervisor's name are given in the table.

S. N	Name of the Student	Subject	Name of Supervisior	Award Date
1	Bijaya Bahadur Thapa	Chemistry	Prof. Dr. Nirajan Parajuli	2081.06.09
2	Roshan Chalise	Physics	Prof. Dr. Raju Khanal	2081.07.12
3	Pramila Kumari Gachhadar	Botany	Dr. Chitra Bahadur Baniya	2081.07.13
4	Chandra Bahadur Thapa	Botany	Prof. Dr. Bijaya Pant	2081.08.4
5	Yuv Raj Sahu	Chemistry	Prof. Dr. Ajaya Bhattarai	2081.08.26
6	Binita Maharjan	Chemistry	Dr. Ramlal Shrestha	2081.09.16
7	Bunty Maskey	Food Tech.	Prof. Dr. Dhan Bdr Karki	2081.09.25
8	Ramina Maharjan Shrestha	Chemistry	Prof. Dr. Paras Nath Yadav	2081.09.29
9	Jagat Krishna Pokharel	Mathematics	Prof. Dr. Narayan Pahari	2081.10.6
10	Pushpa Man Shrestha	Microbiology	Dr. Komal Raj Rijal	2081.10.11
11	Dinesh Raj Sharma	Geology	Dr. Naresh Kaji Tamrakar	2081.10.23
12	Bidhya Thapa	Physics	Prof. Dr. Narayan Pd Adhikari	2081.10.28
13	Ram Sharan Dani	Botany	Dr. Chitra Bahadur Baniya	2081.10.30
14	Arun Kumar Shrestha	Physics	Prof. Dr. Ram Prasad Koirala	2081.11.02
15	Champak Babu Silwal	Geology	Prof. Dr. Dinesh Pathak	2081.11.05
16	Ganesh Tamang	Zoology	Prof. Dr. Nanda Bdr Singh	2081.11.21
17	Pramod Kumar Mehta	Zoology	Prof. Dr. Mahendra Maharjan	2081.11.26
18	Kanchan Chaulagai	Geology	Dr. Ranjan Kumar Dahal	2081.12.01
19	Dibya Raj Dahal	Zoology	Prof. Dr. Nanda Bdr Singh	2081.12.03
20	Arjun Singh Saud	CSIT	Prof. Dr. Swarna Shakya	2081.12.25
21	Sanjay Kumar Sah	Physics	Prof. Dr. Ishwor Koirala	2082.01.05
22	Chudamani Pokharel	Mathematics	Prof. Dr. Chet Raj Bhatta	2082.01.08
23	Devi Prasad Bhandari	Chemistry	Prof. Dr. Nirajan Parajuli	2081.01.12
24	Chandradip Kumar Yadav	Chemistry	Prof. Dr. Ajaya Bhattarai	2082.01.19
25	Nepal Rama Devi	Physics	Prof. Dr. Bhawanidatta Joshi	2082.01.22
26	Ram Prabodh Yadav	Chemistry	Prof. Dr. Nirajan Parajuli	2082.01.26
27	Ram Babu Ray	Physics	Dr. Gopi Chandra Kafle	2082.02.02
28	Tilmaya Dhakal (Kharel)	Botany	Dr. Chandra Pd. Pokharel	2082.02.07
29	Sabitri Shrestha	Botany	Prof. Dr. Tilak Prasad Gautam	2082.02.13

30	Hari Prasad Kattel	Microbiology	Dr. Megha Raj Banjara	2082.02.16
31	Prakash Man Shrestha	Physics	Prof. Dr. Khem Narayan Paudel	2082.02.19
32	Bikash Phuyal	Geology	Dr. Prem Bdr Thapa	2081.02.21
33	Madhab Gautam	Chemistry	Prof. Dr. Jagadeesh Bhattarai	2082.02.22
34	Sajan Shrestha	Physics	Prof. Dr. Ram Prasad Regmi	2082.02.25
35	Shiva Pandeya	Chemistry	Dr. Mahesh Kumar Joshi	2082.02.30
36	Pawan Kumar Mishra	Chemistry	Dr. Debal Prasad Bhattarai	2082.03.06
37	Ratna Silwal Gautam	Botany	Prof. Dr. Ila Shrestha	2082.03.12
38	Prakash Gautam	Chemistry	Prof. Dr. Rameshwor Adhikari	2082.03.13
39	Sagar Aryal	Microbiology	Dr. Dev Raj Joshi	2082.04.09
40	Anju Kumari Das	Chemistry	Prof. Dr. Amar Pd. Yadav	2082.04.29
41	Punya Ram Sukupayo	Zoology	Dr. Tirtha Raj Ghimire	2082.05.06
42	Santoshi Shrestha	Zoology	Prof. Dr. Kumar Sapkota	2082.05.13
43	Prakash Khatri	Physics	Prof. Dr. Narayan Pd Adhikari	2082.05.16
44	Bekha Ratna Dangol	Mathematics	Dr. Jeevan Kafle	2082.05.17
45	Ishwari Prasad Banjade	Stastistic	Prof. Dr. Srijan Lal Shrestha	2082.05.18
46	Puroshottam Adhikari	Geology	Prof. Dr. Khum Narayan Paudel	2082.05.31
47	Dikpal Kumar Shahi	Chemistry	Dr. Mahesh Kumar Joshi	2082.06.02
48	Badri Prasad Pangeni	Mathematics	Prof.Dr. Tanka Nath Dhamala	2082.06.26
49	Anand Kumar Yadav	Chemistry	Prof. Dr. Paras Nath Yadav	2082.06.27
50.	Jyoti Acharya	Microbiology	Prof. Dr. Prakash Ghimire	2082.07.17
51.	Bal Bahadur Tamang	Mathematics	Prof. Dr. Ajaya Singh	2082.07.19
52.	Tirtha Raj Paneru	Physics	Prof. Dr. Bhawani Datta Joshi	2082.08.11
53.	Puja Jaishwal	Zoology	Prof. Dr. Arvinda Keshari	2082.09.04

The maximum number of Ph.D. degree is awarded in Chemistry i.e., 14 and followed by subject Physics, i.e., 10. The disciplinary distribution is shown in the bar diagram below:

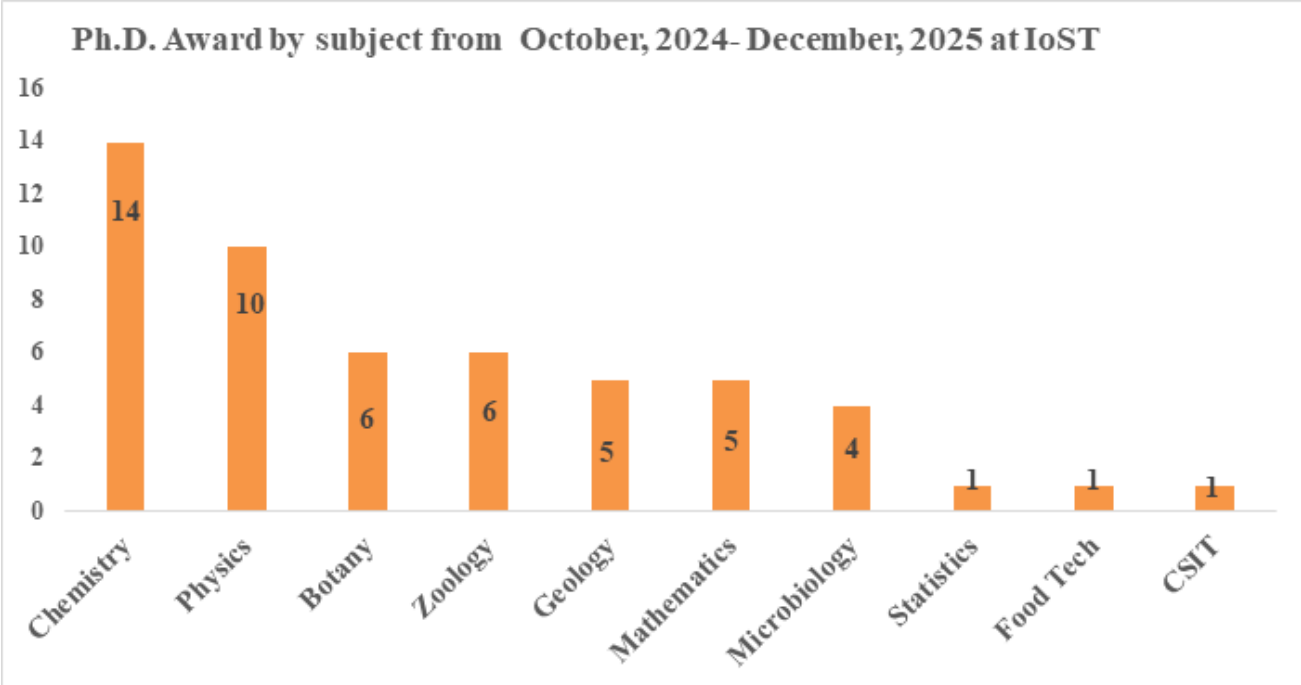


Figure 1: Distribution of Ph.D. award in various subjects of S&T in the year 2024-2025.

Ph. D. Enrollment-2024

In the year 2024, 79 Ph.D. candidates were enrolled. The orientation program was held in the Seminar Hall of Central Department of Physics on 14th Mangsir 2081. In the program, Prof. Binil Aryal, Dean, Dr. Surendra K. Gautam, Assistant Dean, Prof. Narayan Pd. Adhikari, Dr. Chitra Baniya delivered talk to the Ph.D. candidates. A list of newly enrolled Ph.D. candidates is given in the table below:

S.N	Name of the Student	Subject	Supervisor name
1	Alina Shri Sapkota	Biotechnology	Prof. Dr. Krishna Das Manandhar
2	Amit Kumar Sah	Biotechnology	Dr. Smita Shrestha
3	Mitesh Shrestha	Biotechnology	Dr. Pramod Poudel
4	Ravindra Kumar Karn	Biotechnology	Dr. Pramod Poudel
5	Ajay Neupane	Botany	Dr. Yadav Uprety
6	Ashish Dhami	Botany	Prof. Dr. Suresh Kumar Ghimire
7	Bina Wagle	Botany	Dr. Deepak Raj Panta
8	Indira Pokharel	Botany	Prof. Dr. Tilak Prasad Gautam
9	Jyoti K.c.	Botany	Prof. Dr. Bharat Babu Shrestha
10	Kamal Ghimire	Botany	Dr. Yadav Uprety
11	Krishna Prasad Sharma	Botany	Prof. Dr. Suresh Kumar Ghimire
12	Mukti Ram Aryal	Botany	Prof. Dr. Hari Datta Bhattarai
13	Nishanta Shrestha	Botany	Prof. Dr. Sangeeta Rajbhandary
14	Pratiksha Shrestha	Botany	Prof. Dr. Sangeeta Rajbhandary
15	Priti Dhakal	Botany	Dr. Chitra Bahadur Baniya
16	Sanju Parajuli	Botany	Dr. Giri Prasad Joshi
17	Shiva Pokhrel	Botany	Prof. Dr. Suresh Kumar Ghimire
18	Swasti Sharma	Botany	Dr. Lal Bahadur Thapa
19	Arun Acharya	Chemistry	Dr. Sabita Shrestha
20	Bhabani Prasad Adhikari	Chemistry	Dr. Bhanu Bhakta Neupane
21	Bhesh Raj Bhattarai	Chemistry	Dr. Sabita Shrestha
22	Bhola Nath Luitel	Chemistry	Dr. Narendra Kumar Chaudhary
23	Bipin Kumar Karn	Chemistry	Prof. Dr. Deba Bahadur Khadka
24	Dipesh Timilsina	Chemistry	Prof. Dr. Deba Bahadur Khadka
25	Gunakhar Ghimire	Chemistry	Dr. Bipeen Dahal
26	Kanhaiya Lal Gupta	Chemistry	Prof. Dr. Khaga Raj Sharma
27	Khem Raj Bhatta	Chemistry	Dr.Bhanu Bhakta Neupane
28	Manjul Kumar Karn	Chemistry	Dr. Ram Lal (Swagat) Shrestha
29	Sabita Gautam	Chemistry	Dr. Bhushan Shakya
30	Shiva Prasad Bhattarai	Chemistry	Dr. Rajesh Pandit
31	Shree Krishna Dangol	Chemistry	Dr. Rajesh Pandit

32	Sujan Poudel	Chemistry	Dr. Kamal Prasad Sapkota
33	Sunil Chaudhary	Chemistry	Prof. Dr.Ajaya Bhattarai
34	Manoj Bista	Chemistry	Bipeen Dahal, Ph.D.
35	Kumari Shipra Parmar	Chemistry	Dr. Rameshwar Adhikari
36	Nigam Singh Silwal	Environmental Science	Dr. Kumar Khatri
37	Pramila Prasai	Environmental Science	Prof. Dr. Chhatra mani Sharma
38	Arijit Choudhury	Environmental Science	Dr.Ramesh Prasad Sapkota
39	Sudip Paudel	Environmental Science	Chhatra Mani Sharma
40	Sachina Neupane	Geology	Dr. Moti Lal Rijal
41	Binod Parajuli	Hydro & Meteorology	Dr. Dhiraj Pradhananga
42	Dinkar Kayastha	Hydro & Meteorology	Dr. Dhiraj Pradhananga
43	Gopi Adhikari	Hydro & Meteorology	Dr. Binod Dawadi
44	Shiv Kumar Mahto	Hydro &Meteorology	Dr.Damoder Bagale
45	Arun Kumar Bhandari	Mathematics	Dr. Ramesh Chandra Timsina
46	Baldev Adhikari	Mathematics	Dr. Ramesh Chandra Timsina
47	Dhirendra Kumar Yadav	Mathematics	Dr. Sushil Chandra Karna
48	Jay Narayan Jha	Mathematics	Dr. Puskar Raj Pokhrel
49	Nar Bahadur Chand	Mathematics	Dr. Jhabi Lal Ghimire.
50	Nilam Kharel	Mathematics	Dr. Khagendra Adhikari
51	Raman Kumar Karn	Mathematics	Dr. Sushil Chandra Karna
52	Yagya Raj Pant	Mathematics	Dr. Khagendra Adhikari
53	Rajendra Paudyal	Mathematics	Dr. Shree Ram Khadka
54	Narayan Prasad Adhikari	Mathematics	Shreeram Khadka , PhD
55	Purushottam Parajuli	Mathematics	Prof. Dr. Narayan Prasad Pahari
56	Molhu Prasad Jaiswal	Mathematics	Prof. Dr. Narayan Prasad Pahari
57	Amrit Acharya	Microbiology	Prof. Dr. Binod Lekhak
58	Krishna Prasad Pant	Microbiology	Prof. Dr. Binod Lekhak
59	Kusum Shrestha	Microbiology	Dr. Supriya Sharma
60	Prasil Pradhan	Microbiology	Dr. Supriya Sharma
61	Rabin Paudyal	Microbiology	Dr. Shyam Prakash Dumre
62	Roshani Maharjan	Microbiology	Dr. Komal Raj Rijal
63	Rupa Pandey	Microbiology	Dr. Supriya Sharma
64	Sandesh Ghimire	Microbiology	Dr. Komal Raj Rijal
65	Sanjib Adhikari	Microbiology	Prof. Dr. Prakash Ghimire
66	Aakash Pokheral	Physics	Prof. Dr. Narayan Prasad Chapagain
67	Bikal Khanal	Physics	Dr. Madhav Prasad Ghimire
68	Chhandak Maharjan	Physics	Prof. Dr. Narayan Prasad Chapagain
69	Dhruba Poudel	Physics	Dr. Pitri Bhakta Adhikari
70	Dhurba Prasad Acharya	Physics	Dr. Gopi Chandra Kaphle
71	Eak Raj Paudel	Physics	Prof. Dr. Harihar Paudyal
72	Khem Kumari Lamichhane	Physics	Prof.Dr. Leela Pradhan Joshi
73	Udaya Bahadur Thapa Kshetri	Physics	Prof. Dr. Harihar Paudyal
74	Arun Kumar Yadav	Statistics	Prof. Dr. Shankar Prasad Khanal
75	Bidur Nepal	Statistics	Dr. Arun Kumar Chaudary
76	Hari Prasad Upadhyay	Statistics	Dr. Bijay Lal Pradhan
77	Barun Panthi	Zoology	Prof. Dr. Prem Bahadur Budha
78	Dina Nath Dhakal	Zoology	Dr. Kishor Pandey
79	Baburam Banjade	Zoology	Dr. Hari Prasad Sharma

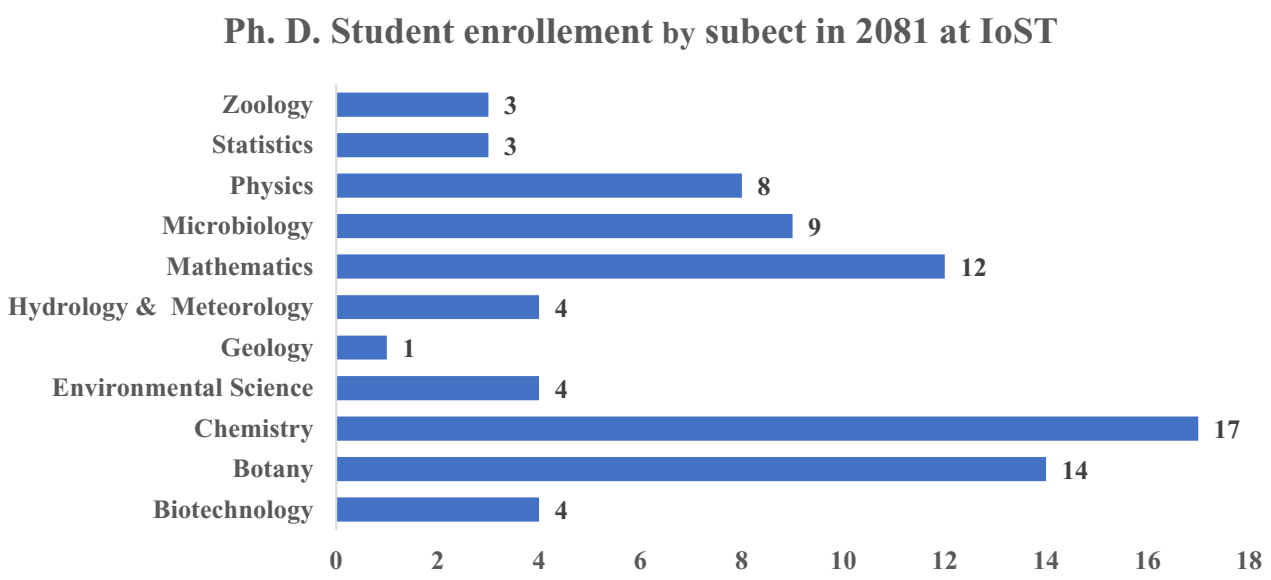


Figure 2: Diagram showing enrolled Ph.D. students in year 2024.

Ph. D. Enrollment-2025

In this year 2025, 75 Ph.D. candidates are enrolled. The orientation program was held in the Seminar Hall of New building of Central Library on 15th Mangsir 2082. Prof. Dr. Deepak Aryal, Vice-Chancellor, Tribhuvan University has inaugurated the Orientation Program and released the revised version of Research Regulation Ph.D. Postdoctoral and Mini Research Program and Research Regulation Master's Program. The Program is divided into two sessions: Inagural and Technical Session. The inaugural session was chaired by Dean of IoST, Chief Guest Vice-Chancellor Prof. Dr. Deepak Aryal focossed without dong hardwork, dedication and keen interest, it is impossible to be awarded Ph. D. in Science and Technology. In inagrual session, Prof. Dr. Akaldev Mishra, Principal, University Campus, Kirtipur, Kathmandu, TU, Asst. Dean, Prof. Dr. Mahendra Maharjan, Asst. Dean Dr. Khageshwor Mandal, Prof. Dr. Sangeeta Rajbhandary, Prof. Dr. Anjana Singh also delivered their rematks. The inaugural session was conducted by Asst. Dean Dr. Komal Raj Rijal. In the technical session, Prof. Dr. Shankar Prasad Khanal, Dean IoST, Dr. Komal Raj Rijal, Assistant Dean, Prof. Dr. Prakash Ghimire, Prof. Dr. Srijan Lal Shrestha, Mr. Bijaya Sharma, Library Officer, Prof. Narayan Pd Adhikari, Dr. Chitra Bdr. Baniya and Dr. Ramesh Prasad Sapkota delivered talk to the Ph.D. candidates.

Photographs: 1&2: Inaguration and Release of revised Research regulations by Vice-Chancellor, Prof. Dr. Dipak Aryal

Tribhuvan University
Institute of Science & Technology
Ph.D. Orientation Program
December 1st, 2025 (15 Mangsir 2082)
Venue: Seminar Hall, New Building of Central Library, TU, Kirtipur

PROGRAM	
09:00 – 09:45	Registration – Breakfast
09:45 – 10:45	**Opening Ceremony**
09:45 – 09:50	Invitation to Dias *(Chair person, Chief Guest VC TU, Asst. Deans & HODs/CDRC Chair of Central Departments, Research Committee members, Journal Committee members)*
09:50 - 10:00	*Welcome Address* **Prof. Dr. Mahendra Maharjan**, Asst. Dean, IoST, TU
10:00 – 10:05	*Inauguration, and i) Release of Revised version of Research Regulation PhD, Postdoctoral and Mini Research Program ii) Research Regulation Master's Program* by **Prof. Dr. Deepak Aryal, Vice Chancellor**, Tribhuvan University
10:05 – 10:20	*Opinion and wishes by* Chief Editor of JIST **Prof. Dr. Anjana Singh** CDMi, TU **Prof. Dr. Sangeeta Rajbhandary**, Head, CDB, TU **Prof. Dr. Chet Raj Bhatta**, Head CDM, TU
10:20– 10:30	*Address by the Chief Guest* **Prof. Dr. Deepak Aryal**, VC, TU
10.30–10.40	*Address by the Chair of the Session* **Prof. Dr. Shankar Prashad Khanal**, Dean, IoST, TU
10:40– 10:45	Vote of Thanks by **Dr. Khageshwar Mandal**, Asst. Dean, IoST, TU
10:50 – 12:30	**Technical Session–1**
10:50 – 11:00	*Self Introduction by Ph.D. students*
11:00 – 11:20	*Ph.D. Rule and Regulations-2025, IoST, TU* **Dr. Komal Raj Rijal**, Asst. Dean, IoST, TU
11:20 – 12:00	*Scientific Writing and Publication* **Prof. Dr. Shankar Prasad Khanal**, Dean, IoST, TU
12:00 – 12:30	*Ethical conduction of Research* **Prof. Dr. Prakash Ghimire, CDMi, TU**
12:30 – 13:30	**LUNCH**
13:30 – 15:30	**Technical Session–2**
13:30 – 14:00	*Library Resources, Journals, e-Resources & Databases* **Mr. Bijaya Sharma, Central Library, TU**
14:00 – 14:30	*Application of Statistical tools in Research* **Prof. Dr. Srijan Lal Shrestha**, CDS, TU
14:30 – 15:00	*Course Introduction and Grant Application for Ph.D.* **Prof. Dr. Narayan Prasad Adhikari**, Head, CDP, TU
15:00 – 15:30	Q/A Session **PhD Course Facilitators, Focal Persons**
15:30 – 16:00	**Tea/Coffee**

This Session will be conducted by ***Dr. Chitra Bd Baniya****, IoST, TU*
Guests: *HoDs or Chair of CDRC of IoST Central Departments, Research Committee and Journal Committee members of IoST will be invited.*

This Session will be conducted by ***Dr. Ramesh Sapkota****, IoST, TU*
Guests: *HoDs or Chair of CDRC of IoST Central Departments, Research Committee and Journal Committee members of IoST will be invited.*

Opening ceremony will be conducted by ***Dr. Komal Raj Rijal****, Asst. Dean, IoST, TU.*

Figure 3: Agenda of Ph.D. Orientation Program-2025

A list of newly enrolled Ph.D. candidates (Ph.D. enrollement in 2025) is given in the following table:

S.N	Name of the Student	Subject	Supervisor name
1	Hemanta Kumari Chadhuary	Biotechnology	Dr. Jarina Joshi
2	Basu Dev Poudel	Botany	Dr. Yadav Upreti
3	Bidhya Maharjan	Botany	Prof. Dr. Haridatta Bhattarai
4	Dipak Lamichhane	Botany	Prof. Dr. Bharatbabu Shrestha
5	Pramod Sen Oli	Botany	Dr. Chitra Bahadur Baniya
6	Tila Ram Gurung	Botany	Prof. Dr. Haridatta Bhattarai
7	Agni Prasad Sharma	Chemistry	Prof. Dr. Akkal Dev Mishra
8	Arati Pradhan	Chemistry	Dr. Shanta Pokharel Bhattarai
9	Ashma Bhattarai	Chemistry	Dr. Achyut Adhikari
10	Deepak Nath	Chemistry	Dr. Chandradip Yadav
11	Ganesh Giri	Chemistry	Dr. Purna Prasad Dhakal
12	Jasana Maharjan	Chemistry	Prof. Dr. Ajaya Bhattarai
13	Jaya Ram Thapa	Chemistry	Dr. Mani Ram Kandel
14	Kamala Bhattarai	Chemistry	Dr. Subhangi Subedi
15	Khag Raj Ghimire	Chemistry	Dr. Bhoj Raj Paudel
16	Naresh Prasad Bhatta	Chemistry	Dr. Mahesh Kumar Joshi
17	Raj Kumar Karki	Chemistry	Dr. Kamal Prasad Sapkota
18	Ram Bhadhur Gharti	Chemistry	Dr. Debal Prasad Bhattarai
19	Ram Narayan Shah (Raman)	Chemistry	Dr. Debal Prasad BHattarai
20	Rohan Sedhai	Chemistry	Dr. Purna Prasad Dhakal
21	Sachin Thapa	Chemistry	Dr. Dasu Ram Paudel
22	Sailendra Kumar Tripathi	Chemistry	Dr. Bhoj Raj Paudel
23	Sanjaya Dware	Chemistry	Dr. Dipak Kumar Gupta
24	Sanjib Kumar Chaudhary	Chemistry	Prof. Dr. Paras Nath Yadav
25	Suryadev Prasad Yadav	Chemistry	Prof. Dr. Ajaya Bhattarai
26	Tara Datta Bhatta	Chemistry	Dr. Mani Ram Kandel
27	Timila Shrestha	Chemistry	Dr. RamGopal (Swagat) Shrestha
28	Binod Paudyal	CSIT	Dr. Sanjib Prasad Pandey
29	Dipendra Raj Joshi	Environmental Sciences	Dr. Ramesh Prasad Sapkota
30	Meera Prajapati	Environmental Sciences	Dr. DipNarayan Shah
31	Narendra Bd. Singh Bishwakarma	Environmental Sciences	Prof. Dr. Chhatramani Sharma
32	Rupesh K.c.	Environmental Sciences	Dr. Binod Baniya
33	Sajan Puri	Environmental Sciences	Dr. Ramesh Raj Panta
34	Sandesh Neupane	Environmental Sciences	Dr. Narayan Prasad Gaire
35	Saroj Nepal	Environmental Sciences	Dr. Ramesh Raj Panta
36	Anil Kumar Chaudhary	Geology	Dr. Ranjan Kumar Dahal
37	Nirmal Kafle	Geology	Prof. Dr. Dinesh Pathak
38	Bishnu Prasad Neupane	Hydrology and Meteorology	Dr. Dhiraj Pradhanang
39	Devesh Koirala	Hydrology and Meteorology	Dr. Dibas Shrestha
40	Jeena Amatya	Microbiology	Dr. Dev Raj Joshi
41	Om Prakash Pant	Microbiology	Prof. Dr. Prakash Ghimire
42	Padma Shrestha	Microbiology	Dr. Megha Raj Banjara
43	Pramila Parajuli	Microbiology	Dr. Dev Raj Joshi
44	Daya Ram Sharma	Physics	Dr. Nurapati Panta

45	Jibanath Pandey	Physics	Dr. Hari Krishna Neupane
46	Narendra Kumar Chaudhary	Physics	Dr. Dinesh Kumar Chaudhary
47	Om Shree Rijal	Physics	Prof. Dr. Narayan Prasad Adhikari
48	Pramila Balami	Physics	Prof. Dr. Ram Prasad Regmi
49	Pramod Prasad Yadav	Physics	Dr. Suresh Prasad Gupta
50	Rabindra Kumar Budhathoki	Physics	Prof. Dr. Ishwor Koirala
51	Reshma Basukala	Physics	Prof. Dr. Bhawani Datta Joshi
52	Sudist Kumar Sah	Physics	Dr. Rajendra Prasad Koirala
53	Yam Bahadur Budhathoki	Physics	Prof. Dr. Devendra Adhikari
54	Krishna Prasad Adhikari	Physics	Dr. Jhulan Paudel
55	Santosh Kumar Das	Physics	Dr. Suresh Prasad Gupta
56	Aasis Baral	Mathematics	Dr. Ramesh Gautam
57	Ami Raj Adhikari	Mathematics	Prof. Dr. Gyan Bahadhur Thapa
58	Birendra Jaiswal	Mathematics	Dr. Rabindra Kumar Gupta
59	Biseswar Prashad Bhatt	Mathematics	Dr. Nabaraj Adhikari
60	Bishnu Prasad Bhandari	Mathematics	Dr. Chudamani Pokharel
61	Gobinda Adhikari	Mathematics	Dr. Jhabilal Ghimire
62	Hari Prasad Bhattarai	Mathematics	Dr. Anjana Pokharel
63	Hari Prasad Gnawali	Mathematics	Dr. Jeevan Kafle
64	Kedar Nath Chhatkuli	Mathematics	Dr. Jeevan Kafle
65	Prem Prakash Kaphle	Mathematics	Prof. Dr. Narayan Prasad Pahari
66	Sabindra Giri	Mathematics	Dr. Ramesh Gautam
67	Samjhana Koirala	Mathematics	Dr. Nabaraj Adhikari
68	Tuk Bahadur Rana	Mathematics	Prof. Dr. Gyan Bahadur Thapa
69	Youb Raj Gaire	Mathematics	Dr. Shreeram Khadka
70	Prabhat Upreti	Statistics	Prof. Dr. Shankar Prasad Khanal
71	Ajay Jha	Zoology	Dr. Archana Prasad
72	Deepa Dangol	Zoology	Dr. Laxman Khanal
73	Kamala Limbu	Zoology	Dr. Laxman Khanal
74	Shirish Acharya	Zoology	Dr. Indra Prasad Subedi
75	Shrijana Sapkota	Zoology	Dr. Bishnu Prasad Bhattarai

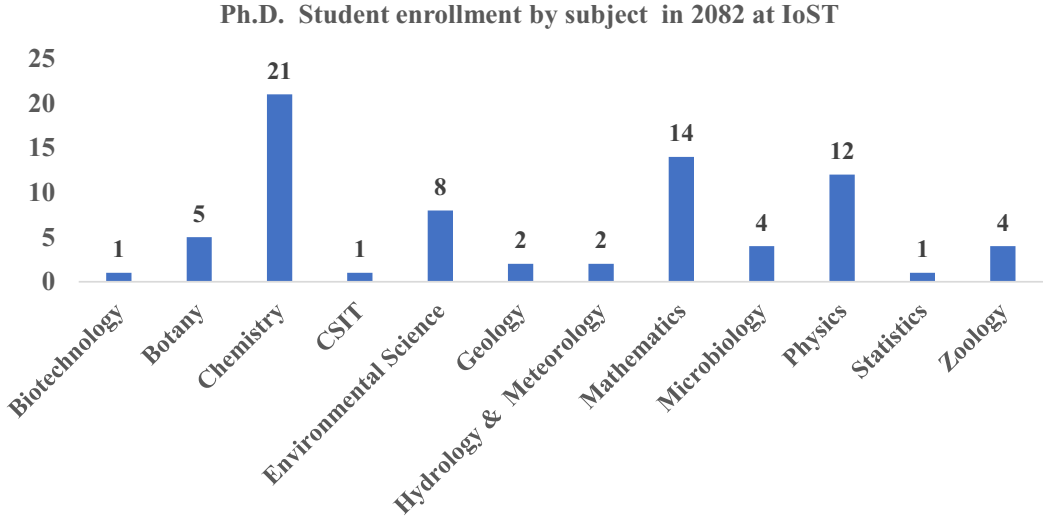


Figure 5: Bar diagram showing enrolled Ph.D. students in year 2025.

IoST Activities

B. Tech (Food Technology) Semester course orientation

In 2024, Academic Council of TU approved B. Tech (Food Technology) program to be run under the semester system as per semester system operational guidelines-2074. Central Campus of Technology, Dharan is the only constituent campus running this program and other 10 affiliated colleges throughout in Nepal. IoST has organized the series of online orientation programs for the faculties of constituent campus and affiliated colleges in current semester system syllabus of B. Tech (Food Technology). Asst. Dean Dr. Khageshwor Mandal has coordinated the orientation program.

Figure 1: Flyer of Second semester course orientation for faculties of B. Tech (Food Technology)

Figure 2: Flyer of Third semester course orientation for faculties of B. Tech (Food Technology)

IoST Activities
Scientific Writing Workshop

Photograph 1: Participants of Scientific Writing Workshop

Institute of Science and Technology, Tribhuvan University, has organized a three-day Scientific Writing Workshop for Ph.D. second-semester students in collaboration with the Institute of Mountain Hazards and Environment (IMHE), Chinese Academy of Sciences, at KCRE-TU. Fifty PhD scholars and a few master's-level students participated in this workshop. The program was organized from 24 to 26 November 2025 at KCRE-TU. Two renowned resource persons, Professor Dr. Qiu Dunlian, Editor-in-Chief, and Dr. Wang Yang, Editor, Journal of Mountain Science (JMS), Dr. Chitra Bdr Baniya, and Dr. Binod Dawadi, Deputy Director, KCRE from TU, were resource persons. The program has been formally inaugurated by Professor Dr. Shankar Prasad Khanal, Dean of the Institute of Science and Technology at Tribhuvan University. Dr. Komal Raj Rijal, Assistant Dean, IoST, welcomed the resource persons and participants of the workshop and thanked Dr. Chitra Bdr Baniya for coordinating with the Journal of Mountain Science (JMS) to organize this important workshop and KCRE-TU for providing the seminar hall for the workshop. Dr. Chitra Bdr Baniya, Associate Professor, Central Department of Botany, TU, facilitated the entire duration of the workshop.

IoST Activities
M. Sc. Dissertation Meet

The Institute of Science and Technology, Tribhuvan University organized the M.Sc. Dissertation Meet on 11-12 Mangsir, 2081 B.S. In the Master Meet, more than 250 master research dissertations of Master Thesis students from 12 different Central departments were presented. In the program, Supervisors, faculties from Central Departments, M. Sc students were also present. Approximately two thousand students observed the Master- Dissertation Meet Program-2081.

The program was inaugurated by the Vice-Chancellor of Tribhuvan University, Prof. Dr. Keshar Jung Baral. On this occasion, Vice chancellor highlighted that science education should be both practical and research-oriented, stating that "We must take our work beyond the classroom and link education with production." Dean of the Institute of Science and Technology, Prof. Dr. Binil Aryal, highlighted the importance of master dissertation meet program and through the presentation and exhibition of master dissertations, new students and fresh researcher gain a clear opportunity to understand how to conduct research work. In the inauguration program Rector Prof. Dr. Khadga K.C, Registrar, Prof. Dr. Kedar Rijal, Tribhuvan University, Principal, Heads of Central Departments, faculty members, and representatives of student organizations were also present.

Photographs: Master Dissertation Meet, on Mangsir 11-12, 2081.

IoST News

Felicitation of Former Dean and Welcome of New Dean

Felicitation of Dean Prof. Dr. Binil Aryal on 11 Poush, 2081

Photographs: Felcitation of Dean, Prof. Dr. Binil Aryal

Prof. Dr. Binil Aryal served as Dean of Institute of Science and Technology (IoST), Tribhuvan University (TU) from Poush 12, 2077 to 11 Poush 2081. As an academic leader, he has played an important role in leading Institute of Science and Technology towards academic reform, research excellence, and introducing LMS Moodle, introduced AI detection facility in PG iThenticate, implemented double degree Program at Ph.D. Levl (IoF & Central Department of Botany and initiated a data Protection Policy in the Institute of Science and Technology. Furthermore, as a dean, Prof. Aryal made strong and dedicated efforts in drafting and submitting the proposal for the Central Reference Laboratory to The University Grants Comission (UGC-Nepal) and successfully secured grants for the establishment of National Science Reference Laboratory in his tenure. Prof. Dr. Binil Aryal is currently Professor at Central Department of Physics, Tribhuvan University and Academician of Nepal Academy of Science & Technology, Kumaltar, Lalitpur. Prior to Dean of IoST, TU he searved as Head of Central Department of Physics, TU.

Under his strong leadership, IoST has undertaken significant academic initiatives, including the revision of undergraduate and graduate curricula and the transfer of Bachelor of Food Technology program from an annual to a semester system in 2024. Furthermore, Master in Information Technology (MIT) and M.Sc. in Mountain and Mountaineering Science (MMS) program were introduced during his tenure. He has also focused in research promotion and encouraged faculties for research during his tenure. IoST faculties and students have achieved remarkable growth in research output in his tenure, with over a thousand publications and a substantial increase in Scimago-indexed journal articles.

Prof. Dr. Aryal has actively supported National and International research collaborations. During his tenure, IoST has been implemented the requirement that graduate and Ph.D. research thesis abstract should be written in Nepali language together with English and that plagiarism should be checked. He brought the concept of the "Ph.D. Festival-2023", & "Master Dissertation Meet-2024", which honored 50 years of Ph.D. research and more than 70 years of master program at IoST and promoted multidisciplinary research culture. Overall, Prof. Dr. Binil Aryal's tenure symbolizes a progressive, research-focused, and significant change at IoST, TU that will ultimately make IoST a major center of National Center of Excellence in Science and Technology education in Nepal.

Welcome of New Dean Prof. Dr. Shankar Prasad Khanal on Poush 12, 2081.

Photographs: Felcitation of Dean, Prof. Dr. Binil Aryal

Prof. Dr. Shankar Prasad Khanal is appointed as the Dean of the Institute of Science and Technology (IoST), Tribhuvan University, since December 27, 2024(12th Poush, 2081 B.S.). Prof. Khanal is a distinguished biostatistician in Nepal. He did his Ph.D. Degree in Biostatistics from the All India Institute of Medical Sciences (AIIMS), New Delhi, India with Ph.D. research focused on survival modeling in acute liver failure.

He completed his M.Sc. in Statistics from Central Department of Statistics, Tribhuvan University and began his academic career as permanent lecturer in 1996. He became Full Professor of Statistics since March 2013. He also served as Head of the Central Department of Statistics, Tribhuvan University from August 2015 to January 2020. His teaching areas are mainly biostatistics, meta-analysis, and research methodology at Master's and Ph.D. levels. Prof. Khanal has published more than 100 manuscripts in National and International Journals. His research work covers mainly survival analysis, ophthalmic epidemiology, public health, poverty analysis, and applied statistics. He has served as team leader and consultant for major research projects funded by UGC Nepal, British Council, EU, JICA, ICMR (India), WHO, and UNICEF.

He has supervised Ph.D. scholars, examined Ph.D. theses nationally and internationally. He has actively contributed to academic publishing as Founder Editor-in-Chief of the Nepalese Journal of Statistics. His academic excellence has been recognized through national honors including the Nepal Bidhya Bhusan "Ka" and the National Education Award.

MoU between IoST, TU and the Nepal Agricultural Research Council (NARC)

Photograph 1: MOU Signature between Dean, IoST and Acting Executive Director, NARC.

A Memorandum of Understanding (MoU) has been signed between Tribhuvan University (TU) and the Nepal Agricultural Research Council (NARC) to foster collaboration in research and academic activities of mutual interest. This initiative was led by the Central Department of Microbiology, TU. The MoU was formally exchanged today between Dr. Doj Raj Khanal, Acting Executive Director of NARC, and Prof. Dr. Shankar Prasad Khanal, Dean of the Institute of Science and Technology (IoST), TU. This partnership aims to promote joint research efforts and academic cooperation, paving the way for significant scientific advancements in the future.

Felicitation of Former Assistant Dean and welcome of New Assistant Dean

Felicitation of Assist. Dean Dr. Surendra Kumar Gautam on Ashad 19, 2082

Photographs: Felcitation of Asst. Dean Dr. Surendra Kumar Gautam

Associate Professor, Dr. Surendra Kumar Gautam has completed his four-year tenure of Assistant Dean of IoST on July 3, 2025. He served as the Assistant Dean of the Institute of Science and Technology (IoST), TU, from 4 July 2021 to 3 July 2025. He looked Ph.D. Research and Academic during his tenure. As Assistant Dean, he contributed to improving coordination among central departments and constituent campuses, with a particular focus on enhancing transparency and effectiveness in academic administration. He served as a faculty member of Tri-chandra Campus at Department of Chemistry since 1994. Dr. Gautam completed his Ph.D. in Materials Science and Nanotechnology at Indian Institute of Technology (IIT), BHU, India in 2011. He is now Associate Professor in Chemistry Department at Tri-chandra campus, Ghantaghar, Kathmandu.

Welcome of New Asst. Dean Dr. Komal Raj Rijal on Ashad 22, 2082.




Photographs: Welcome of New Asst. Dean Dr. Komal Raj Rijal

Dr. Komal Raj Rijal, is an Associate Professor of Microbiology appointed as Assistant Dean of Institute of Science and Technology on 4th July, 2025. He Served as Head of Central Department of Microbiology Tribhuvan University from December 2020 to December, 2024. He began his academic career as lecturer of School of Pharmaceutical and Biomedical Sciences, Pokhara University Since 2005 and joined permanent lecturer at Central Department of Microbiology Since November, 2008 and promoted as Associate Professor of Microbiology from July, 2019. He obtained his Ph.D. from the Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand, with a focus on characterizing relapse patterns in vivax Malaria and studying Glucose-6-Phosphate Dehydrogenase deficient variants in Nepal in 2018. He recived Tranakchit Harinasuta Award (Outstanding student), Faculty of Tropical Medicine, Mahidol University, 2015. Dr. Rijal exhibits a passionate dedication to research, particularly in malaria, vectorborne diseases, infectious diseases, and antimicrobial resistance. Dr. Rijal received Science Award- 2078: Nepal Academy of Science and Technology (NAST), Awarded by Prime Minister of Nepal. Dr. Rijal has published more than 100 manuscripts in different peer-reviewed National and International Journals.

Felicitation of Staff Retirment

Ms. Indu Rajoupadhaya, Senior Head Assistant, Institute of Science and Technology, has retried from Tribhuvan University from August 1, 2025 (Sharvan 18, 2082 BS). She has worked at Tribhuvan University since 2052 BS. During her 30-year career, she worked at the Institute of Science and Technology for over 27 years. She looked Ph.D. Program of IoST since 2055 BS. She is a very honest, trustworthy, and diligent employee in her position. She is the sole institutional memories of IoST activity from the past. The IoST family wishes her continued healthy and laughter retried life.

Enrollment trend of students: Undergraduate Level

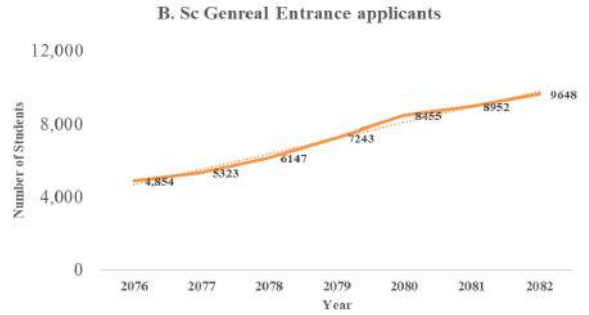


Figure 1: Trend of B. Sc General Science Entrance applicants, 2076-2082

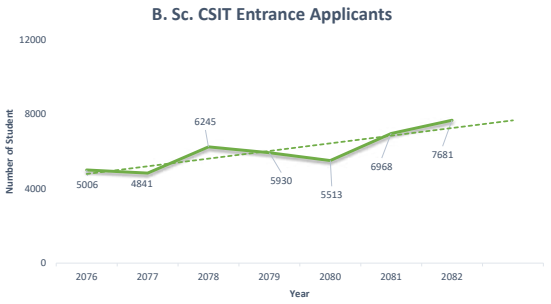


Figure 2: Trend of B. Sc CSIT Entrance applicants, 2076-2082

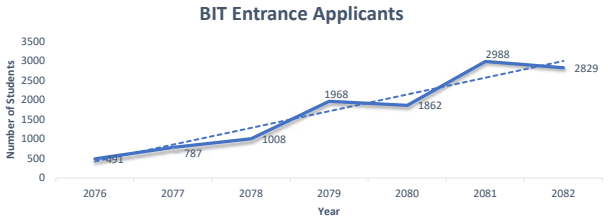


Figure 3: Trend of BIT Entrance applicants, 2076-2082

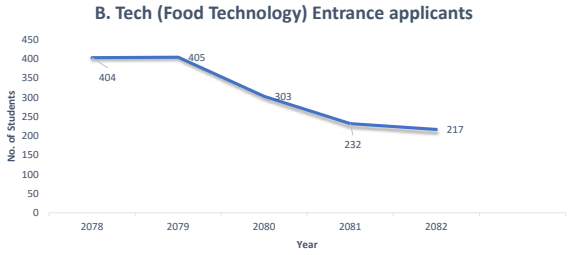


Figure 4: Trend of B. (Tech) Entrance applicants, 2078-2082

In this year, 2082 BS, a total of 20,375 students (B. Sc General, 9648; B. Sc CSIT, 7681; BIT, 2829 and B. Tech, 217) attended entrance Examination conducted by Insttitue of Science and Technology (IoST) TU at the undergraduate levels. This is about 12% (last year, it was 18,000) increasement of students' applicants in compared to last year, 2081 BS. Figures show that there is a growth of students in different level of undegradugate program during last five years.

The attraction towards B. Sc (General) has been increased in last 4 years. The rate of increment is about 1000 students per year from last 4 years. B. Sc. General Science Program has been offered by 21 constituents and 26 affiliated colleges. More than 80% students study in constituent colleges. B. Sc (Microbiology) and B. Sc (Environmental Sciences) has been offered by 30 and 14 campuses/ colleges, respectively.

An increasing trend in the number of applicants for the B.Sc. CSIT program has been observed over the last two years (2081 and 2082 BS). The number of applicants rose to 6,968 in 2081, representing an increase of about 1,500 students compared to 2080, and further increased to 7,681 in 2082, showing an additional rise of approximately 600 students compared to 2081.

Interaction program with Ph.D. Scholars

The Institute of Science and Technology, Tribhuvan University has been organized a discussion program between Dean's office and the Ph.D. researchers who have registered their Ph.D degree at IoST, in presence of Dean, Assistant Deans and responsible officers from the Dean office. The discussion program was conducted on Monday, Magh 14, 2081 at the hall of new building of Central Library. During discussion program, Ph. D. scholars requested Dean's office to address their problems, and Dean's office acquainted them with the rules and regulation of the Ph.D. program at IoST, laboratory management and the timely completion of the degrees as per the defined rules and regulations.

Celebration of Fifty-Two Anniversary day of IoST, TU

The Institute of Science and Technology has celebrated its 52nd establishment day on 19 Poush, 2081. The program was chaired by Prof. Dr. Shankar Prasad Khanal, Dean of Institute of Science and Technology. In the program, main office Assistants, Ms. Nilu Shrestha and Mr. Upendra Subedi, were honored with a certificate of appreciation and a dosalla by the Dean of the Institute of Science and Technology. In the program Dean, Prof. Dr. Shankar Prasad Khanal mentioned that the Dean's Office would give more emphasis to archiving the institutional memory of the Institute and further emphasized that everyone should work institutionally rather than individually. In the Anniversary celebration program, Assistant Deans Dr. Surendra Kumar Gautam, Prof. Dr. Mahendra Maharjan and Dr. Khageshwor Mandal expressed their best wishes to IoST in coming days.

Photograph 1: 52nd Anniversary day celebration at Dean's office, IoST, TU

Photograph 2: Main Office Assistants, Ms. Nilu Shrestha and Mr. Upendra Subedi, were honored with a certificate of Appreciation and Dosalla on 52nd Anniversary of IoST, TU.

Interaction program with Campus chiefs/ Program Coordinators of CSIT Program

An interaction program has been organized by the Dean office, IoST with the campus chiefs'/ program coordinator running the CSIT program, affiliated from TU. The program was held on July 11, 2025 at the hall of Central Department of Statistics. Campus chiefs of affiliated campuses within KTM valley physically attained the program, whereas campus chief/program coordinators outside Kathmandu joined the program via online. In the program, Dean Prof. Dr. Shankar Prasad Khanal, Assistant Deans, Prof. Dr. Mahendra Maharjan, Dr, Khageshwor Mandal and Dr. Komal Raj Rijal, subject committee members, and Head of Central Department of Computer Sciences and Information Technology, Mr. Sarbin Sayami were also present. A detailed discussion was held on the operational status of the CSIT program academic quality, curriculum implementation, examination management, and challenges faced by the affiliated campuses. Discussion were also held on how the Dean office has been supporting the affiliated campuses to run the program effectively and completion of the entire course with in time. In addition, suggestions were exchanged between two entities to make the program more effective and quality.

Photographs: Interaction program with campus chiefs'/program coordinator of CSIT program affiliated colleges

A Talk with Eminent Personality of Science & Technology

पूर्व डिन प्रा. सुरेशराज चालिसेसँगको कुराकानी

(यो अन्तर्वार्ताका लागि पूर्वडिन प्रा. सुरेशराज चालिसेको निवासमा विज्ञान तथा प्रविधि अध्ययन संस्थानका डिन प्रा.डा. शंकरप्रसाद खनाल, सहायक डिन डा. कोमलराज रिजाल, जल तथा मौसम विज्ञान केन्द्रीय विभागका सहप्राध्यापक डा. विनोद दवाडी र डीन कार्यालयका कर्मचारी श्री उपेन्द्र सुवेदी जानुभएको थियो । उहाँसँग भएको कुराकानीको अडियो भिडियो रेकर्ड डिन कार्यालयको सम्पत्तिको रूपमा सुरक्षित रहनेछ ।)

✍ तपाईंको बाल्यकाल तथा जन्मका बारेमा केही बताइदिनुहुन्छ कि ?

हामी पहिलेदेखिकै काठमाडौं कै निवासी हौं । हाम्रो कुलदेवता गोकर्णमा रहेका छन् । मेरो बुबा सुन्दरराज चालिसे काठमाडौंको इन्द्रचोकमा जन्मनुभएको थियो । विविध कारणले इन्द्रचोकबाट नरदेवी, कमलपोखरी हुँदै हाम्रो परिवारको बसाइ नक्साल भयो । मेरो मामाघर कमलपोखरीमा थियो । नक्सालमा जन्मे पनि म मामाघरमा नै हुर्कँ पढेँ ।

मेरो बुबा राजनीतिमा संलग्न हुनुहुन्थ्यो । उहाँ तत्कालीन प्रजापरिषद्मा लाग्नुभएको थियो । हाम्रा चार सहिदहरूकै समकक्षमा रहेर राणाशासन विरोधी राजनीतिमा लागेकाले उहाँ निकै वर्ष भारत प्रवासमा रहनुभयो । मेरी आमा सुशीलादेवी चालिसे पनि उहाँसँगै भारतको कलकत्तामा बस्नुभएको थियो ।

मेरो सानो मामा गौतमबुद्ध प्याकुरेल उमेरमा मभन्दा केही जेठो भए पनि हामी एकअर्काका साथी जस्ता थियौं र सँगैसँगै खेल्नेपढ्ने गर्थ्यौं । मामाघरमा ग्रामोफोन, रिकार्ड, हारमोनियम, घडी आदि थिए र मामा र म यिनीहरूलाई खोल्ने, मिलाउने आदि गर्थ्यौं । हाम्रो जिज्ञासुपूर्ण व्यवहारले उपकरणहरूलाई खोल्ने गर्दा कहिलेकाही बिग्रन्थ्यो तर हजुरबुबा डा. भोजराज प्याकुरेलले हामीलाई गाली नगरी बनाएर ल्याउनुहुन्थ्यो । त्यति मात्र होइन केही काम गर्नुपर्‍यो भने हामीलाई संलग्न गराउनुहुन्थ्यो, उत्साह भर्नुहुन्थ्यो, अनि हामी रमाइरमाइ गर्थ्यौं । बिग्रे पनि खासै गाली नगर्ने हुनाले हामीलाई रमाइलो नै लाग्थ्यो । घरमै सिकर्मी आदिको पनि काम भइरहन्थ्यो । हजुरबुबाले चित्र पनि बनाउनुहुन्थ्यो । आर्ट, म्युजिकका सबै साधनहरू घरमै थिए । हामीलाई जे रूचि हुन्थ्यो त्यसमा सहभागी गराइन्थ्यो । मामाघरमा कपडाको रङाइछपाइ गर्ने कारखाना पनि थियो । उहाँहरूले ट्युबेल गाड्ने काम पनि गर्नुहुन्थ्यो । काठमाडौंमा पहिले ट्युबेल गाड्ने काम पनि उहाँहरूले नै सुरू गर्नुभएको हो । यी सबै परिवेशले गर्दा मेरो मामाघर एउटा ल्याब जस्तो थियो । जहाँ ल्याबमा पाइने रसायन आदि सबै हुन्थ्यो र हामी बाल्यकालमा विभिन्न कुराको रहरले परीक्षण गर्थ्यौं ।

मेरो बाल्यकाल बढो रमाइलो ढङ्गले बित्यो । तत्कालीन राजनीतिक परिवेशले गर्दा हामीलाई केटाकेटी भनेर शासक वर्गले खासै वास्ता नगर्ने भएर गोप्य चिठीपत्र इत्यादि ओसारपसार गर्ने गर्थ्यौं । गोप्य चिठीपत्र भारतको हुलाकबाट पनि आदानप्रदान गरिन्थ्यो । त्यतिमात्र होइन अदृश्य मसीले लेखेका चिठीहरू पनि आउँथे । अनि त्यस कागजलाई तताएर अक्षर पढिन्थ्यो । मेरो मामाघर त यसका लागि हब जस्तै थियो । प्रचार सामग्री बनाउने मात्र होइन, रङ आदि सामान ल्याउने क्रममा गोप्य चिठी पर्चा लगायतका कुराहरू तयार

गर्ने काम पनि हुन्थ्यो । मेरी आमाले पनि कलकत्ता जाँदाआउँदा गोप्य समाचार आदानप्रदान गर्नुहुन्थ्यो । यतिमात्र होइन राजासँगको सम्पर्कको माध्यम पनि आमा नै हुनुहुन्थ्यो । त्यतिबेला हामी धेरैजसो घरभित्रै खेलिने खेलहरूमात्र खेल्थ्यौं । मावली हजुरआमाले "तँ त अर्काको नासो होस्" भनेर फेरि केही होला भनी बाहिरका खेल खेल्न अनुमति दिनुहुन्थेन ।

राणाकालमा मेरो मामाको घरको तीनपटक खानतलासी भयो । त्यस वेला घरका सबै कागजात, कापी ग्रामोफोन, रिकार्ड, किताब लागायतका सामग्रीहरु लरीमा राखेर सिपाहीले लगेका थिए । खानतलासीका क्रममा एउटा सिपाहीलाई करेन्ट लागेछ अनि अरु खानतलासीको काम छाडेर उनीहरु जफत गरेका सामग्री लिएर गएँ । यस सँगै हाम्रा किताब पनि गए । हामी एक महिनासम्म स्कुल जान सकेनौं । यसैबिचमा म र मामालाई कृष्णबहादुर मानन्धर मास्टरसाहेबले टुडिखेलमा भेटेपछि स्कुल जाने वातावरण बनाइदिनुयो । पछि केही सामान फिर्ता पनि भयो । अनि हामी जसोतसो स्कुल जान थाल्यौं

✍ अब तपाईंको पढाइको बारेमा कुरा गरौं न ।

मेरो काका रामराज चालिसे म भन्दा केही जेठो हुनुहुन्थ्यो साथै अरु मामा पनि उस्तै । नाताले काका, मामा भए पनि उहाँहरु मेरा साथी नै हुनुभयो । मामा तथा काकाले कौमुदी पढ्नुभयो । मैले पनि नेपाली र संस्कृतका किताबहरु पढ्न सुरू गरिसकेको थिएँ । २००३ सालमा मैले ७ वर्षकै उमेरमा स्कुल गएर भर्ना भई पढ्ने अवसर पाएको थिएँ । त्यतिबेला भरखरै पद्मोदय स्कुल खुलेको थियो । त्यस स्कुलमा स्टान्डर १, स्टान्डर २, पाँचौं, चौथो, तेस्रो, दोस्रो अनि प्रथम (१०) कक्षा थियो तर दरबार स्कुलमा कक्षा १बाट भर्ना सुरू हुन्थ्यो । त्यति वेला पद्मोदयमा अक्षर नजान्नेलाई स्टान्डर १ मा भर्ना गरिन्थ्यो भने अङ्ग्रेजी, नेपाली अक्षर जान्ने र जोड घटाउन गर्न जान्नेलाई स्टान्डर २ मा । म पद्मोदय स्कुलमा स्टान्डर २ मा भर्ना भएँ । लगातार परीक्षामा राम्रै गरेका कारण कक्षा चढ्दै गएर १३ वर्षकै उमेरमा २००९ सालमा एसएलसी पास गरैं । त्यस वर्ष प्रथम श्रेणीमा पद्मोदय हाइस्कुलबाट एसएलसी पास गर्नेमा म एक्लो थिएँ ।

स्कुल पढ्दै गर्दाको एउटा घटनाको याद आउँछ । बुबा धेरैजसो कलकत्ता रहने हुँदा उहाँसँग मेरो भेट खासै हुँदैनथ्यो । घर तथा मामाघरमा बुबाका बारेमा निकै कुरा सुन्थैं । यसले गर्दा मलाई बुबालाई भेट्ने तीव्र इच्छा जाग्यो । त्यस वेला बुबा कलकत्ता हुनुहुन्थ्यो । २००४ सालको मिनपचासको

बिदामा मोहनप्रसाद मास्के मास्टरसाहेबले कलकत्ता जाने कुरा गर्नुभयो । म पनि उहाँसँगै कलकत्ता गएर बुबालाई भेट गर्ने इच्छा देखाएँ र यसमा ढिपी नै गरेँ र गौतमबुद्धमामा र मास्टरसाहेबसँग हिँडेर थानकोट, विरगञ्ज, रक्सोल हुँदै कलकत्ता गएँ । तर उहाँ पुग्दा बुबालाई भेटिनँ आमालाई मात्र भेटेँ । बुबा लखनउ गएको थाहा पाएपछि आमासँग हामी लखनउ पनि पुग्यौँ तर मेरो इच्छा पूरा हुन पाएन । उहाँ त्यहाँबाट पनि हिँडिसक्नुभएको जानकारी पाइयो । त्यसपछि हामी काठमाडौँ फर्कियौँ । काठमाडौँ मामाघरमा पुग्दा बुबा घरमा आइसक्नुभएको जानकारी पाएँ र नक्सालको हाम्रो घरमै बुबालाई भेटेँ । त्यस वेला बुबाले दारी पाल्नुभएको रहेछ । बाहिरी बारदलीबाट हिँडेर कोठाभित्र आउनेजाने गर्नुपर्ने हुँदा छिमेकीले देख्छन् भनेर दुई कोठाको बिचमा प्याल पारेर भित्रभित्रैबाट छिर्ने गरी व्यवस्था मिलाइएको रहेछ । उक्त छिर्ने ठाउँमा पर्दा लगाइएको थियो । सबै जनाले मलाई बुबाका बारेमा कसैलाई नभन्नु भनेका थिएँ । यसको मतलब पछि मात्र बुझेँ । त्यतिवेला उहाँ भूमिगत जीवन बिताइरहनुभएको रहेछ; राणाहरूसँग लुकेर बस्नुभएको रहेछ । घरमा सानैदेखि मैले देख्दै आएको एउटा अचम्मको टोपी लगाएको मान्छेको फोटो थियो । पछि मात्र थाहाँ पाएँ उहाँ सुबासचन्द्र बोस हुनुहुँदो रहेछ; मेरो बुबाका आदर्श पात्र । यो कुरा मेरी आमाले मलाई बताउनुभएको थियो ।

लैनचौरमा एउटा पोखरी छ । एकपटक स्कुलबाट भागेर हामी त्यहाँ पौडी खेल्न गयौँ । घर पुग्नासाथ हजुरआमाले गाली गर्नुभयो, "तेरो मास्टरले भनिसक्यो अनि अहिले मलाई ढाँट्ने" । यस्तै एकपटक भागेर खेल्न जाने क्रममा मामाको हात भाँचियो । अनि हामी मच्छेन्द्रबहालभित्रको परोपकार उपचार केन्द्रमा गएर हातमा ब्यान्डेज लगायौँ । घरमा थाहै दिएका थिएनौँ । जति लुकाए पनि यो लुक्ने कुरा भएन । खाना खाने बेलामा यो देखिइहाल्यो । हामीले गाली खायौँ र खेल्न जान पनि बन्द भयो । मैले अरु खेल्न भन्दा पनि चङ्गा उडाएर बढी गाली खाएको छु ।

एसएलसी फस्ट डिभिजनमा पास भएपछि मलाई नेपाल बाहिर पढ्ने मन थियो तर सानो उमेरको भनेर बाहिर जान दिइएन र त्रिचन्द्र कलेजमा नै आइएसीमा भर्ना भएँ । त्यस बेला त्रिचन्द्र कलेज भव्य खालको थियो । ल्याब आदिको पनि राम्रो व्यवस्था थियो । पछि भारतमा अरु धेरै कलेज तथा युनिभर्सिटी घुमेर त्यो बेलाको त्रिचन्द्र कलेजको ल्याबको तुलना गर्दा धेरै अब्बल भएको पाउँछु । भारतका त्यति बेलाका धेरै राम्रा कलेजभन्दा पनि हाम्रो स्तर राम्रो थियो । भव्य भवन, सरसफाइ उस्तै अनि बगैँचा । घण्टाघरको दक्षिणपट्टिका भवनहरूमा विज्ञानको पढाइ हुन्थ्यो । त्यतिवेला भौतिकशास्त्र आशुतोष सेन, फणिन्द्रप्रसाद लोहनी, शङ्करप्रसाद प्रधान, बलराम जोशीले, रसायनशास्त्र प्रसन्नमान सिंह अमृतप्रसाद प्रधान, सुरेन्द्रसिंह केसी, अमूल्यरत्न मित्र, डिल्लीराज उप्रेतीले, गणित आशुतोष गंगुली, केशवदेव भट्टराई, नारायणबहादुर मानन्धर अनि बायोलोजी शिवशङ्कर सिंह, द्विजराज उप्रेती, बाह्मीदत्त पाण्डेले पढाउनुहुन्थ्यो ।

त्रिचन्द्र कलेजमा भर्ना भएकै वर्ष पुनर्मिलन समारोह भएको थियो । यसमा प्रमुख अतिथिका रूपमा राजा त्रिभुवन नै उपस्थित हुनुभएको थियो । उहाँसँगै तत्कालीन युवराज महेन्द्र पनि हुनुहुन्थ्यो । घन्टाघरको उत्तरपूर्वपट्टि मुख्य भवनको पछाडि ब्याडमिन्टनको कोर्ट थियो । त्यहाँ एउटा मेच राखेर युवराज महेन्द्रले पनि खेल हेर्नुभएको सम्झना छ । उहाँले समारोहलाई पनि सम्बोधन गर्नुभएको थियो । "यो पुनर्मिलन समारोहमा म युवराजधिराजको हैसियतले होइन, यहाँको विद्यार्थीको हैसियतले आउन पाएको भए मेरो ठूलो सौभाग्य हुन्थ्यो । मैले यो कलेजमा पढ्ने सौभाग्य पाइनँ र जो यहाँ पढिरहनुभएको छ, उहाँहरु शौभाग्यशाली हुनुहुन्छ ।" भन्ने उहाँको उद्गार मैले सुनेको हुँ ।

त्यतिवेला नेपालमा विश्वविद्यालय नभएको हुनाले पटना विश्वविद्यालय मार्फत जाँच हुन्थ्यो । हाम्रो परीक्षाको समयमा राजा त्रिभुवनको मृत्यु भयो र यसै कारण परीक्षा पछाडि सर्‍यो । जाँच दिने समयमा म बिरामी परेँ । ३,३ घन्टाको जाँच त्यो पनि १ घन्टाको फरकमा दिनुपर्ने हुन्थ्यो । यति मात्र होइन दुई वर्ष पढेको सबै कोर्सको परीक्षा एकैपटक दिनुपर्ने हुन्थ्यो । जसोतसो परीक्षा दिएँ र दोस्रो श्रेणीमा पास पनि भएँ ।

अब स्नातक तहको अध्ययन गर्ने समय भयो । मेरा सबै मिल्ने साथीहरु कोलम्बो प्लान अन्तर्गत फाराम भरे र भारतमा पढ्न गए । मैले भने फारामसमेत भर्न पाइनँ । त्यतिबेला म बल्ल १५ वर्षको थिएँ । कोलम्बो प्लानमा पढ्नका लागि १७ वर्ष पूरा भएको हुनुपर्थ्यो । तैपनि म भारतमै गएर पढ्ने ढिपी गरेँ र कलकत्तामा हाम्रा आफन्त सुवर्णशमशेरको घर भएका कारण म बिएससी पढ्न त्यही गएँ र कलकत्ता विश्वविद्यालयबाटै बिएससी पूरा गरेँ ।

स्नातक सकेपछि इन्जिनियरिङ पढौँ जस्तो लागेको थियो तर फेरि स्नातक पढेर जाँदा धेरै ढिलो भइसक्छ बरू मास्टर्स नै गरिहाल्छु भन्ने भयो । मास्टर्समा पढ्नका लागि कोलम्बो प्लानमा आवेदन दिएँ । कोलम्बो प्लान अन्तर्गत मैले फेरि कलकत्तामा नै पढ्ने अवसर पाएँ र भौतिकशास्त्रमा एमएससी तह पूरा गरेँ । यसै समयमा जर्मन भाषा पनि सिकेँ । मेरा जर्मनी गुरूले जर्मन जानका लगि प्रस्ताव गरेका पनि थिए तर मैले रूचि देखाइनँ । बङ्गाली भाषा कलकत्ता बस्दाबस्दै आफैँ सिकेँ ।

२०१७ पुस १ गते नेपालमा राजा महेन्द्रले शासन अधिकार आफ्नो हातमा लिँदा म कलकत्तामा नै थिएँ । त्यति बेला बुबा जेल पर्नुभएको कुरा सुवर्णशमशेरबाट नै थाहा भयो । अनि उहाँले नै आमालाई जकपुरबाट लिएर जाऊ भनेर मैले आमालाई लिएर सिमरा हुदै काठमाडौँ पुगेँ ।

✍ तपाईँको बुबा राजनीतिमा लागेको मान्छे तपाईँ प्राध्यापनमा लाग्नुभयो । यसमा केही सम्बन्ध छ कि ?

म राजनीतिमा कहिल्यै लागिनँ । साधारण सदस्यता पनि लिइनँ न त बुबाले नै राजनीतिमा लाग्न सल्लाह दिनुभयो न त भातृ सङ्गठनमा सहभागी हुन लगाउनुभयो । उहाँले बारम्बार भन्नुहुन्थ्यो "म सार्वजनिक जीवनमा हिँडिसकेको मान्छे, तिम्रा लागि केही गर्न सक्तिनँ, मबाट केही आशा नगर, तिमी आफैले दुख गर्नुपर्छ । आफूले चाहेको विषय पढ, काम गर, आफ्नो प्रतिभालाई आफैले चम्काउनुपर्छ ।"

बुबासँग म भेटेर कुरा गर्न पनि पाउँदिनथेँ । उहाँ सधैँ आफ्नो पाटी नेपाली काङ्ग्रेसको काममा व्यस्त रहनुहुन्थ्यो । उहाँलाई हाम्रो बारेमा चिन्ता थियो हाम्रो आवश्यकता पनि पूरा गर्नुभयो तर हाम्रा पछाडि लागेर हिँड्नुभएन । न त हामीलाई उहाँको पिच्छलग्गु बनाउनुभयो । हामीलाई स्वतन्त्र छाडिदिनुभयो । मलाई जाँचबुझ केन्द्रमा काम गर्न बोलाएपछि यस सम्बन्धमा बुबालाई "जाँचबुझ केन्द्र काम गर्न बोलाएका छन् के गरौँ" भनेर सोध्दा "तिम्रो क्यारियर हो जे गर्छौ गर मलाई भन्नु केही छैन, जे ठिक लाग्छ सोही गर ।" भन्नुभयो । मैले तपाईँको राजनीतिमा यसले असर पार्छ कि भनेर जिज्ञाशा राख्दा जसजसले जे भने पनि असर पर्दैन भन्नुभयो ।

कलकत्ताबाट पढाइसकेर आएपछि मात्र म स्थायी रूपमा मामाघरबाट नक्साल घरमा बस्न थालेँ । त्यहाँ बुबाको भेटघाट गर्ने एउटा सानो कोठा थियो तत्कालका लागि म त्यही कोठामा बस्नुपर्ने भयो । म सुतेकै कोठामा बिहानै ५ बज्नु अगाडिबाटै मानिस आउँदा रहेछन् । मलाई अचम्म लाग्यो । यसरी सुतिरहेको अवस्थामा धमाधम मानिस आउँदा रहेछन् । राति पनि अबेलासम्म मानिस आइ नै रहने बिहान त उज्यालो नहुँदै मानिसहरु आइपुग्ने कुराले मलाई हैरान पाऱ्यो र आमालाई गुनासो पनि गरेँ । पछि गएर बल्ल मेरा लागि छुट्टै कोठाको व्यवस्था भयो ।

बुबा पार्टीप्रति पूर्ण समर्पित हुनुहुनथ्यो । पाटीको झन्डाको परिकल्पनाकार हुनुभएको उहाँलाई घरको अन्य काम गर्ने फुर्सत हुँदैनथ्यो । गणेशमान, विश्वेश्वरप्रसाद कोइराला, पुष्पलाल, सुवर्णशमशेर आदि त्यस बेला हाम्रा घरमा आइरहने हुँदा सबै नेतालाई भेट्न पाएको थिएँ ।

समग्रमा भन्दा बुबाको राजनीतिबाट न त मैले केही फाइदा लिन खोजे न बुबाले नै मलाई राजनीतिमा संलग्न गराउने प्रयत्न गर्नुभयो । यस विषयमा हामी सबै आआफ्नो निर्णय लिन स्वतन्त्र थियौँ ।

✍ तपाईँले विद्यावारिधि किन गर्नुभएन ? प्रयासै गर्नुभएन कि अरू केही भयो ?

मैले फुलब्राइटमा निवेदन राखेको थिएँ विद्यावारिधि गर्नका लागि । म छनोटमा पनि परेँ । पछि "अमेरिका जान एक हप्ता बाँकी भएकाले जान तयार हुनू" भन्ने खरब पनि आयो र म तयारी भएर बसेँ । तर एक दुई दिन पछि मैले एउटा चिठी पाएँ जसमा म अध्ययनका लागि जान नसक्ने बेहोरा थियो । त्यसपछि म यसका लागि बुझ्न फुलब्राइट

अफिस जाँदा उहाँहरूले "हामीले रोकेको होइन तिम्रो सरकारले नै अनुमति दिएन" भन्नुभयो । साथै पासपोर्ट बनाउन सकेमा अमेरिका जान पाउने पनि भने र म पासपोर्ट बनाउने कोसिसमा लागेँ । पासपोर्टका लागि शिक्षा मन्त्रालयले सिफारिस चाहिन्थ्यो तर शिक्षा मन्त्रालयले नै मलाई रोकेकाले सिफारिस दिने कुरै भएन । यो घटना २०१८ सालको हो एमएससी गरेर फर्केपछि कुनै काम पाएको थिइनँ र मेरो बुबा त्यसवेला जेलबाट भर्खरै मात्र छुट्नुभएको थियो । उहाँ नेपाली काङ्ग्रेसको नेता भएकाले राजा महेन्द्रको पञ्चायत व्यवस्थाको प्रखर बिरोधीका रूपमा चिनिनुहुन्थ्यो ।

त्यसपछि विद्यावारिधि गर्नका लागि २०१९मा कोलम्बो प्लान अन्तर्गत म भारतको पुना विश्वविद्यालयमा गएँ । त्यहाँ सबै कुरा बुझ्दा विद्यावारिधि पूरा गर्न कम्तीमा पनि ५ वर्ष लाग्ने र धेरै जसोको सात वर्षमा मात्र पूरा भएको थाहा पाएँ । मेरो गाइड महाराष्ट्रमा निकै चर्चित हुनुहुन्थ्यो । उहाँले मलाई "Optical Properties of air at High Pressure" शीर्षकमा काम गर्न लगाउनुभयो । मेरो गाइडले के देखेर यो शीर्षक चयन गरेर मलाई अनुसन्धानमा लगाउनुभयो कुन्नि मेरो भने चित्त बुझेन । पुनाको आसपासमा रहेको National Chemical Laboratory, Tata Institute of Fundamental Research, Indian Institute of Tropical Meteorology आदि अनुसन्धान संस्थाका प्रयोगशालमा गएर अवलोकन तथा काम गरेँ । पिएचडीका लागि मैले जुन काम गरिरहेको थिएँ त्यस किसिमको काम त नेपालमा नै गएर गर्न पनि सकिन्छ किन अरु देश जाने भन्ने प्रश्न मेरो मनमा उब्जियो । बरू नेपालमा नै केही अनुसन्धान गर्छु भन्ने भयो र विद्यावारिधि यात्रालाई विश्राम दिएर विद्यावारिधि होस् नहोस् नेपालमा नै अनुसन्धान गर्छु र बरू कीर्तिहरु प्रकाशित गर्छु भन्ने अठोट लिएर म नेपाल फर्कें । यसरी दुई वर्ष पुना बसेर २०२१ सालमा नेपाल फर्केर पुनः अस्थायी रूपमा त्रिचन्द्रमा भौतिकशास्त्र पढाउन थालें ।

तपाईंको जागिरे जीवन कसरी सुरू भयो ? बताइदिनुहुन्छ कि ।

फिजिक्समा एमएससी गरेर नेपाल आएपछि पनि डेढवर्ष जति मैले काम पाइनँ । ट्युसन पढाउने काम गरेर बसेँ । २०१८ चैत्र १ गते मात्र त्रिचन्द्र कलेजमा अस्थायी लेक्चररको नियुक्ति पाएँ । हाम्रो नियुक्तिमा वर्षमा दुई महिनाको तलब नदिने १० महिनाको तलब दिइन्थ्यो । यसरी नै केही समय पढाएँ । पछि शिक्षा मन्त्रालयमा विगतका वर्षका तलब दाबी नगर्ने भनी कागज गरेपछि मात्र पूरा समयको तलब पाउने व्यवस्था भयो । त्यसै वेला मेरा गुरू अमृतप्रसाद प्रधानको आग्रहमा मैले पार्ट टाइम लेक्चररका रूपमा पब्लिक साइन्स कलेज (अमृत क्याम्पस) मा पनि पढाएँ ।

म पुनाबाट फर्किँदा त्रिचन्द्र कलेजमा मेरो ठाउँमा अर्को व्यक्ति नियुक्त भइसकेको रहेछ तर पनि मैले पढाउन पाएँ । त्यहाँ त्रिचन्द्र कलेज साइन्स एसोसिएसन भन्ने संस्था प्रा. शंकरप्रसाद प्रधानको अगुवाईमा खोलेर केही सरकारी अनुदान प्राप्त गरी अनुसन्धानात्मक कामहरु सुरू गर्ने काममा संलग्न भएँ । वायु प्रदुषण सम्बन्धमा केही काम गर्नुपर्छ भन्ने लागेर त्यस विषयमा र पुनर्नवीकरणीय ऊर्जामा काम गर्न थालियो । एसिया प्यासिफिक इनर्जी ग्रुपमा पनि म सहभागी भएँ र यसै बेला मेरो अनुसन्धानात्मक लेख पनि प्रकाशन भयो ।

म सधैँ अरूले "हुन्न" भनेको कुरामा "किन के कारणले हुँदैन ?" भनेर प्रश्न गर्ने गर्थें र यसको समाधानमा लागिहाल्थें । नेपाल बाहिरका मानिस नेपालमा आएर अनुसन्धान गरेर जाने अनि हामी नेपालीले केही नगरी हेरेर बस्ने गर्नुहुँदैन भनेर म अनुसन्धानमा लागिपरेँ । साइन्स साइन्स नै हो । जहाँ बसेर पनि गर्न सकिन्छ भन्ने मेरो बिचार थियो । हामीसँग ठूलो प्रयोगशाला त छैन तर जे साधन स्रोत छ त्यसमा राम्रै काम गर्न सकिन्छ भन्ने मेरो विश्वास थियो ।

२०२१ मा पुना विश्वविद्यालयबाट फर्केपछि त्रिभुवन विश्वविद्यालयमा फिजिक्समा पनि एमएससीको

पढाइ सुरू गर्ने तयारी चल्दै थियो । त्यसमा मैले पनि सम्मिलित हुने अवसर पाएँ । सन् १९६५ बाट १९६७ सम्म एमएससी फिजिक्सको ल्याबको स्थापना र प्राध्यापन गर्ने श्रेय पनि प्राप्त भयो । फिजिक्सको केन्द्रीय विभाग र एमएससीको पढाइ त्रिचन्द्रमा नै सुरू भएको हो । सुरूमा एमएससी पढाउने सबै आंशिक रूपमै थियौं । पछि पूर्णकालीन रूपमा पढाउनका लागि माग पनि गरियो । तर यसरी स्नातकोत्तर तहमा पढाएको ग्रेड पनि नदिने र पूर्णकालीन वा आंशिक दुवैलाई एउटै मान्यता दिने भएपछि त्यहाँ पढाइनँ त्रिचन्द्र कलेजमा मात्रै पढाएँ । यसै कुरालाई अगाडि बढाउँछु भनेर सिनेटमा पनि उठे तर मलाई यस सम्बन्धमा कसरी जित्ने भन्ने थाहा थिएन र हारैं पनि ।

यसै बेला नेशनल कलेज (रात्रीकलेज) का प्रिन्सिपल शंकरदेव पन्तको आग्रहमा आईएससीको पढाइ सुरू गरियो । जसमा मेरा मित्र प्राध्यापक सुरेशराज शर्मा (पछि काठमाडौं विश्वविद्यालयका संस्थापक उपकुलपति) ले र अन्य प्राध्यापक मित्रहरूले ठूलो सहयोग गर्नुभयो । दुर्भाग्यवश २०३० सालमा बडो मेहनत गरेर स्थापना भएका ल्याबहरु तोडिन पुग्यो । नयाँ शिक्षा नीतिअनुसार आइएससीको कार्यक्रम त्यस कलेजबाट हटाइयो ।

यसै बिचमा त्रिभुवन अन्तराष्ट्रिय विमानस्थलमा मौसम विज्ञको आवश्यकता भएको जानकारी पाएँ । स्नातक तहमा मौसम सम्बन्धी विषय पढाइ नभएको हुनाले यहाँ यससम्बन्धी विज्ञ उत्पादन भएका थिएनन् र भारतबाटै विज्ञहरु बोलाइन्थ्यो । यसै क्रममा मलाई तत्कालीन श्री ५को सरकारको मौसम विभागका अधिकृत मेरो बाल्यसखा डा. शरदप्रसाद अधिकारी आएर मलाई काजमा आउन अनुरोध गरे । अनि म काजमा नेपाल सरकारको मौसम विभागमा गएँ । यही बिचमा लामटाङमा एउटा स्नोगज राख्न शरद अधिारीसँगै गइयो । यसले मेरो उत्सुकता र अनुसन्धानप्रतिको चासो अझ बढ्न गयो । यो हिमाली श्रृङ्खलालाई नै मैले त एउटा ल्याबको रूपमा देख्न थालैं । हामीले यसको अध्ययन नगर्ने तर विदेशीहरु आएर यसैको अनुसन्धान गर्ने गरेको देखेपछि मैले सोचैं "यसलाई एउटा अनुसन्धान क्षेत्रको रूपमा स्थापित गरेर स्वदेशी विज्ञहरूलाई अनुसन्धान गर्न लगाउनुपर्छ र अनुसन्धानको एउटा हब नै बनाउनुपर्छ । केही अनुदान उपलब्ध गराउन सके यस्ता अनुसन्धान गर्न सकिन्छ । नेपालका हिमाल र पहाडका फरक मौसमकै कारण यसबाट नयाँ ज्ञान लिन पनि सकिन्छ र सानो ठाउँबाटै धेरै विवरण प्राप्त गर्न सकिन्छ ।" एक पटक पोल्यान्डको हिमालयन एक्पेडिसन आएको थियो । यसले सहयोग मागेकाले भौतिकशास्त्रकै खड्गबहादुर थापा मेरो अनुरोधमा हाम्रो सहयोग स्वरूप जानुभयो । उहाँले पनि त्यहाँको केही अवलोकन र मेजरमेन्ट गरेर डाटा सकलन गरी आउनुभयो ।

तत्कालीन श्री ५को सरकारको जलवायु विज्ञान विभाग र शिक्षा मन्त्रालयको निर्णय अनुसार म World Meteorological Organization (WMO) को फेलोसिपमा बेलायतमा १९६९को सेप्टेम्बरमा मौसम विज्ञानको स्नातकोत्तर अध्ययन गर्न रेडिङ युनिभर्सिटी युकेमा गएँ । Prof. Ashish Sutlecliff त्यहाँको विभागीय प्रमुख हुनुहुन्थ्यो र यो सुरूवाती चरणमा नै थियो । यहाँ जानका लागि हामीलाई १२० पाउन्ड दिने भनिएको थियो । यस बारेमा त्यहाँ रहेका मेरा आफन्त तथा चिनेजानेकासँग बुझ्दा श्रीमान्श्रीमती दुवै जना जाँदा पनि खर्चले धान्ने थाहा पाएपछि दुबै जना जाने तयारी भयो । तर पछि ६८ पाउन्ड मात्र प्राप्त भयो । यसले गर्दा निकै अप्ठ्यारो परेको थियो । एक मन त नजाऊँ कि पनि भएको थियो तर सम्झौता गरेपछि एक्लै भए पनि जानै पऱ्यो । त्यहाँ एक वर्ष जति बसैं । बेलायत जानु अगाडि मेरी श्रीमती गर्भवती थिइन् । नौ महिना भइसकेको थियो । मलाई त्यस्तो अवस्थामा उनलाई छोडेर जान बडो कठिन भएको थियो । म गएको एक महिनापछि हाम्रो छोरा जन्मेको हो । बेलायतबाट फर्केर मात्र मैले उसको मुख देख्न पाएँ । त्यस समयमा फोन सपर्क हुन पनि कठिन थियो ।

भौतिकशास्त्र र मौसम विज्ञान विषयको सम्बन्ध धेरै नजिकको हुन्छ । बेलायतमा मौसम विज्ञानमा गणितज्ञ, भौतिकशास्त्री, तथ्याङ्कशास्त्री, रसायनशास्त्री तथा भूगर्भविद्हरु नै आएका थिएँ र उनीहरूले नै मौसम विज्ञान सम्बन्धी काम गर्ने गरेको देखेँ ।

बेलायतबाट फर्केपछि श्री ५ को सरकारको विभागमा काजमा नै गएँ । त्यस अवधिमा त्रिचन्द्र कलेजमा फिजिक्स पनि पढाएँ । त्यसै समयमा राजाका प्रमुख स्वकीय सचिव नारायणप्रसादजीले जाँचबुझ केन्द्रमा राजा वीरेन्द्रको जिल्ला भ्रमण सवारीमा काम गर्न बोलाउनुभयो । जाँचबुझ केन्द्रबाट फुर्सद पाउँदा र त्यहाँ बिदा हुँदाका दिनमा त्रिचन्द्र कलेजमा पढाउँथे । राजाको सवारीका लागि तयार गरिएका जिल्लाका परिचय, प्रतिवेदन र थप सामग्री जोडेर जाँचबुझ केन्द्रले मेची देखि महाकाली नामको चार खण्डको पुस्तक प्रकाशित गरेको थियो । उक्त पुस्तकको 'प्राकृतिक स्वरूप र सम्पदा' शीर्षकको खण्ड मैले नै सम्पादन गरेको थिएँ । जाँचबुझ केन्द्रको काम र अनुभवले जीवनका धेरै ठाउँमा सहयोग गरेको छ । राजासँग नजिक रहेको बुझेर हो वा किन हो यहाँ दुई वर्ष रहेर काम गर्दाको प्रभाव मेरो जीवनमा पछिसम्म रहिरह्यो ।

बेलायतबाट फर्कदासाथ मैले मैले स्नातक तहमा मौसम विज्ञानको पढाइ सुरू गर्न खोजेँ । तर शिक्षा मन्त्रालयले उच्च शिक्षा सबै त्रिविले सञ्चालन गर्ने राष्ट्रिय शिक्षा नीति भएकाले २०३० सालमा मात्र जलवायु विज्ञानमा बिएससीको पठनपाठन सुरू गर्न सकियो । अनि मैले त्रिचन्द्र कलेजमा फिजिक्स छोडेर जलवायुविज्ञान पढाउन सुरू गरेँ । सुरूमा म एक्लैले मौसम विज्ञान विभाग स्थापना गर्नुपऱ्यो । सरस्वती सदनको उत्तरपश्चिममा रहेको रातो बिल्डिङको एउटा कोठा पाइएको थियो । त्यस समयमा मलाई सहयोग गर्ने कोही भएन । अनि विभागीय प्रमुखदेखि कार्यालय सहयोगीले गर्ने सबै काम मैले नै स्वयंसेवकका रूपमा गरेँ । त्यसवेला आंशिक रूपमा सरकारी मौसम विभागका विज्ञहरु डा. शरदप्रसाद अधिकारी, किरण शंकर र विदेशी सल्लाहकारहरूले पठनपाठनमा कक्षाहरु सञ्चालन गर्न सहयोग गर्नुभयो । यसरी स्नातक तहमा मौसम विज्ञानको पढाइ सुरू भयो । तर पढाउने शिक्षकको कमी त छँदै थियो । यसका लागि नेपालमा विज्ञहरु हुने कुरा पनि भएन । अनि यसको समाधानका लागि पोस्ट ग्राजुएट डिप्लोमा इन मेटिरियोलोजी सुरू गरियो । भौतिकशास्त्र लगायत विज्ञानका अन्य विषयमा एमएससी गरिसकेकाहरूका लागि मौसम विज्ञानको थप कोर्स गर्ने गरी यो एक बर्से कार्यक्रम सञ्चालन गरियो । जसमा प्रतिवर्ष ८,१० जना जति विद्यार्थीहरु संलग्न थिए । पछि यीमध्ये त्रिचन्द्रको भौतिकशास्त्र विभागमा रहेका ध्रुवदास मुल्मी, विदुर उपाध्याय र खड्गबहादुर थापाले जलतथा मौसम विभागमा मलाई सघाउनुभयो र मेरो अनुपस्थितिमा नेतृत्वको काम पनि सम्हाल्नुभयो ।

यो कार्यक्रमको पढाइ बिहानीको समयमा हुन्थ्यो । पढाइ त सुरू गरियो तर किताबको समस्या भयो । केन्द्रीय पुस्तकालयमा यहाँका विद्यार्थीको सदस्यता नहुने । यसकारण पुस्तकालयमा नै बसेर त पढ्न सकिने तर पुस्तक निकाल्न नमिल्ने भयो । अनि यसको समाधानका लागि केन्द्रीय पुस्तकालयका किताबहरु सबै मेरा नाममा निकालेर किताबको जिम्मा व्यक्तिगत रूपमा मैले नै लिने सर्तमा विद्यार्थीलाई पढ्न दिइयो । यसमा तत्कालीन विज्ञान तथा प्रविधि अध्ययन संस्थानका पहिला डिन र मेरा भौतिकशास्त्रका गुरू डा. शङ्करप्रसाद प्रधानले ठूलो सहयोग गर्नुभयो । उहाँले त्रिविमा जलवायु विज्ञानका बिएससी र एमएसीका कोर्सहरु सञ्चालन गर्न योजनाकालदेखि नै सक्रियतापूर्वक ठूलो सहयोग गर्नुभयो । नत्र मैले मात्र गरेर यो सम्भव हुने थिएन । प्रयोगात्मक कक्षाका लागि विमानस्थलमा नै गइन्थ्यो । अहिले त सबै डिजिटलाइज भयो तर त्यस बेला मैले सबै डेटा चार्टमा राखी नक्सा बनाएर मौसमको विश्लेषण र भविष्यवाणी गर्नुपर्थ्यो । त्रिचन्द्र कलेजमा जल तथा मौसमको बिएससी स्नातक तहको कार्यक्रम

सुरू भएदेखि नै केही अनुसन्धान कार्य र जापानी विश्वविद्यालयको सहयोगमा Gelacial Expection of Nepal भन्ने अनुसन्धान परियोजना संयुक्त स्वमा सञ्चालन गरियो । बिहानको डिप्लोमा कार्यक्रमका लागि सरकारका मौसम विभागका विज्ञहरुको पनि सहयोग थियो जसमा मदलाल श्रेष्ठ र मदनबहादुर बस्नेतहरु पनि पछि संलग्न हुन आउनुभयो ।

जे काम गर्दा पनि आफूमा दृढ विश्वास हुनुपर्ने रहेछ अनि काम गर्न सकिने रहेछ । मेरो सम्बन्धमा पनि यस्तै भयो । कतिपय कुरामा जोखिम पनि मोल्नुपर्ने रहेछ । नडगी काम गरेपछि सफल भइने रहेछ । स्नातकोत्तर डिप्लोमा सुरू गरेको २०३१ तिर हो । अब ममा दुईवटा जिम्मेवारी रहे । एउटा केन्द्रीय क्याम्पसको शिक्षण समितिको अध्यक्ष र अर्को त्रिचन्द्र क्याम्पसको विभागीय प्रमुख ।

जल तथा मौसमविज्ञानको एमएसी कार्यक्रम सुरू गर्ने कुरा चल्दा यसबाट उत्पादित सबै जनशक्ति नेपालमा खपत हुने स्थिति थिएन । यसले गर्दा एटमोसफेरिक फिजिक्स कक्षा सुरू गरौं भन्ने भयो । जसमा जल तथा मौसम विज्ञान पनि हुने र भौतिकशास्त्रका कोर्स मिलाउने सल्लाह भयो र ६० प्रतिशत जल तथा मौसम विज्ञान र ४० प्रतिशत भौतिकशास्त्रको विषयवस्तु राखेर पाठ्यक्रम तयार गरियो र स्नातकोत्तर तहको पढाइ पनि सुरू भयो । पढाइ सुरू त गरियो तर बजेटको केही व्यवस्था थिएन । प्रयोगशाला र उपकरणका लागि तत्कालीन श्री ५ को सरकारको सम्बन्धित विभागका विज्ञहरु र त्रिभुवन विमानस्थल स्थित मौसम भविष्यवाणी शाखाका सुविधाहरु उपलब्ध गराइ कक्षाहरु चलाइयो ।

अर्को वर्ष भने बजेटका लागि बेलैमा प्रयास गरियो र केन्द्रीय क्याम्पसको बजेटमा चानचुन एक लाख यस विभागका लागि उपकरणहरु खरिद प्रयोजना लागि प्राप्त हुने कुरा भयो । बजेटको आश्वासन पाएपछि मैले जल तथा मौसमविज्ञानको प्रयोगशाला स्थापना गर्ने हेतुले आवश्यक उपकरण खरिद गर्ने प्रक्रिया अगाडि बढाएँ । तर अर्को पटकको बैठकमा हाम्रा लागि छुट्याएको बजेट वनस्पतिशास्त्र र प्राणीशास्त्रको उपकरणहरुका लागि खर्च गर्ने निर्णय भएको बेहोरा सुनाइयो । वनस्पतिशास्त्र र प्राणीशास्त्रले आफूलाई चाहिने उपकरण मगाएर भन्सारमा रहेको र भन्सार महसुल बुझाउनका लागि रकम नपुगेकाले हामीलाई छुट्याएको रकम उतै गएछ । यसरी छुट्याएको बजेट पनि नदिएपछि कसरी काम गर्ने ? अनि मैले "यसरी बजेट अन्तै लगेर काम गर्न नपाएपछि म पदीय जिम्मेवारी लिएर रहन सक्दिनँ पढाउने काम मात्र गर्छु ?" भनेर डिनज्यूसँग कुरा गरैं । त्यसपछि त्रिवि केन्द्रीय क्याम्पसको जलवायु शिक्षण समिति र त्रिचन्द्र कलेजका जलवायु शिक्षण समिति दुवैको अध्यक्ष पदबाट राजीनामा दिएर कक्षाहरुका पढाउने काम मात्रको जिम्मा लिएँ ।

✍ तपाईं त सानै उमेरमा डिन हुनुभयो । कसरी यो सम्भव भयो बताइदिनुहुन्छ कि ?

विभागीय प्रमुख भै काम गर्दा मैले भोगेका समस्याका बारेमा त्रिवि केन्द्रीय क्याम्पस र त्रिचन्द्रका साथीहरुसँग सल्लाह गर्न थालैं । मैले गर्न खोजेका कामलाई सफल पार्न के गर्ने होला, कसरी गर्ने होला भन्ने बारेमा छलफल गरैं । अनि माथिल्लो पद लिएर सहजीकरण नगरिकन तलबाट प्रयास गरेर मात्र नहुने निष्कर्ष निस्कियो । त्यस छलफलपछि मलाई माथिल्लो पदमा जानका लागि एउटा उत्प्रेरणा जाग्यो र डिन हुनका लागि प्रयास गरैं । त्यसैवेला नयाँ डिनको खोजी भइरहेको कुरा थाहा पाएँ । मैले आफूलाई पद पाउनका लागि अहिलेसम्म भनसुन आदि गरेको थिइनँ । तर अबको परिस्थितिमा कुनै अर्को उपाय देखिनँ । त्यति वेला विश्वविद्यालयको कुलपति त राजा नै हुने र डिन नियुक्ति पनि राजाले नै गर्ने हुनाले त्यहाँ अनुरोध गर्ने विचार गरैं । जाँचबुझ केन्द्रमा काम गरेको हुनाले मलाई यो सहज हुने देखैं । अनि मलाई जाँचबुझ केन्द्रमा काम गर्न बोलाउने नारायणप्रसादजीलाई भेट गर्न पुगैं । उहाँबाट उपकुलपतिबाट नाम सिफारिस भयो भने यो काम हुन्छ हुने आश्वासन पाएँ ।

अब उपकुलपतिलाई भेट गर्नुपर्ने भयो । कसरी भेट गर्ने होला भनेर बिचार गर्दा मेरा जेठान र तत्कालीन उपकुलपति डा. महेन्द्र साथी रहेछन् । यस कुरामा श्रीमतीले पहिले कुरा गरिछन् अनि जेठानले "मसँग ज्वाइँले किन कुरा नगरेको ?" भनेपछि मलाई कुरा गर्न जान कर गरिन् । उहाँले डा. महेन्द्रसँग कुरा गराउनुभयो । त्यहाँ गएपछि थाहा भयो डा.महेन्द्र बुबाका पनि साथी हुनुहुँदो रहेछ । अनि उहाँले "तिम्रो बुबाले त यस बारेमा मलाई कहिल्यै केही भन्नुभएन त" भन्नुभयो । बुबा र मेरो सम्बन्धमा उहाँको राजनीतिमा मैले केही नसोध्ने र मेरो पेसागत काममा पनि उहाँले केही दखल नगर्ने समझदारी थियो । अनि बुबासँग यस सम्बन्धमा कुरा गरेकै थिइनँ । उपकुलपति डा.महेनद्रप्रसादसँग विश्वविद्यालयबारे र खासगरी आफ्नो विषय र विभागहरूको उन्नति र प्रवर्द्धन गर्ने सम्बन्धमा कुराकानी भयो । २०३६ सालको विद्यार्थी आन्दोलन भर्खर भएकाले देशको राजनीति अप्ठ्यारो मोडमा थियो । डा. महेन्द्रले मलाई डिनमा सिफारिस गर्ने आश्वासन दिनुभयो । मैले डिनको नियुक्ति पनि पाएँ । सायद सानै उमेरमा डिन हुनेमध्ये म पनि हुँला ।

✍ तपाईँ डीन भएपछि तपाईँले भोगेका समस्या पूरा भए त ? अरू केके गर्नुभयो ? बिस्तारमा बताइदिनुहुन्छ कि ?

डिन भएपछि मेरा सबै समस्या कहाँ समाधान हुन्थ्यैं । डिन भएपछि झन् कठिन भयो । सबै विषयहरूलाई न्याय गर्नुपऱ्यो । मैले समग्र विज्ञानका विषयहरूलाई ध्यान दिएर काम गरैं र आफ्नो विषयका लागि सक्दो गरैं ।

त्यतिबेलाको डिन अफिस कीर्तिपुरमा नै थियो । अहिले कृषि तथा पशुविज्ञान अध्ययन संस्थानको डिन कार्यालय रहेको ठाउँमा, त्यस वेला विज्ञानको डिन अफिस थियो । डिन अफिसको भौतिक सुविधाको अवस्था कमजोर थियो । मभन्दा अगाडिका डिनज्यूहरूलाई केन्द्रीय कार्यालयमा नै धेरै समय बिताउनुपर्ने भएकाले आफ्नो अफिसको भौतिक सुविधातिर ध्यान दिने समय नै पाउँदैनथे । फेरि विज्ञानलाई कम ध्यान दिने हुँदा डिनको कार्यालयमा सुविधाको कमी भएको हुन सक्छ ।
एक दिन डिनलाई भेट्ने भनेर युनेस्कोको एक जना पदाधिकारी डिन आफिस आउनुभएको थियो । हामी कुरा गर्दै गर्दा म र उहाँबिचमा वर्षाको पानीको थोप तपतप गर्दै खस्न थाले । यसो माथि हेरेको त छानाबाट पानी चुहिरहेको र भुइँको जुट कार्पेटमा एउटा प्वाल नै परेको रहेछ । डिन भएर आएपछि विद्यार्थीसँगै कुरा गर्दागर्दै अरू कुरामा मेरो ध्यान नै गएको थिएन । भर्खर आन्दोलन बन्द भएको हुँदा विद्यार्थीको घेराउ भइरहन्थ्यो । यसरी पानीको थोपा खसेको र भुइँकको कार्पेटमा प्वाल परेको अवस्था देखेर मलाई निकै असहज महसुस भयो, सहिनसक्नु भयो । अनि मैले डिन अफिसलाई सुधार गर्ने अठोट गरैं । दक्षिणपट्टिका कोठाहरूमा रजिस्ट्रार कार्यालयका कागजपत्रहरूको डङ्गुर रहेछ । डिन अफिस उत्तरपट्टिका चिसा कोठामा थियो । अनि एक जना इन्जिनियर पुष्पदास मुल्मीलाई बोलाएर सल्लाह गरी सम्पूर्ण डिन कार्यालयको मर्मतसम्भार गर्ने काम भयो । त्यस मर्मत सम्भारको अरू पदाधिकारीले पनि सरहाना गरे ।

अनुसन्धान तथा प्रयोगशालाका लागि बजेट नपाएका कारण नै म डिन हुन कोसिस गरेको थिएँ ।। त्यसैले मैले त्यही कुरालाई अगाडि बढाएँ अनि अनुसन्धानका लागि उपलब्ध बजेटलाई विभाग तथा क्याम्पसमा दामासाहीले उपलब्ध गराएँ । कतिपयले यसको मर्म नबुझेर भौतिक सुधारमा समेत खर्च गरेछन् ।

म क्याम्पसहरू घुम्न पनि गएँ । जे गर्दा पनि म अनुसन्धानको अवस्था हेरी यसलाई सुधार गर्नका लागि आवश्यक सरसल्लाह गर्थैं । कुनै कुनैमा त त्यहाँको अवस्था देखेर मन नै खराब हुन्थ्यो । धेरै ठाउँमा कुरा गर्दा साइन्सलाई अवमूल्यन गरेको पाएँ । प्रविधिलाई प्राथमिकता दिँदा विज्ञानलाई खासै वास्ता नगर्ने गर्दा स्रोत र साधनको ठूलो

अभाव यस अध्ययन संस्थानका क्याम्पसहरूमा थियो । तर विज्ञानका आधारशिलामा नै प्रविधिको उन्नति हुन्छ भन्ने कुरा थाहा नपाएकाले होला विज्ञानलाई महत्व नदिएको ।

सबै क्याम्पसका विद्यार्थीहरूले प्रयोगशालाहरूमा समान स्तरका उपकरणहरु प्रयोग गर्न पाऊन् भनेर वरिष्ठ प्राध्यापकहरु सरस्वती रिमाल, सुदर्शन रिसाल, चित्रबहादुर तुलाधरको टोली बनाई क्याम्पसका प्रयोगशालाहरु निरीक्षण गर्न लगाउँदा प्रयोगशालाको स्तर वृद्धि गर्ने काम भयो । त्यसवेला झापादेखि महेन्द्रनगरसम्मका विज्ञानका सबै क्याम्पसका अवस्था सुधार र ल्याब र उपकरणहरूको स्तरउन्नतिका लागि आवश्यक सुझाव दिइयो । हरेक क्याम्पसमा विद्यार्थीहरूलाई ल्याबका हरेक सामानहरु उपलब्ध गराइ उपकरणको प्रयोग गर्न सक्ने अवस्थामा पुऱ्याइयो । क्याम्पसका प्राध्यापकहरूलाई पनि आवश्यक तालिम प्रदान गरी आवश्यक उपकरणहरूको सामान्य मर्मत सम्भार गर्न प्रोत्साहन गर्ने व्यवस्था गरियो ।

२०३० मा नयाँ शिक्षा लागु भएपछि निजी कलेजका आइएसीको कक्षा बन्द गरिएका थिए भने पब्लिक क्याम्पस जस्ता केही क्याम्पसलाई त्रिवि अन्तर्गत ल्याइएको थियो । नेशनल कलेजमा निर्माण भएका ल्याब भत्काइयो भने सरकारी कलेज पद्मकन्या कलेजमा पनि आइएससीको कार्यक्रम बन्द गरिएको थियो । आइएससी तहसम्मका उपकरणहरूको स्तरोन्नति भइसकेपछि पद्मकन्या क्याम्पसमा आइएससीको पढाइ पुन सञ्चालन गरियो र निजी स्कुल वनस्थली विद्याश्रमले आइएससीका कक्षाहरु सञ्चालन गर्न त्रिविसँग सहयोग मागकोमा आवश्यक उपरणहरूको अनुदान र प्राध्यापकहरूलाई आंशिक रूपमा प्राध्यापन गर्न अनुमति दिई सहयोग गरियो ।

यसरी त्रिवि केन्द्रीय क्याम्पसका साथै देशभरिका त्रिविका आंगिक क्याम्पसमा विज्ञानका प्रयोगशालाहरु र उपकरणहरूको स्तरोन्नति तथा बन्द भएका आइएससीका कार्यक्रमहरूको पुन सञ्चालन गरी उच्च शिक्षामा विज्ञानलाई यथोचित प्राथमिकता दिने विषयमा केही कदम चालियो ।

पब्लिक साइन्स कलेजका संस्थापक प्रिन्सिपल अमृतप्रसाद प्रधानले मलाई भन्नुभएको थियो, "आइएससीसम्म त स्तरीय शिक्षा दिने व्यवस्था यहाँ गर्न सकैं, बिएससीका लागि भने कक्षाहरु निर्माण गर्न आर्थिक अभावले गर्न पाएको छैन । सहयोग खोज्दै छु । त्यो पूरा गर्न पाए धेरै सन्तोष हुन्थ्यो ।" त्यसवेला म पब्लिक साइन्स कलेजमा आंशिक रूपमा फिजिक्स पढाउने गर्थे उहाँकै आग्रहमा । म डिन भएपछि यसबारे बुझ्दा बिएससीका कक्षाहरूका लागि मूल भवनमा जोडेर थप्ने काम भइरहेको बेहोरा मेरा मित्र र अमृत साइन्स क्याम्पसका प्रमुख मोहनवीर सिंहबाट थाहा पाएँ । ठेकेदारले काम अगाडि नबढाई बेपत्ता भएकाले काम अड्किएको रहेछ । मेरो डिन पदावधि आधा समाप्त हुन लागेको थियो । मोहनवीरजीसँग यस समस्या समाधान कसरी गर्ने भनी सल्लाह गरैं । अनि मैले प्राध्यापक अमृतप्रसादले पब्लिक साइन्स कलेज खोल्दाका उहाँका पुराना मित्र र पब्लिक साइन्स कलेका पुराना ट्रस्टीहरूमध्ये त्रिविकै इन्जिनियरिङ अध्ययन संस्थानका पूर्वडिन ई. कुलरत्न तुलाधरको अध्यक्षतामा एउटा निर्माण समिति गठन गर्ने र त्यसमा अर्का पुराना ट्रस्टी सुब्बा अनङ्गमान शेरचन सदस्य र क्याम्पस प्रमुख सदस्य रहने गरी ३ जनाको समितिले निर्माण गर्ने विचार गरैं । क्याम्पस प्रमुखले पनि त्यसलाई सहर्ष स्वीकार गर्नुभयो । मैले ई. कुलरत्न तुलाधर र सुब्बा अनङ्गमान शेरचनजीसँग आफै कुरा गरी सहयोगको याचना गरैं । उहाँहरु तयार हुनुभयो ई. कुलरत्न तुलाधार सबैका आदरणीय व्यक्तित्व हुनुहुन्थ्यो । यस समितिको अथक प्रयासले भवन बन्यो । मलाई ठूलो सन्तोष छ कि विज्ञानको जग बसाउन जीवन नै समर्पण गर्ने आदरणीय स्वर्गीय प्राध्यापक अमृत प्रधानको सपाना पूरा गर्न मैले केही गर्न सकैं । पछि थाहा भयो डिनको अधिकार क्षेत्रभन्दा बाहिर गएर काम गरेको भनी बेरूजु उठेको रहेछ । तर राम्रै काम भएर होला

म लगायत कसैमाथि कारबाही भएन ।

एकपटक लेखाबाट भन्सार तिर्नका लागि बजेट नभएको जानकारी भयो । भन्सारको रकम हेर्दा निकै धेरै रहेछ । शिक्षण सामग्रीका स्वमा प्रयोग हुने सामानलाई पनि भन्सारले किन यत्रो कर लिएको होला भनेर म भन्सार विभागमा नै पुगँ । संयोग पनि कस्तो भने मेरा मामाघरको छिमेकी र केटाकेटी देखिकै साथी नै भन्सारको हाकिम रहेछन् । अनि उहाँलाई "बरू प्राविधिकहरूलाई ल्याब हेर्न पठाइदिनुहोला तर शैक्षिक प्रयोजनको ल्याबमा प्रयोग हुने सामानलाई यसरी कर नलगाउनुहोला" भनी अनुरोध गरँ । आखिर यहाँबाट तिरिने रकम पनि सरकारी नै त हो नि भनेर सम्झाएँ । पछि ५०० प्रति गोटा स्वैया गोटा भन्सार लाग्ने भनेको सामानलाई १० । १५ स्वैयामा नै भन्सार छुटाउन म सफल भएँ । वास्तविक कुरा बुझ्दै जाँदा हाम्रो उपकरणमा मिटर भन्ने शब्द बढी प्रयोग हुने र भन्सारमा मिटर भन्नासाथ नै मोटरको पार्टपूर्जा भनेर कर लगाउने परम्परा नै रहेछ ।

कतिपय क्याम्पसको ल्याबको बिजोग अवस्था देखेर म अर्थ मन्त्रालयमा नै पुगँ । अनि उहाँहरूलाई "तपाईंका छोराछोरीलाई हामीले कस्तो साइन्स पढाउने हो ? सिकाउने पनि हो कि सिद्धान्त मात्र घोकाउने । सिकाउने हो भने सिकाउने ल्याबको अवस्था सुधार्न परेन ? यसका लागि बजेट चाहिँदैन ?" भनेर लबिङ गरेर प्रयोगशालाका लागि बजेट थप गर्न सफल भएँ । त्यति बेला उपकरण र अनुसन्धानका लागि करोड भन्दा बढीको बजेट छुट्याइएको थियो । म जाँचबुझ आयोगमा दुई वर्ष काम गर्दा मन्त्रालयहरु र विभागका उच्चपदस्थ पदाधिकारीसँग परिचय गर्ने अवसर पाएको थिएँ । त्यसले पनि सरकारी अनुदान बढाउन सायद मद्दत गऱ्यो कि ।

त्रिविको विज्ञान तथा प्रविधि अध्ययन संस्थान अन्तर्गतका सबै क्याम्पसमा अध्यापन र अनुसन्धानको स्तरोन्नति र बलियो आधारशीला निर्माण गर्न मैले त्रिवि केन्द्रीय पदाधिकारीहरु र शिक्षा मन्त्रालयका पदाधिकारीहरूसँग पनि समन्वय गरी शिक्षा मन्त्रालयमा कार्यरत युनेस्को सल्लाहकारलाई पनि आवश्यकता अनुसार संलग्न गराई एउटा ४ मिलियन डलरको परियोजना तयार पारँ । यो तयार पार्न यतिसम्म व्यस्त भएँ कि दशैंको अष्टमीको दिनसम्म पनि काममा खटिएको खटियै गरँ । ममात्र होइन कार्यालयका अरु कर्मचारीहरु पनि उसै गरी खटिएका थिए । पछि मेरी श्रीमतीले गाली पनि गरिन् । "यसरी दशैंको बेलामा पनि कर्मचारीहरूलाई त्यसरी काममा लदाउने हो । उनीहरूले दशै मान्नुपर्दैन" भनिन् । मलाई पनि यसरी पर्वका वेला काम गराउन ठिक गरिएन कि जस्तो लाग्यो । जे जसो भए पनि प्रस्ताव तयार भयो । यस प्रस्तावमा हरेक केन्द्रीय विभागमा ५ जना र हरेक क्याम्पसमा २ जनालाई विद्यावारिधि गराउनका लागि अनुदान उपलब्ध गराई आवश्यक व्यवस्था गर्ने विषय पनि रहेको थियो । फेरि दिएको समयावधि कट्ला भनेर यसरी रातोदिन मेहनत गर्नुपरेको थियो । यो प्रस्ताव मन्त्रालय हुँदै वैदेशिक अनुदानका लागि लागि सरकारले पेस गर्थ्यो तर सरकारले विज्ञानलाई कम प्राथमिकता दिने हुँदा उक्त परियोजनालाई मन्त्रालयले अगडि नै बढाएन । हामीले रातोदिन गरेको मेहनत पनि खेर गयो । यसै वेला सरकारको नीति मै साइन्स होइन टेक्नोलोजी मात्र अगाडि बढाऊ भन्ने रहेछ । त्यसै वेला मेरै सहयोगमा बनेको इन्टिच्युट अफ एजुकेसनको बिएड साइन्स कार्यक्रमलाई ४ मिलियन डलरको परियोजना प्रस्तावलाई सरकारले अगाडि बढाई ADB बाट ४ मिलियन डलर सहयोग प्राप्त भएको थियो ।

म डिन हुँदा विज्ञान विश्वविद्यालयको व्यवस्थापनमा एकेडेमी भन्दा अरु प्रशासनिक कार्यमा धेरै समय खर्चिनुपर्ने हुन्छ । विज्ञानको डिनले आफू अन्तर्गतका केन्द्रीय विभाग, क्याम्पस सारा कुरा हेर्नुपर्ने हुन्थ्यो । सहायक डिनलाई समेत बोलाएर विभिन्न काम लगाउनुपरेको थियो । दिएको अधिकार खोस्छु पनि भन्नुपऱ्यो । कतिपय शिक्षकले राजनीति गरेर क्याम्पस प्रमुखलाई थेग्नै नसक्ने

बनाएको पनि थाहा पाइयो । एउटा शिक्षकले बढी राजनीति गर्न खोजेर क्याम्पस प्रमुखलाई हैरान पारेको कुरा थाहा भयो । यस कुराले गर्दा उहाँले आफूलाई सरूवाको माग गर्नुभएको थियो । अनि मेले उहाँलाई उपकुपतिकहाँ लिएर गएँ र यस सम्बन्धमा आवश्यक कारबाही गरेर समस्या समाधान गरियो । यस चार बर्से कार्यकालमा पाँच बजे घर हिँड्ने भन्ने दिन नै आएन । सधै इमरजेन्सी काम गरिरहनुपर्ने समय थियो । विद्यार्थी आन्दोलन भर्खरै सकिएको र सरकार पक्षधर र सरकार विरोधीविच राजनैतिक मतभेदले त्रिवि पनि प्रभावित थियो ।

म डिन भएपछि पूर्व डिन लगायतको विवरणको अभिलेख राख्ने परम्परा सुरू गरेको थिएँ । यसले इतिहासलाई जीवित राख्न सहयोग होला भन्ने आशा गरेको थिएँ । प्रा.फणिन्द्रप्रसाद लोहनी, प्रा.प्रसन्नमानसिँह आदिको व्यक्तिगत विवरण सहित अभिलेख राखेको थिएँ । उहाँहरुको भ्वाइस रेकर्ड पनि राख्ने प्रयास पनि गरेको थिएँ ।

डिनको नियुक्ति पाएकै दिनदेखि मैले आफ्नो नैतिक मूल्य र मान्यतामा कुनै पनि सम्झौता गर्दिनँ र त्यस्तो अवस्था आए म तुरून्त राजिनामा गर्छु भनी मिति खाली राखी राजिनामा पत्र लेखेर साथमा बोकेर हिँड्ने गर्थें । काठमाडौँ बाहिरको एउटा जिल्लाको क्याम्पस निरीक्षण गरेर फर्केर आएपछि मैले तत्कालीन उपकुलपतिलाई त्यो राजिनामा दिनुपर्ने अवस्था आयो र दिएँ । उहाँले लिन मान्नुभएन । उहाँकै आग्रहमा पछि फिर्ता लिएँ । त्यो घटना र त्रिवि भित्र बढ्दो राजनैतिक हस्तक्षेप देखेपछि त्यही दिनदेखि नै दोस्रो पटक डिन नहुने निर्णय गरेको थिएँ र डिनको अवधि सकिएपछि म अध्यापन कार्यमा नै फर्कें । अन्य उपल्लो पदमा जाने विचार पनि गरिनँ ।

म डिन हुँदा सहायक डिनका रूपमा रहेर डा. देवेन्द्रराज बिस्ट, प्रा.चित्रबहादुर तुलाधर, डा. वीरेन्द्र मल्लिक, डा. कृष्ण मानन्धरले सहयोग गर्नुभयो । विशेष सल्लाह र सुझावका लागि प्रा. सरस्वती रिमाल र सुदर्शन रिसाल मेरो डिनको कार्यकालमा अत्यन्त ठूलो सहयोग गर्नुभयो । डा. मनललाल श्रेष्ठ र डा. मदन बहादुर बस्नेतले सुरूमा अध्यापन कार्यमा सहयोग गर्नुभएको थियो ।

✍ विश्वविद्यालयको अलवा अरू पनि केही काम गर्नुभयो कि ?

एक दिन शिक्षामन्त्री केशरबहादुर बिस्ट मेरो घरमा आउनुभयो र दुई वटा प्रस्ताव राख्नुभयो ।

१. म डिन भएको बेलामा इन्टिच्युट अफ एजुकेसनका लागि तयार गरिएको परियोजनाका लागि ADB बाट सहयोग प्राप्त भएको थियो । मलाई डिन पद सकिएपछि यो परियोजना सञ्चालन गर्न मन्त्रालयका तत्कालीन सचिव डा नर्सिङनारायण सिंहले धेरै आग्रह गर्नुभएको थियो । अहिले बिस्टजीले यही परियोजनाको सञ्चालन गर्ने जिम्मा दिने कुरा गर्नुभयो । यसमा लागेमा कमाइ पनि राम्रै हुने र विदेश घुमघाम गर्न पाइने पनि व्यवस्था थियो ।

२ युनेस्कोको Man and the Biosphere Programme (MAB) को नेपाल राष्ट्रिय कमिटिको सदस्यसचिवका रूपमा काम गनुपर्ने । यसमा नेपालमा MAB र युनेस्कोसँग समन्वय गरी अनुसन्धानका काम गर्नुपर्थ्यो तर तलब भत्ता इत्यादि पाइदैनथ्यो ।

मैले दोस्रो प्रस्तावलाई राजँ र यसबाट इसिमोडको स्थापनाको तयारीका लागि राष्ट्रिय समितिको सदस्यसचिव भई काम पनि गरँ । इसिमोडको स्थापना भइसकेपछि र त्रिविबाट अवकाश भएपश्चात् इसिमोडमा अन्तराष्ट्रिय स्तरको विज्ञका रूपमा काम गरँ । इसिमोड जानुको मेरो उद्देश्य मैले आफूले सुरू गरेका त्रिविका जलवायु विज्ञानका कामहरूलाई अझ स्तरोन्नति र अनुसन्धानको अवसर दिलाउन सकिन्छ कि भन्ने थियो । कही हदसम्म सो गर्न सफल पनि भएँ । इसिमोडको कार्यक्षेत्र हिन्दकुश हिमालयका आठ देश- अफगानिस्तान, बङ्गलादेश, भुटान, म्यानमार, चिन, भारत, नेपाल, पाकिस्तानका

हिमाली र पहाडी भूभाग पर्ने हुँदा म त्यहाँ काम गर्न आकर्षित भएको हुँ । त्यहाँ झन्डै दुई दशक काम गर्दा जलस्रोत, जलवायु परिवर्तन, प्राकृतिक प्रकोप, पर्वतीय वातावरण आदिको व्यवस्थापन र सम्बन्धित अनुसन्धान र तालिमका परियोजनाहरु सञ्चालन गरैं ।

✍ अन्तिममा तपाईंका भन्नुपर्ने केही कुरा छन् कि ?

हामीसँग जे जति स्रोत छ देखे जानेको बुद्धि विवेकले भ्याएसम्म आआफ्नो संस्थाको विकासको काम गर्नुपर्छ । दुई प्रतिस्पर्धी साथीको सम्बन्ध राम्रो नराम्रो जे भए पनि संस्थाको काममा मिलेर गर्नुपर्छ । पेसागत कुरामा नकारात्मक कहिल्यै हुनुहुँदैन । व्यक्तिगत स्वमा जे भए पनि संस्थालाई राम्रो गर्नुपर्छ, मिलेर गर्नुपर्छ । जुनसुकै शिक्षाले पनि पहिला आफूलाई सुधार गर्नुपर्ने कुरा गर्छन् । त्यसैले पहिले आफूलाई सुधार्नुपर्छ । शारीरिक मानसिक प्रदुषण हटाउन सके मात्र समाजमा अगाडि बढ्न सकिन्छ । एक छिन मनलाई आनन्द दिएर राख्नुपर्छ । विज्ञानले फाइदैफाइदा दिन्छ । फाइदा बाहेक केही छैन । सुरूमा खर्च केही बढी चाहिएला तर निन्तरता दिन सकेमा विज्ञानमा गरेको लगानीले राम्रै उपलब्धि हासिल गर्न सकिन्छ ।

स्व. प्रा.अमृतप्रसाद प्रधानले भन्नुहुन्थ्यो, "केही भएन भने मसीमात्र उत्पादन गरेर वितरण गर्न पाए पनि यसैले क्याम्पस चल्न सक्थ्यो ।" मलाई पनि लाग्छ कि एउटा क्याम्पसले कुनै पनि एक विषयमा अनुसन्धान गर्न थालेमा क्रमशः देशले स्थानीय र राष्ट्रिय विकासमा ठूलो टेवा दिनसक्छ । देशभरि रहेका क्याम्पसहरूबाट विज्ञानमा स्तरीय शिक्षा र अुनसन्धान हुन सकेका यो देशको कायापलट हुने थियो । यसका लागि इच्छाशक्ति चाहिन्छ र व्यक्तिगत स्वार्थ छाड्न सक्नुपर्छ ।

मैले जीवनमा सुरूदेखि नै नेपालमै विज्ञान शिक्षा र अनुसन्धानमा आफ्नो क्षमताले दिएसम्म त्यसको वृद्धि र विकासमा संलग्न हुन्छु भन्ने अठोट गरेको थिएँ । किनकि मैले २००७ सालको परिवर्तन

अघिको नेपालको अविकसित अवस्था देखेको हुँदा वैज्ञानिक सोच र चिन्तनबाट समाजलाई आधुनिकीकरण गर्न सम्भव हुन्छ भन्ने मेरो विश्वास छ । जलवायु विज्ञानमा मैले यो देशको आर्थिक विकासका लागि अत्यन्त महत्त्वपूर्ण र आफ्नो पहुँच भित्रको स्रोत र साधनबाट पनि धेरै उपलब्धिमूलक वैज्ञानिक अनुसन्धान कार्यहरु गर्न सक्ने सम्भावना देखेको छु । अहिले संसारभरि नै जलवायु परिवर्तनका कुराहरु उठिरहेका छन् । मैल जानीनजानी जलवायुविज्ञानको शिक्षण त्रिविमा सुरू गर्ने अवसर पाएँ र आज त्यस विषयमा त्रिविबाट उत्पादन भएका दक्ष व्यक्तिहरु देश विदेशमा वैज्ञानिक अनुसन्धानमा लागेको देख्दा खुसी छु । मलाई यस कार्यमा धेरैबाट सहयोग भएको हो । त्यसैले मलाई सहयोग गर्ने सबैलाई यसको श्रेय जान्छ । म उहाँहरुप्रति आभारी छु ।

PUBLICATIONS of IoST in the year 2024: A Statistics

Publication and its citation are the major strength of Institute of Science & Technology, Tribhuvan University. It is because of the contribution made by the biological science. physical science and mathematical sciences, citation score in the Times Higher Education World University Ranking (THE-WUR) reached above 70%. The major strength of IoST program is to create new knowledge in the respective and interdisciplinary fields. In the last year, Publications numbers of manuscripts from IoST faculties and students at Central Departments and campuses crosses 550. Still, number of constituent's colleges are missing from the data (Table 1, Figure 1) despite repeatedly call. We humbly request all Constituent/Affiliated colleges to send their data in a given format prescribed by Dean office.

Table 1: *A list of publications by the S&T faculties of Central Departments and Constituent Colleges of IoST, TU in the year 2024.*

Central Dept of	Total No.	Sci-index Journal
Biotechnology	14	8
Botany	58	36
Chemistry	128	60
Geology	41	23
Food Tech.	10	4
Hydro & Meteo.	27	18
Mathematics	50	29
Microbiology	48	36
Statistics	6	4
Physics	65	45
Zoology	51	38
Env. Science	38	22
CSIT	4	2
Bhaktapur Multiple campus	11	5
Degree campus, Biratnagar	12	4
Total	**563**	**334**

More than 51% artcles are found to be published in the SCImago listed Journals in the year 2024. Most of the SCI articles are either an outcome of Ph.D. work or collaborative research. In an average, each Ph.D. candidate has published 2 articles in the SCI Journals. In this section (below), a detail list of publications sent by the Central Departments and Constituent Colleges where S&T program is running are listed. As far as possible, DOI has been added in the list. In addition to the original research articles, book chapters and review articles have also been added in the list.

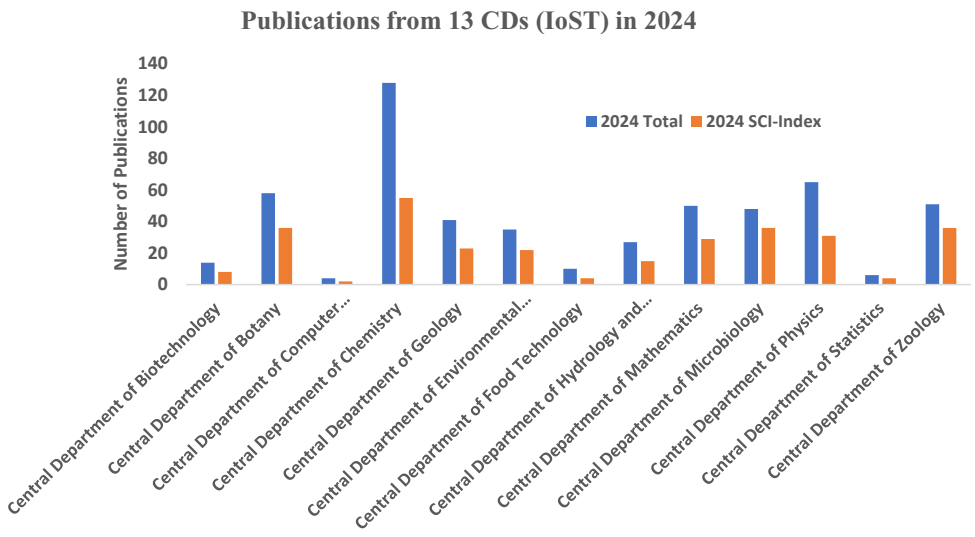


Figure 1: Histogram showing total number of publications by the Central Departments

PUBLICATIONS (2024)
Central Department of Biotechnology

International Journal

1. Napit, R., Elong Ngono, A., Mihindukulasuriya, K. A., Pradhan, A., Khadka, B., Shrestha, S., Droit, L., Paredes, A., Karki, L., Khatiwada, R., Tamang, M., Chalise, B. S., Rawal, M., Jha, B. K., Wang, D., Handley, S. A., Shresta, S., & Manandhar, K. D. (2024). Dengue virus surveillance in Nepal yields the first on-site whole genome sequences of isolates from the 2022 outbreak. *BMC genomics*, *25*(1), 998. https://doi.org/10.1186/s12864-024-10879-x
2. Ramanuj Rauniyar, Binod Manandhar, Satish Chandra Jha, Indu Bikram Joshi, Bimal Sharma Chalise, Paul K Wallace, William Telford, Krishna Das Manandhar (2024). Inflammatory cytokine response in dengue infected female of reproductive age: insight with reference to a pregnant case. *Journal of Institute of Science and Technology*, 29(2), 175-182
3. Prajapati, S., Ngono, A. E., Cauley, M. M., Timis, J., Shrestha, S., Bastola, A., Mandal, S. K., Yadav, S. R., Napit, R., Moi, M. L., Yamabhai, M., Sessions, O. M., Shresta, S., & Manandhar, K. D. (2024). Genomic sequencing and neutralizing serological profiles during acute dengue infection: A 2017 cohort study in Nepal. *bioRxiv : the preprint server for biology*, 2024.06.03.597174. https://doi.org/10.1101/2024.06.03.597174
4. Khadka, B., Napit, R., Mihindukulasuriya, K. A., Shrestha, S., Rauniyar, R., Tuladhar, E. T., Droit, L., Paredes, A. M., Jha, R., Raut, R., Jha, B. K., Handley, S. A., Elong-Ngono, A., Shresta, S., Wang, D., & Manandhar, K. D. (2024). Genomic surveillance of SARS-CoV-2 in Nepal. *Microbiology resource announcements*, *13*(12), e0078924
5. Tiwari, A., Poudel, P., Khanal, S., Lekhak, S., Adhikari, S., Regmi, R. S., & Sharma, S. (2024). Emergence of mcr-1 gene in colistin-resistant *Escherichia coli* isolates from chicken in Chitwan, Nepal. *Foodborne Pathogens and Disease*. https://doi.org/10.1089/fpd.2023.0151 (Q1).
6. Lamichhane, A., Regmi, S., Pandit, K., Upadhaya, S., Acharya, J., Koirala, S., Aryal, S., Gurung, K., Thapa, J., Adhikari, S., Sharma, S., Poudel, P., & Sharma, S. (2024). Identification of fungal pathogens among COVID-19 and non-COVID-19 cases in Bhaktapur hospital, Nepal. *BMC Research Notes,* 17, 347. https://doi.org/10.1186/s13104-024-07010-4
7. Pandit, K., Sharma, S., Aryal, S., Lamichhane, A., Regmi, S., Paudel, P., Koirala, S., Sharma, S., Adhikari, S., Rijal, K. R., & Poudel, P. (2024). Concurrent presence of Staphylococcal Cassette Chromosome mec types of Meticillin-resistant *Staphylococcus aureus* in hospital environments and post-operative patients at a hospital in Kathmandu, Nepal. *Infection Prevention in Practice,* 6, 100436. https://doi.org/10.1016/j.infpip.2024.100436
8. **Joshi, J.,** Bhatt, P., Kandel, P., Khadka, M., Kathariya, S., Thapa, S., Jha, S., Phaiju, S., Bajracharya, S. and Yadav, A. P. (2024). "Integrating microbial electrochemical cell in anaerobic digestion of vegetable wastes to enhance biogas production. *Bioresource Technology Reports* (27): 101940. **ISSN: 2589-014X.** https://doi.org/10.1016/j.biteb.2024.101940. Elsevier 101940,
9. Bhatt, P., Poudyal, P., Dhungana, P., Prajapati, B., Bajracharya, S., Yadav, A. P., Bhattarai, T., Sreerama, L., and **Joshi**, J. (2024). Enhancement of Biogas

(Methane) Production from Cow Dung Using a Microbial Electrochemical Cell and Molecular Characterization of Isolated Methanogenic Bacteria. *Biomass* 4(2): 455-471. ***I*SSN: 2673-8783** https://doi.org/10.3390/biomass4020023. ISSN: 2673-8783

10. Regmi, P., Knesebeck, M., Boles, E., Weuster-Botz, D., & Oreb, M. (2024). A comparative analysis of NADPH supply strategies in Saccharomyces cerevisiae: Production of d-xylitol from d-xylose as a case study. *Metabolic engineering communications*, *19*, e00245.

National Journal

11. Baral, S. K., Dangol, G., Manandhar, K. D., & Poudel, P. (2024). Characterization of virulence factors in multidrug-resistant Escherichia coli isolated from intestinal and extra-intestinal clinical samples. *Journal of Manmohan Memorial Institute of Health Sciences*, 9(2), 13–18. https://doi.org/10.3126/jmmihs.v9i2.71802

12. Poudel, P. (2024). Inculcating Entrepreneurial ecosystem in Nepalese Higher Education Institutions. The Transcript, A Biotechnology Magazine. *Nepalese Society of Biotechnology*, Central Department of Biotechnology, Tribhuvan University. Vol. 3 (1), ISSN: 2505-1103.

13. Soni, S., Dangol, S. D., Joshi, J. (2024). Exploring holistic wellness: Unveiling the probiotics wonders of fermented dairy-Meet Kefir and its health benefits. *Journal of Nepal Biotechnology Association.* 5(1), 61-68. DOI: https://doi.org/10.3126/jnba/v5i1/63748.

14. Regmi, P. (2024). CRISPR/Cas9 - A robust genome editing tool for microbes. *The Transcript- A Biotechnology Magazine 3 (12024)*, 45-46.

Central Department of Botany

International Publication

1. Acharya, M., Gautam, R., Yang, S., Jo, J., Maharjan, A., Lee, D., Ghimire, N.P., Min, B., Kim, C., Kim, H. and Heo, Y. 2024. Evaluation of *Artemisia dubia* folium extract-mediated immune efficacy through developing a murine model for acute and chronic stages of atopic dermatitis. *Laboratory Animal Rresearch*, 40(1): 13. https://doi.org/10.1186/s42826-024-00201-x

2. Adhikari, A., Subedi, S., Tiwari, A. and Shrestha, B.B. 2024. Impacts of road on plant invasions in the Middle Mountain region of central Nepal. *Journal of Mountain Science,* 21(2): 619-632. https://doi.org/10.1007/s11629-023-8064-z

3. Aryal, S., Poudel, Y.B., Joshi, G.P. and Pant, D.R. 2024. *Nymphanthus glaucescens* (phyllanthaceae): An addition to the flora of Nepal. *Journal of Japanese Botany*, 99(4): 265-267.

4. Dangol, A., Shrestha, A., Airi, H., Kharel, N., Thapa, L.B., Devkota, A. and Shrestha, B.B. Germination and seedling growth of closely related native and invasive Legume trees in Nepal. *Journal of Ecology and Environment,* 48:30. https://doi.org/10.5141/jee.24.034

5. Devkota, A., Shrestha, S. and Jha, P.K. 2024. Effect of air pollution on the leaf morphology and anatomy of common plant species of Kathmandu Valley. *European Journal of Ecology*, 10(1): 25-36. doi.org/10.17161/ eurojecol. v10i1.19487

6. Dhakal, S., Shrestha, B.B., Sharma, K.P., Paudel, S. and Siwakoti, M. 2024. Grasslands are more vulnerable to plant invasions than forests in south-central Nepal. *Environmental Challenge,* 15: 10.1016/j.envc.2024. 100929

7. Dhakal, T. M., Thapa, L. B., Yadav, R.K.P., and Pokhrel, C. P. 2024. Tree carbon stock and seasonal influence on soil properties in Shivpuri-Nagarjun National Park, Nepal. *Bangladesh Journal of Botany*, 53(3): 567-576.

8. Dhungana, B.P., Chhetri, V.T., Baniya, C.B., Sharma, S.P., Ghimire, P. and Vista, S.P. 2024. Post-fire effects on soil properties in high altitude mixed-conifer forest of Nepal. *Trees, Forests and People,* 17:100633. https://doi.org/10.1016/j.tfp.2024.100633.

9. Dhungana, B.P., Chhetri, V.T., Baniya, C.B., and Sharma, S.P. 2024. Low-intensity wildfire alters selected soil properties in the tropical *Shorearobusta* forest. *International Journal of Forestry Research*: https://doi.org/10.1155/2024/4686760.

10. Dorji, P., Suberi, B., Ghimire, N.P., and Rai, S.K. 2024. Diversity of freshwater algae of Khotokha Ramsar Wetland, Wangduephodrang district, Bhutan. *Asian Journal of Conservation Biology*, 13(1): 3-11. 10.53562/ajcb.80595.

11. Hofmann, S., Rödder, D., Andermann, T., Matschiner, M., Riedel, J., Baniya, C.B., Flecks, M., Yang, J., Jiang, K., Jianping, J., Litvinchuk, S.N., Martin, S., Masroor, R., Nothnagel, M., Vershinin, V., Zheng, Y., Jablonski, D., Schmidt, J. and Podsiadlowski, L. 2024. Exploring Paleogene Tibet's warm temperate environments through target enrichment and phylogenetic niche modelling of Himalayan spiny frogs (Paini, Dicroglossidae). *Molecular Ecology*, :e17446. https://doi.org/10.1111/mec.17446.

12. Dani, R.S. and Baniya, C.B. 2024. Seedling potential of trees species along the elevational gradient in temperate hill forest of central Nepal. *Journal of Mountain Science*, 21(4): 1329-1344.

13. Joshi, K., Sandip G.C., Poudel, Y.B., Ghimire, N.P. and Rajbhandary, S. 2024. *Scleria lithosperma* var. *lithosperma* (Cyperaceae): an addition to the flora of Nepal. *Rheedea*. 34(1): 2024. 10.22244/rheedea.2024. 34.01.04

14. Joshi, P.R., Thapa, B.B., Chand, K., Maharjan, L., Paudel, M.R., Pant, B. and Pant, B. 2024. Biological activities of protocorms and stems extracts of *Dendrobium transparens. Trends in Phytochemical Research*, 8: 122-130.

15. Joshi-Sharma, B.K. and Devkota, A. 2024. Seasonal variation of macrophytes related to hydro-chemical parameters in Ghodaghodi Lake, Nepal *Pakistan Journal of Botany*, 56(3): 2024. DOI:10.30848/PJB2024-3(40).

16. Karki, D., Pandeya, B., Bhandari, R., Basnet, D., Ghimire, B., S Bhattarai, S. and Shrestha, B.B. 2024. Regeneration and leaf traits variation of *Rhododendron campanulatum* along elevation gradient in western Nepal. *Journal of Ecology and Environment,* 48 (2): 152-162. *10.5141/jee.24.011*

17. Khakurel, D., Uprety, Y., Karki, S., Khadka, B., Poudel, B.D., Ahn, G., Cha, J.Y., Kim, W.Y., Lee, S.H. and Rajbhandary, S. 2024. Assessing the risks to valuable medicinal plants in Nepal from human activities and environmental factors. *Global Ecology and Conservation.* 51:1-15. 10.1016/j.gecco. 2024.e02860

18. Kharel, N., Dangol, A., Shrestha, A., Airi, H., Devkota, A., Thapa, L.B. and Shrestha, B.B. 2024. Germination patterns and seedling growth of congeneric native and invasive *Mimosa* species: implications for risk assessment. *Ecology and Evolution,* 14 (4): 10.1002/ece3.11312

19. Mattalia, G., McAlvay, A.C., Teixidor, T.I., Díaz, S., Uprety, Y., et al. 2024. Cultural keystone species as a tool for bio-cultural stewardship. A global review. *People and Nature*, 1–13. https://doi.org/10.1002/pan3.10653

20. Neupane, A., Adhikari, B. and Shrestha, B.B. 2024. *Cuphea carthagenensis* (Jacquin) J.F. Macbride, Lythraceae: a newly naturalised species from eastern Nepal. *Check List,* 20 (1): 40–46. 10.15560/20.1.40

21. Paneru, D., Joshi, L.R., Adhikari, B. and Rajbhandary, S. 2024. Three new additions to the Cyperaceous flora of Nepal. *Rheedea*. 34(2): 2024. DOI: https://dx.doi.org/10.22244/rheedea.2024.34.02.0

22. Paudel, C.K., Tiwari, A. Baniya, C.B., Shrestha, B.B. and Jha, P.K. 2024. High impacts of invasive weed *Lantana camara* on plant community and soil physico-chemical properties across habitat types in central Nepal. *Forests,* 15(8): 1427. https://doi.org/10.3390/f15081427

23. Poudel, P., Ghimire, N.P., and Rai, S.K. 2024. Algal diversity and its relationship with seasonal variation of water quality in Gajedi Lake, Rupandehi District, Nepal. *International Journal on Algae*, 26(4): 10.1615/InterJAlgae.v26.i4.60.

24. Poudel, Y.B., Panthi, K., Adhikari, B. and Rajbhandary, S. 2024. *Lindernia rotundifolia* (Linderniaceae), *Picria felterrae* (Linderniaceae), and *Limnophila aromatica* (Plantaginaceae): three new records for the flora of Nepal. Check List (the journal of biodiversity data), 20(3): 819-827. doi: 10.15560/20.3.819

25. Poudeyal, M.R., Meilby, H., Hart, R., Ghimire, S.K. 2024. Sustainable harvest of a threatened medicinal herb: Empirical evidence for spatially and temporally specific management of *Neopicrorhiza scrophulariiflora*, https://doi.org/10.1016/j.ppees.2024.125799.

26. Roy, H.E., Pauchard, A., Stoett, P.J., Renard-Tuong, T., Meyerson, L.A., ……. Shrestha, B.B., Ziller, S.R. 2024. Curbing the major and growing threats from invasive alien species is urgent and achievable. *Nature Ecology and Evolution,* 8:1216–1223. 10.1038/s41559-024-02412-w

27. Shrestha, A., Dangol, A., Airi, H., Kharel, N., Thapa, L.B., Devkota, A. and Shrestha, B.B. 2024. Do winter and summer cohorts of invasive weed *Parthenium hysterophorus* differ in seed germination and seedling growth? *Weed Research,* 64 (2): 127-137. 10.1111/ wre.12611

28. Subedi, A., Adhikari, A., Tiwari, A. and Shrestha, B.B. 2024. Canopy gaps facilitate establishment of invasive plants in a subtropical broadleaved forest of central Nepal. *Ecological Frontiers,* 44 (4): 781-787. 10.1016/j.ecofro. 2024.02.009

29. Thapa, C.B., Bhattarai, H.D., Pant, K.K. and Pant, B. 2024.Comparative antioxidant, antibacterial, and antidiabetic activities of *in vitro* grown callus and wild-grown various parts of *Piper longum* L. *Phytomedicine Plus*. 100586.

30. Thapa, C.B., Pant, K.K. Ghimire, M., Sah, A.K. and Pant, B. 2024. *In vitro* propagation and evaluation of genetic homogeneity using RAPD, ISSR, and SCoT markers in *Piper longum* L. *South African Journal of Botany,* 172: 609-618, doi.org/10.1016/j.sajb.2024.07.066

31. Timilsina, A., Neupane. P., Yao, J., Raseduzzaman, M., Bizimana, F., Pandey, B., Feyissa, A., Li, X., Dong, W., Yadav, R.K.P., Gomez-Casanovas, N, and Hu, C. 2024. Plants mitigate ecosystem nitrous oxide emissions primarily through reductions in soil nitrate content: Evidence from a meta-analysis. *Science of the Total Environment*, 949: 175115.doi.org/10.1016/j. scitotenv. 2024.175115

32. Tiruwa, B.L., Neupane, B.D., Kadariya, R., Pokhrel, C.P. and Pant, B. 2024. Diversity of orchids in terms of their distribution, uses and conservation in Annapurna Conservation Area of Nepal. *American Journal of Plant Sciences*, 15: 422-440 https://www.scirp.org/journal/ajps

33. Tiwari, A., Bidari, A., Bista, R., Aryal, K.R., Maharjan, S. and Shrestha, U. 2024. Site-specific growth performance of *Cedrus deodara* forests in Western Nepal Himalaya. *Plant Ecology*, 225: 1059-1070 doi.org/10.1007/s11258-024-01454-1

34. Tiwari, A. and Dhakal, S. 2024. Climate change, disasters and infrastructure development in Nepal. *Disaster & Development,* 12(1): 21-40.

35. Trang, P.T., Thu, N.T., Son, L.T., Dung, T.V., An, T.T.T., Thuong, P.T.H., Quy, N.V., Nhung, T.T., Baniya, C.B., Dagamac, N.H., Tuyet, T.T.A. and The, P.V. 2024. Impacts of climate change on the distribution of Vietnamese Golden Cypress in Northern Vietnam. *Biology Bulletin Reviews*, ISSN 2079-0864.DOI: 10.1134/S2079086423600431.

36. Uprety, Y., Oli, B.N., Karki, S., Bashyal, B., Rimal, R.K., Subedi, S., Gotame, B., Rajbhandary, S., and Baral, H.L. 2024. Tree species diversity and spatial distribution of carbon stock in forests under different management regimes in Nepal's Western Terai Arc Landscape. *Trees, Forests and People,* p. 100728.

37. White, F., Mondoni, A., Corli, A., Shrestha, B.B., Rossi, G., and Orsenigo, S. 2024. An investigation into the potential for upward range expansion in high-montane species on the roof of the world. *Plant Biology,* 26 (3): 390-397. https://doi.org/10.1111/plb.13630

National Journal

38. Budhathoki, S., Shakya, B., Maharjan, S. R., and Thapa, L. B. (2024). Effect of aqueous extract of *Ageratum houstonianum* on seed germination and seedling growth of *Triticuma estivum* (Wheat). *Khwopa Journal*, 6(1): 59-69.

39. Darji, T. B., Pathak, S., Deuba, R., Saud, K., Pant, G., and Thapa, L.B. 2024. Impact of invasive *Ageratina adenophora* on soil fungi in native plant-grown soils in Nepal. *Journal of Nepal Biotechnology Associatio*n, 5(1): 53-60.

40. Gachhadar, P., Baniya, C.B. and Mandal, T.N. 2024. Pattern of plant biomass and carbon stock along different elevational forests in eastern Nepal. *BankoJanakari*, 34(1): 15–29. https://doi.org/10.3126/banko.v34i1.62716.

41. Lama, G., Shrestha, B., Limbu, S., Gurung, P.R. and Pant, K.K. 2024. *In vitro* selection and characterization of cadmium-tolerant calli of *Tagetes erecta* and *Gomphrena globosa*. *Banko Janakari*, 34 (1): 30-39. https://doi.org/10.3126/banko.v34i1.66289

42. Tiwari, A., Ranabhat, K., Maharjan, D. and Baniya, C.B. 2024. Livelihood options andagrobiodiversity in mountain settlements of Manang District. *Journal of Tourism and Himalayan Adventures*, Vol. 6, ISSN: 2717-5030.

43. Baniya, C.B., Shrestha, K.K. and Chongbang, T.B. 2024. Patterns of lichen richness across elevation in the Manaslu Conservation Area, central Nepal. *Nepal Journal of Botany* 1:

44. Ghimire, N.P. and Jha, P.K. 2024. Assessment of the surface water quality in high-altitude springs in the Sagarmatha (Everest) National Park, Nepal. *Our Nature*, 22(1): 1-9. https://doi.org/10.3126/on.v22i1.67345.

45. Ghimire, N.P., Chauhan, R., Thakuri, S., and Aryal, A. 2024. First results on lake Bathymetry of Panch-Pokhari Complex, Langtang Region, Central Nepal. *Journal of Tourism and Himalayan Adventures,* Vol. 6. http://doi.org/10.3126/jtha.v6i1.67395.

46. Maharjan, S., Sundas, R., Baniya, C.B., Basnet, B.B. and Munankarmi, N.N (2024). Quantification of heavy metal deposition in lichen species of Kathmandu Valley. Nepal *Journal of Science and Technology*, Vol. 21 (2): 73–80. https://doi.org/10.3126/njst.v21i2.62357.

47. Paneru, D., Joshi, L.R. and Rajbhandary, S. 2024. Convolvulaceae flora of Shuklaphanta National Park and adjoining areas. *Nepal Journal of Botany* 1: 25-33.

48. Pant, D.R., Joshi, G.P. and Aryal, B. 2024. Phytochemical screening and antioxidant potential of extracts of selected medicinal plants from Nepal. *Tribhuvan University Journal,* 39 (1): 1-15.

49. Panthi, N, Thapa, M., Malla, R., Nagarkoti, A. Bhattaraia, H.D. and Paudel, B. 2024. Oral microbial diversity among Nepalese individuals across various geographical regions. *Journal of Nepal Biotechnology Association*, 5: 46-52.

50. Pun D, Joshi, G.P. and Pant, D.R. 2024. Pharmacological activities of six species of *Hedychium* J. Koenig from Nepal. *Journal of Nepal Biotechnology Association,* 5 (1): 23-30.

51. Thapa, B.B., Chand, K., Thakuri, L.S., Baniya, M.K. and Pant, B. 2024. *Ex-situ* conservation of *Bulbophyllum leopardinum*, A threatened medicinal

orchid of Nepal. *Journal of Nepal Biotechnology Association*, 5(1): 1–7.

52. Thapa, C.B., Bhattarai, A., Pant, K.K., Bhattarai, H.D. and Pant, B. 2023. Evaluation of antioxidant, antidiabetic, and cytotoxic activities of *Lilium nepalense* D. *Journal of Institute of Science and Technology*. 28: 63-70.
53. Thapa, C.B., Pant, K.K., Bhattarai, H.D., Thapa, M. and Pant, B. 2024. Induction, proliferation and differentiation of callus in *Paris polyphylla* Sm. through Leaf Culture. *Journal of Nepal Biotechnology Association*, 5(1): 8–15.
54. Thapa, L., Chaturwedi, S.B., Joshi, G.P. and Pant, D.R. 2024. Antidiabetic and antioxidant activities of two alpine species of *Swertia* L. *Nepal Journal of Botany,* 1: 42-55.

Book chapter

55. Baniya, C.B. 2024. Lichens of Nepal. In: *Flora and Vegetation of Nepal. Plant and Vegetation*, Rokaya, M.B., Sigdel, S.R. (eds) Springer International Publishing AG, Cham, Switzerland. DOI: 10.1007/978-3-031-50702-1.
56. Joshi, G.P., Paudel, M.R. and Pant, D.R. 2024. Bryophyta plant diversity in Nepal. In: *Flora and Vegetation of Nepal. Plant and Vegetation*, Rokaya, M.B., Sigdel, S.R. (eds) Springer International Publishing AG, Cham, Switzerland. 19: 199-217.
57. Rai, S.K. and Ghimire, N.P. 2024. A Comprehensive review of algal exploration in Nepal. In: *Flora and Vegetation of Nepal. Plant and Vegetation*, Rokaya, M.B., Sigdel, S.R. (eds) Springer International Publishing AG, Cham, Switzerland. 19: 114- 170. https://doi.org/10.1007 /978-3-031-50702-1_5.
58. Shrestha, B.B., Sharma-Poudel, A., Pandey, M. 2024. Plant invasions in Nepal: What we do not know? In: *Flora and Vegetation of Nepal. Plant and Vegetation*, Rokaya, M.B., Sigdel, S.R. (eds) Springer International Publishing AG, Cham, Switzerland. 19: 333-3360.

Central Department of Chemistry

1. Pathak, A., Kumar, S. & Jha, V.K. Effect of metakaolin and lime addition on geopolymerization of construction and demolition waste. *Environ Sci Pollut Res* (2024). https://doi.org/10.1007/s11356-024-35234-1
2. Das, B. K., & Jha, V. K. (2024). Uptake of Arsenic and Lead ions by the adsorbent material prepared from physiochemical modification of spinach leaves. *Scientific World*, 17(17), 53-65.
3. Chaudhary, U., Kumar, P., Sharma, P., Chikara, A., Barua, A., Mahiya, K., Subin, J.A., Yadav, P.N. and Pokharel, Y.R., 2024. Synthesis of 5-hydroxyisatin thiosemicarbazones, spectroscopic investigation, protein-ligand docking, and in vitro anticancer activity. *Bioorganic Chemistry*, *153*, p.107872.
4. Pokharel, Y.R., Singh, N.K., Sharma, S., Wangchuk, T., Shahi, N., Mahiya, K., Choudhary, R.K., Kumbhar, A.A. and Yadav, P.N., 2025. Synthesis, characterization, and in vitro anticancer activity of a series of N (4) dimethyl isatin thiosemicarbazones and their copper (II) complexes. Journal of Molecular Structure, 1327, p.141157.
5. Yadav, A. K., Singh, N., Silwal, M., Adhikari, A., & Yadav, P. N. (2024). Synthesis, characterization, anticancer activity, molecular docking and DFT calculation of 3-acetylcoumarin thiosemicarbazones and Schiff's bases. *Results in Chemistry*, *11*, 101794.
6. Adhikari, H. S., Garai, A., Khanal, C., & Yadav, P. N. (2024). Synthesis and comprehensive characterization

with anticancer activity assessment of salicylaldehyde and 2-acetylphenol based chitosan thiosemicarbazones and their copper (II) complexes. *Carbohydrate Polymer Technologies and Applications*, *7*, 100469.

7. Yadav, A. K., Shrestha, R. M., & Yadav, P. N. (2024). Anticancer mechanism of coumarin-based derivatives. *European journal of medicinal chemistry*, *267*, 116179.

8. Shrestha, R. M., Mahiya, K., Shrestha, A., Mohanty, S. R., Yadav, S. K., & Yadav, P. N. (2024). Synthesis, characterization, and anticancer potency of coumarin-derived thiosemicarbazones and their Copper (II) complexes. *Inorganic Chemistry Communications*, *161*, 112142.

9. Shahi, N., Shah, S. K., Yadav, A. P., & Bhattarai, A. (2024). Effect of Methyl Red on the Surface Properties of DTAB in CH3OH–H2O. *Results in Chemistry*, *12*, 101863.

10. Pandey, N., Gupta, L., Gautam, M., Bhattarai, J., & Bhattarai, N. P. (2024). An inhibitory prospect of leaf extracts of flossflower and yam for rebar steel corrosion in concrete aggregates. In *E3S Web of Conferences*, 559, p. 02008

11. Adhikari, M. K., Yadav, C. K., Chaudhary, S., Yadav, J. K., Yadav, B., Shahi, N., ... & Bhattarai, A. (2024). Exploring the Protective Effects of Surfactants against Corrosion: A Comprehensive Review. *Journal of Institute of Science and Technology*, *29*(2), 159-174.

12. Das, A. K., Neupane, S., Nayak, K. K., Shrestha, S., Karki, N., Gupta, D. K., & Yadav, A. P. (2024). Dichloromethane-Methanol fraction of Mahonia nepalensis containing Berberine, Jatrorrhizine, and Tetrahydroberberine as corrosion inhibitor for mild steel. *Results in Chemistry*, *12*, 101866.

13. Yadav, C. K., Shahi, N., Niraula, T. P., Yadav, A. P., Neupane, S., & Bhattarai, A. (2024). Effect of percentage of methanol on micellization position of mixed surfactant interaction in the absence and presence of dye. *Results in Chemistry*, *11*, 101834.

14. Yadav, C. K., Shahi, N., Adhikari, M. K., Neupane, S., Rakesh, B., Yadav, A. P., & Bhattarai, A. (2024). Effect of cetyl pyridinium chloride on corrosion inhibition of mild steel in acidic medium. *International Journal of Electrochemical Science*, *19*(10), 100776.

15. Joshi, J., Bhatt, P., Kandel, P., Khadka, M., Kathariya, S., Thapa, S., ... & Yadav, A. P. (2024). Integrating microbial electrochemical cell in anaerobic digestion of vegetable wastes to enhance biogas production. *Bioresource Technology Reports*, *27*, 101940.

16. Bhatt, P., Poudyal, P., Dhungana, P., Prajapati, B., Bajracharya, S., Yadav, A.P., Bhattarai, T., Sreerama, L. and Joshi, J., 2024. Enhancement of Biogas (Methane) Production from Cow Dung Using a Microbial Electrochemical Cell and Molecular Characterization of Isolated Methanogenic Bacteria. *Biomass*, *4*(2), pp.455-471.

17. Shahi, N., Shah, S.K., Singh, S., Yadav, C.K., Yadav, B., Yadav, A.P. and Bhattarai, A., 2024. Comparison of dodecyl trimethyl ammonium bromide (DTAB) and cetylpyridinium chloride (CPC) as corrosion inhibitors for mild steel in sulphuric acid solution. *International Journal of Electrochemical Science*, *19*(5), p.100575.

18. Yadav, C. K., Niraula, T. P., Neupane, S., Yadav, A. P., & Bhattarai, A. (2024). Study of Anti-Corrosion Properties of Sodium Dodecyl Sulphate and Cetyl Pyridinium Chloride. *Journal of Nepal Chemical Society*, *44*(1), 163-172.

19. Sah, G. K., Gupta, D. K., & Yadav, A. P. (2024). Analysis of ChatGPT and the future of artificial intelligence: Its effect on teaching and learning. *Journal of AI, Robotics & Workplace Automation*, *3*(1), 64-80.

20. Gautam, M., Bhattarai, N. P., & Bhattarai, J. (2024). Leaf-based extracts of Nepal origin plants as efficient inhibitors for controlling rebar corrosion in concrete pore solution. *International Journal of Corrosion and Scale Inhibition*, 13(4), 2087-2111.

21. Khadka, D., Gautam, P., Dahal, R., Ashie, M. D., Paudyal, H., Ghimire, K. N., B. Pant, B. P. Bastakoti, B. R. Poudel & Pokhrel, M. R. (2024). Evaluating the Photocatalytic Activity of Green Synthesized Iron Oxide Nanoparticles. *Catalysts*, *14*(11), 751.

22. Pant, B. D., Adhikari, S., Shrestha, N., Baral, J., Paudyal, H., Ghimire, K. N., ... & Poudel, B. R. (2024). Iron-loaded Punica granatum peel: an effective biosorbent for the excision of arsenite from water. *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e37382

23. Poudel, B. R., Aryal, R. L., Ghimire, K. N., Paudyal, H., & Pokhrel, M. R. (2024). Potential removal of arsenite from contaminated water using a fixed bed column packed with TiO_2-impregnated pomegranate peel powder. *Bibechana*, *21*(1), 51-62.

24. Dhungana, S., Gauli, A., Tiwari, L., Khadka, D., Gautam, S. K., Pokhrel, M. R., ... & Poudel, B. R. (2024). Synthesis and Characterization of Copper Oxide Nanoparticles Isolated from Acmella oleracea and Study of Antimicrobial and Phytochemical Properties. *Amrit Research Journal*, *5*(1), 18-29.

25. Rajbhandari (Nyachhyon), G. Neupane, (2024), Photocatalytical degradation of Methyl Orange using laboratory prepared Copper Oxide photocatalyst, *Scientific World*, 17(17), 106-109.

26. K. Dhungana, A. Rajbhandari (Nyachhyon), (2025), Photocatalytical Degradation of Methylene blue using laboratory prepared cadmium sulphide, Journal of Nepal Chemical Soceity, 45(1), 48-56.

27. Hwu, J. R., Bohara, K. P., Kapoor, M., Roy, A., Lin, S. Y., Lin, C. C., ... & Tsay, S. C. (2024). Generation of quaternary carbons in cycloalkanones and lactones with arynes through a domino process. *The Journal of Organic Chemistry*, *89*(24), 18393-18399.

28. Bhatta, K., Sharma, G. D., Bohara, K. P., & Joshi, M. K. (2024). Assessment of Microplastics in Hanumante River of Kathmandu valley. *Journal of Nepal Chemical Society*, *44*(1), 99-111.

29. Sapkota, K. P., Sharma, B. P., & Sharma, M. L. (2024). Oxovanadium Chemistry: A Concise Overview of its Compounds and their Applications. *Gantabya*, *9*(1), 50-74.

30. Waiba, S. Sharma, M. L. and Sapkota, K. P. (2024). Remarkable photocatalytic performance of zinc oxide nanoparticles prepared through green synthetic method by using *Citrus limon* dry peel extract. *Scientific World 17* (17), 123-131.

31. Tamang, M., Sapkota, K. P. and Shrestha, S. (2024). Effect of pH, Amount of Metal Precursor, and Reduction Time on the Optical Properties and Size of Zinc Oxide Nanoparticles Synthesized Using Aqueous Extract of Rhizomes of *Acorus calamus*. *Journal of Nepal Chemical Society 44* (1), 16-30.

32. Luitel, U., Sapkota, K. P., Shrestha, S., Paudel, D. R. and Pradhan, S. (2024). Synthesis of Ag Doped ZnO Nanowire by Hydrothermal Method and its Characterization. *Journal of Nepal Chemical Society 44* (2), 90-100.

33. A Paudel, N Khanal, A Khanal, S Rai, R Adhikari (2024). Pharmacological insights into Curcuma caesia Roxb., the black turmeric: a review of bioactive compounds and medicinal applications. *Discover Plants* 1 (1), 1-19.

34. M Khanal, A Acharya, R Maharjan, DR Upadhyay, SH Dhobi, BR Shah, R. Adhikari (2024). Investigation of naturally occurring radionuclides in selected medicinal plants and associated soils, and calculation of soil-to-plant transfer factors, Journal of Environmental Radioactivity 280, 107556.

35. A Khanal, S Shrestha, R Adhikari (2024). Some Highly Potent Nepalese Medicinal Plants with Antimicrobial Properties. *Current Pharmaceutical Design* 30 (41), 3233-3239.

36. TR Bhandari, RP Bhattarai, R Adhikari (2024). A review on synthesis, structural properties and applications of metal oxide-based thin film thermoelectric materials. *Journal of Materials Science*, 1-17.

37. A Acharya, M Khanal, R Maharjan, K Gyawali, K Khanal, MB Kshetri, R Adhikari (2024). Experimental FTIR characterization of kidney stones, DFT analysis of CaC2O4 and its interactions with lysozyme. *Bibechana* 21 (3), 311-320

38. R Adhikari, PT Campana, YSL Choo, M Lopes Dias, CG Dos Santos, C. M Fellows, M. Hess, R. Lucas-Roper, C. K Luscombe, P. E. Mallon, J. Merna, M. Peeters, T. T. Quach, P. Théato, P. D. Topham, J. Vohlídal, M. Walter (2024). An exercise-based international polymer syllabus. Pure and Applied Chemistry.

39. G Peron, GP Phuyal, J Hošek, R Adhikari, S Dall'Acqua (2024), Identification of hydroxyquinazoline alkaloids from Justicia adhatoda L. leaves, a traditional natural remedy with NF-κB and AP-1-mediated anti-inflammatory properties… *Journal of Ethnopharmacology*, 118345.

40. B Lamsal, R Adhikari (2024). Ways of tuning the morphology of electrospun carbon nanofibres for flexible supercapacitors. *Nano-Structures & Nano-Objects* 38, 101137.

41. A Acharya, M Khanal, R Maharjan, K Gyawali, BR Luitel, R Adhikari (2024), Quantum chemical calculations on calcium oxalate and dolichin A and their binding efficacy to lactoferrin: An in silico study using DFT, molecular docking…, *AIMS Biophysics* 11, 142-165.

42. RG Chaudhary, AK Potbhare, ST Aziz, MM Ayyub, A Kahate, R. Adhikari (2024), …, Bioinspired graphene-based metal oxide nanocomposites for photocatalytic and electrochemical performances: an updated review, *Nanoscale Advances*, 1.

43. P Neupane, J Adhikari Subin, R Adhikari (2024), Assessment of iridoids and their similar structures as antineoplastic drugs by in silico approach, *Journal of Biomolecular Structure and Dynamics*, 1-16.

44. A Puri, R Adhikari, R Pandit (2024), Mechanical and Structural Characterization of Resole Resin Composites Reinforced with Sabai Grass-Derived Cellulose Fibers, *Journal of Nepal Chemical Society* 44 (2), 43-51.

45. M Khanal, A Acharya, R Maharjan, K Gyawali, R Adhikari, DD Mulmi, R. Adhikari, T Lamichhane (2024). Identification of potent inhibitors of HDAC2 from herbal products for the treatment of colon cancer: Molecular docking, molecular dynamics simulation, MM/GBSA calculations, DFT …, *PloS one* 19 (7), e0307501.

46. E Maharjan, MY Wong, U Thapa, R Adhikari (2024), DR Joshi, Fungicidal activity of seeds of Abrus precatorius

L., Datura metel L., and Diploknema butyracea (Roxb.) HJ Lam against phytopathogenic fungi. *Scientific World* 17 (17), 114-122.

47. S Paudel, P Panta, R Adhikari (2024), Vegetable oils in nanoparticles synthesis, Vegetable Oil-Based Polymers and their Surface Applications, 173-200.

48. A Khanal, J Giri, S Dall'Acqua, R Adhikari (2024), Vegetable oils-based cosmetics, Vegetable Oil-Based Polymers and their Surface Applications, 139-161.

49. Panta, P.; Khanal, A.; Shrestha. S.; Adhikari, R.(2024) Oil-yielding Non-timber Plants Seeds: A Review on Their Application for Health Care Products, *Current Traditional Medicine*, 9, e220523217139

50. HX Tung, AV Kosuri, Y Sai, S Mandal, KN Dhakal, R Adhikari, B Langer, R. Adhikari, H. H. Le, S. Wiesner (2024), Mechanical and electrical properties of self-healable rubber blends under influence of imidazole mixture and selective wetting of hybrid filler. *Express Polymer Letters*, 18 (4).

51. J Giri, R Adhikari, J Sapkota (2024), Comparative Study of Polymer Composites with Cellulose Microfibers from Different Plant Resources, *Advances in Polymer Technology*.

52. KP Malla, B Malla, R Pandit, S Pokharel, RJ Yadav, R Adhikari (2024), Acute Oral Toxicity Analysis of Nano-Hydroxyapatite-Gelatin Suspension in Albino Wistar Rats, *Journal of Nepal Chemical Society*, 44 (1), 78-90.

53. Dhami, L. S., Dahal, P., Thapa, B., Gautam, N., Pantha, N., Adhikari, R., & Adhikari, N. P. (2024). Insights from in silico study of receptor energetics of SARS-CoV-2 variants. *Physical Chemistry Chemical Physics*, *26*(11), 8794-8806.

54. S Paudel, P Panta, R Adhikari (2024), Vegetable oils in nanoparticles synthesis, In: Sharmin, E. and Zafar, F. (Eds.); Vegetable Oil-Based Polymers and their Surface Applications, Elsevier.

55. A Khanal, J Giri, S Dall'Acqua, R Adhikari (2024), Vegetable oils-based cosmetics, In: Sharmin, E. and Zafar, F. (Eds.); Vegetable Oil-Based Polymers and their Surface Applications, Elsevier.

56. Bhatta, K., Sharma, G. D., Bohara, K. P., Joshi, M. K. (2024). Assessment of Microplastics in Hanumante River of Kathmandu valley. *Journal of Nepal Chemical Society*, 44(1), 99-111.

57. Bhattarai, S., Khanal, K., Karki, N., Shahi, D. K., GC, R. B., Bhatt, L. R., . . . Joshi, M. K. (2024). Synthesis and characterization of Janus fenugreek seed gum-based film for food packaging and wound dressing applications. *Journal of Nepal Chemical Society*, 44(2), 52-62.

58. Ding, R., Pandeya, S., Shang, Q., Zhu, X., Ma, Y., Han, X., . . . Joshi, M. K. (2025). Bio-inspired fabrication of Ag-ZnO nanoparticle decorated Nylon 11 nanofibers: Multifunctional membrane for environmental remediation. *Vacuum,* 231, 113766.

59. GC, R. B., Awasthi, G. P., Shin, M., Sharma, K. P., Neupane, B. B., Kalauni, S. K., . . . Joshi, M. K. (2024). Nanocellulose from Mankamana-3 corncob biomass: Synthesis, characterization, surface modification and potential applications. *Bioresource Technology Reports*, 28, 101971.

60. Karki, N., Achhami, H., Pachhai, B. B., Bhattarai, S., Shahi, D. K., Bhatt, L. R., Joshi, M. K. (2024). Evaluating citrus juice: A comparative study of physicochemical, nutraceutical, antioxidant, and antimicrobial properties of citrus juices from Nepal. *Heliyon*, 10(23), e40773.

61. Li, X., Cheng, Y., Joshi, M. K., Mao, Z., Han, C., Zang, Y. in Yu, R. (2024). Construction of CdS/ZnO/TiO2 ternary heterojunction with hierarchical structure as photo-anode for enhancing photo-electrochemical performance. *Vacuum*, 228, 113475.

62. Pandeya, S., Ding, R., Ma, Y., Han, X., Gui, M., Mulmi, P., . . . Joshi, M. K. (2024). Self-standing CdS/TiO2 Janus nanofiberous membrane: COD removal, antibacterial activity and photocatalytic degradation of organic pollutants. Journal of Environmental Chemical Engineering, 12(3), 112521.

63. Pandeya, S., Ding, R., Shang, Q., Zhu, X., Ma, Y., Han, X., . . . Joshi, M. K. (2025). A flexible Ag2S QD sensitized TiO2 Janus photocatalytic nanofiber membrane for visible light organic pollutant degradation and COD removal. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 707, 135946.

64. Panthi, K. P., Shahi, D. K., Sharma, M. L., Li, Z., Pandey, L. M., Joshi, M. K. (2025). Gluten-based composite film for smart food packaging applications. *Food and Bioprocess Technology*, 18(3), 2882-2898.

65. Shang, Q., Wang, H., Kan, C., Ding, R., Li, Y., Pandeya, S., . . . Joshi, M. K. (2024). Exploration of the synergistic regulatory mechanism of hydroxide and fluoride modification on the photocatalytic activity of 2D gC 3 N 4. *Catalysis Science & Technology*, 14(23), 6833-6844.

66. Wang, H., Zhu, Y., Joshi, M. K., Cheng, Y., Zhang, P., Tan, M., . . . Li, X. (2024). In-situ and ex-situ preparation of Bi2S3 on the BiVO4/TiO2 to construct Bi2S3/BiVO4/TiO2 heterojunction for efficient Cr (VI) reduction. Chemical Engineering Journal, 500, 156640.

67. Wang, K., Mao, Z., Cheng, Y., Joshi, M. K., Li, X. in Zhang, Y. (2024). Two-dimensional H4Nb6O17 for transparent and flexible UV photodetectors. *Journal of Alloys and Compounds,* 982, 173694.

68. Yan, M.-H., Zhang, Z.-F., Huang, H.-H., Li, Z.-L., Li, P., Hao, J.-G., . . . Joshi, M. K., Fu, P. (2024). Multi-scale structural regulation of negative temperature coefficient effect and electrical conduction mechanism of xSm2O3-(1-x) CaCu3Ti4O12 ceramics. *Ceramics International*, 50(24), 54390-54400.

69. Zhang, Y., Zhang, Z.-F., Bai, H.-R., Li, P., Huang, H.-H., Hao, J.-G., . . . Joshi, M. K., Fu, P. (2024). Advanced energy storage properties and multi-scale regulation mechanism in (1-x)(Bi0. 5Na0. 5) 0.7 Sr0. 3TiO3-xCa (Nb0. 5Al0. 5) O3 relaxor ferroelectric ceramics. *Acta Materialia*, 276, 120109.

70. Zhang, Z.-F., Zhang, Y., Bai, H.-R., Li, P., Huang, H.-H., Li, Z.-L., . . . Du, J., Joshi, M. K., Fu, P. (2024). Excellent energy storage properties and multi-scale regulation mechanism of Sr (Zr0. 5Ti0. 5) O3-(Na0. 5Bi0. 5) 0.94 Ba0. 06TiO3 ceramics. *Journal of Energy Storage*, 90, 111711.

71. Bhutto, R. A., Khanal, S., Wang, M., Iqbal, S., Fan, Y., & Yi, J. (2024). Potato protein as an emerging high-quality: Source, extraction, purification, properties (functional, nutritional, physicochemical, and processing), applications, and challenges using potato protein. *Food Hydrocolloids*, 157, 110415.

72. Gyawali, D., Poudel, M., Gautam, B., Neupane, B.B, Paudyal, H & Ghimire, KN. (2024). Zirconium-modified Citrus limetta peel for effective removal of arsenic from ground water, *Journal of Water Process Engineering*, 68, 106283.

73. Gyawali, D., Poudel, M., Ghimire, K.N., Pokhrel, M. R., Basnet, P. & Paudyal, H. (2024). Synthesis, characterization and

As(III) scavenging behaviours of mango peel waste loaded with Zr(IV) ion from contaminated water, *Heliyon*, 10 (16), e36496.

74. Pathak, I., Dahal, B., Acharya, D., Chhetri, K., Muthurasu, A., Raj Rosyara, Y., Kim T. Ko T. H., Yong Kim, H. (2024). Integrating V-doped CoP on Ti_3C_2Tx MXene-incorporated hollow carbon nanofibers as a freestanding positrode and MOF-derived carbon nanotube negatrode for flexible supercapacitors. *Chemical Engineering Journal, 475*, 146351.

76. Pathak, I., Muthurasu, A., Acharya, D., Chhetri, K., Dahal, B., Rosyara, Y. R., Kim T., Ko T. H., Kim, H. Y. (2024). Electronically modulated bimetallic telluride nanodendrites atop 2D nanosheets using a vanadium dopant enabling a bifunctional electrocatalyst for overall water splitting. *Journal of Materials Chemistry A, 12*(28), 17544-17556.

77. Chaudhari, A., Kandel, M. R., Ali, A., Paudel, D. R., Dahal, B., & Subedi, S. (2024). Ni-doped Co-Layered Double Hydroxides as High-performance Electrocatalyst for the Hydrogen Evolution Reaction. *Journal of Nepal Chemical Society, 45*(1), 66-75.

78. Thapa, B. B., Shakya, S., Shrestha, N., Yadav, R. P., Sharma, K. R., Mishra, A. D., & Parajuli, N. (2024). Identification of secondary metabolites from Actinomycetes isolated from the hilly region of Nepal. *Prithvi Academic Journal, 7*, 20–40.

79. Gautam, S., Bhusal, M., Magar, A. B., Basnyat, R. C., Parajuli, N., & Sharma, K. R. (2024). Phytochemical analysis and evaluation of bioactivities of *Artemisia vulgaris* solvent extracts. *Journal of Institute of Science and Technology, 29*(2), 183–191.

80. Pathak, I., Niraula, M., Sharma, K. R., Thapa, P., Oli, H. B., & Kalauni, S. K. (2024). Green synthesis of silver nanoparticles from *Ocimum sanctum* Linn. and study of their antioxidant activity. *Amrit Research Journal, 5*(1), 82–90.

81. Shrestha, D. K., Jaishi, D. R., Ojha, I., Ojha, D. R., Pathak, I., Magar, A. B., Parajuli, N., & Sharma, K. R. (2024). Plant-assisted synthesis of silver nanoparticles using *Persicaria perfoliata* (L.) for antioxidant, antibacterial, and anticancer properties. *Heliyon, 10*(23), e40543.

82. Jaishi, D. R., Ojha, I., Bhattarai, G., Baraili, R., Pathak, I., Ojha, D. R., Shrestha, D. K., & Sharma, K. R. (2024). Plant-mediated synthesis of zinc oxide (ZnO) nanoparticles using *Alnus nepalensis* D. Don for biological applications. *Heliyon, 10*(20), e39255.

83. Kharel, P., Sapkota, A., Regmi, P., Subba, B., & Sharma, K. R. (2024). Qualitative analysis of adulterants mixed in different foodstuffs. *Journal of Nepal Biotechnology Association, 5*(1), 72–74.

84. Shrestha, D. K., Budhamagar, A., Bhusal, M., Baraili, R., Pathak, I., Joshi, P. R., Parajuli, N., & Sharma, K. R. (2024). Synthesis of silver and zinc oxide nanoparticles using *Polystichum lentum* extract for the potential antibacterial, antioxidant, and anticancer activities. *Journal of Chemistry, 2024*, Article 1876560.

85. Bhattarai, K., Pandey, I., & Sharma, K. R. (2024). Evaluation of antioxidant potential, enzyme inhibition, and chemical profiling through mass spectrometry on bark extract of *Berberis aristata*. *Journal of Nepal Chemical Society, 44*(2), 33–42.

86. Bhusal, M., Pathak, I., Bhadel, A., Shrestha, D. K., & Sharma, K. R. (2024). Synthesis of silver nanoparticles assisted by aqueous root and leaf extracts of

Rhus chinensis Mill and its antibacterial activity. *Heliyon, 10*(13), e33603.

87. Bhattarai, K., Pandey, I., & Sharma, K. R. (2024). Biological activities and annotation of bioactive principles by mass spectrometry in the root extract of *Boerhavia diffusa*. *Journal of Institute of Science and Technology, 29*(1), 47–58.

88. Bhusal, M., Sharma, K., Magar, A. B., Pant, J., & Sharma, K. R. (2024). Chemical analysis and biological activities on solvent extracts from different parts of *Rhus chinensis* Mill. *Natural Product Research*, 1–7.

89. Acharya, R., Tettey, F., Gupta, A., Sharma, K. R., Parajuli, N., *& Bhattarai, N.* (2024). Bioinspired synthesis and characterization of zinc oxide nanoparticles and assessment of their cytotoxicity and antimicrobial efficacy. *Discover Applied Sciences, 6*, 85.

90. Bhattarai, S., & Sharma, K. R. (2024). Evaluation of antioxidant, antibacterial and antidiabetic activities of different parts of *Litsea polyantha* extracts. *Scientific World Journal, 17*(17).

91. Khatri, S., Magar, A. B., Sharma, T., & Sharma, K. R. (2024). Phytochemical analysis and digestive enzymes inhibition study of *Beta vulgaris*. *Bibechana, 21*(3), 174–185.

92. Shrestha, D., Magar, A. B., Pakka, S., & Sharma, K. R. (2024). Phytochemical analysis, antioxidant, antimicrobial, and toxicity studies of *Schima wallichii* growing in Nepal. *International Journal of Food Properties, 27*(1), 273–285.

93. Khadka, A., Magar, A. B., & Sharma, K. R. (2024). Chemical profiling and biological activities on Nepalese medicinal plant extracts and isolation of active fraction of *Nyctanthes arbor-tristis*. *The Scientific World Journal, 2024*, Article ID 5080176. https://doi.org/10.1155/2024/5080176.

94. Pakka, S., Magar, A. B., Shrestha, D., Sharma, T., & Sharma, K. R. (2024). Phytochemical analysis and biological activities on solvent extracts of two traditionally used medicinal plants. *Bibechana, 21*(2), 113–123.

95. Shrestha, A., Upadhyaya, S. R., Raut, B. K., Bhattarai, S., Sharma, K. R., Parajuli, N., Sohng, J. K., & Regmi, B. P. (2024). *In silico* and *in vitro* analyses of multiple terpenes predict cryptotanshinone as a potent inhibitor of the Omicron variant of SARS-CoV-2. *Processes, 12*(230). https://doi.org/10.3390/pr12010230

96. Bhandari, N. L., Bhandari, G., Bist, K., Adhikari, D., Dhakal, K. N., Adhikari, R., Lach, R., Kim, A. A., Yoo, D. J., & Paudel, M. B. (2024). Comparative investigation of fillers loading effect on morphological, micromechanical, and thermal properties of polyvinyl alcohol/biofillers-based composites. *International Journal of Biological Macromolecules,* 280 (2024), 1-12.

97. Gautam, P., Groβmann, L., Pradhan, S., Bhandari, N. L., Nase, M., & Adhikari, R. (2024). Physicochemical and structural investigation of Argeli (*Edgeworthia gardneri*) bast fibers. *Journal of Research Updates in Polymer Science,* 13, 54-65.

98. Joshi, B., Shyaula, S. L. Joshi, T. P., Bhandari, N. L., Budhathoki, U., Gyawali, R., & Thapa, P. (2025). Optimization of liposomes encapsulated with ursolic acid using response surface method. *Indian Journal of Pharmaceutical Sciences,* 87(3), 94-101.

99. Gautam, P., Groβmann, L., Basyal, O. P., Pradhan, S., Bhandari, N. L., Henning, S., Nase, M., & Adhikari, R. (2024). Argeli bast fiber as wonder reinforcing agent for biodegradable polymer composites. *Nepal Journal of Environmental Science*, 12(2), 01-08.

100. Joshi, B., Bhandari, N. L., Shyaula, S. L., Budathoki, U., Gyawali, R., & Thapa, P.

(2024). Design of hydrogel for the drug delivery of less permeable ursolic acid isolated from *Rhododendron arboreum* flower in animal skin membrane. *Journal of Nepal Chemical Society*, 44(1), 86-92.

101. Karki, D., Phunyal, A., Lamichhane, T. R., Rayamajhi, A., Sapkota, A., Nyaupane, H., Shrestha, S & Adhikari, A. (2024). Chemical profiling, in-vitro and in silico α-glucosidase inhibition, antioxidant and antibacterial activities of Hypotrachyna cirrhata (Fr.) Hale ex Sipman. *All Life*, *17*(1), 2424894.

102. Rayamajhi, A., Karki, D., Phunyal, A., Sapkota, A., Adhikari, B., & Adhikari, A. (2024). Phytochemical profiling from Dioscorea bulbifera L. bulbils using LC-MS, proximate analysis and antidiabetic activity: in vitro and in silico approaches. *International Journal of Food Properties*, *27*(1), 1396-1414.

103. Phunyal, A., Adhikari, A., & Adhikari Subin, J. (2024). In silico exploration of potent flavonoids for dengue therapeutics. *PLoS One*, *19*(12), e0301747.

104. Fernando, K. S. S. P., Choudhary, M. I., Abeysekera, A. M., Padumadasa, C., Adhikari, A., & Chandrika, U. G. (2024). Megastigmane and hydroxybenzoic acid derivatives from aqueous leaves extract of Artocarpus heterophyllus lam. *Natural Product Research*, 1–8

105. Baral, J., Shrestha, D., Devkota, H. P., & Adhikari, A. (2023). Potent ROS inhibitors from Zanthoxylum armatumDC of Nepali origin. *Natural Product Research*, 38(21), 3753–3761.

106. Bhandari, D. P., Chaudhary, P., Upadhyaya, S. R., Ranjitkar, R., Satyal, R., Adhikari, A. & Parajuli, N. (2024). Chemical variability, antioxidant and larvicidal efficacy of EOs from Citrus sinensis (L.) Osbeck peel, leaf, and flower. *Horticulturae*, *10*(6), 566.

107. Saliu, T. P., Seneviratne, N. N., Faizan, M., Rajagopalan, U., Perera, D. C., Adhikari, A., & Samarakoon, S. R. (2024). In silico identification and in vitro validation of alpha-hederin as a potent inhibitor of Wnt/β-catenin signaling pathway in breast cancer stem cells. *In Silico Pharmacology*, *12*(1), 31.

108. Khalil, A. W., Iqbal, Z., Adhikari, A., Khan, H., Nishan, U., Iqbal, A., & Afridi, S. (2024). Spectroscopic characterization of eupalitin-3-O-β-D-galactopyranoside from Boerhavia procumbens: In vivo hepato-protective potential in rat model. *Spectrochimica acta. Part A, Molecular and biomolecular spectroscopy*, *304*, 123369.

109. Baral, J., Satyal, P., & Adhikari, A. (2024). Spatial variation in constituents of essential oils from fruit pericarp of Zanthoxylum armatum DC of Nepali origin and their antibacterial activity. Journal of Essential Oil Bearing Plants, 27(1), 47–56.

110. Das, R., Mallik, N., Adhikari, A., & Bhattarai, A. (2024). A comprehensive review on the creation, description, and utilization of surfactants containing multiple hydroxyl groups. *International Journal of Polymer Science*, *2024*(1), 6120535.

111. Adhikari, A., Shrestha, D., Thapa, S., Pokhrel, T., Sinjali, B. B., & Baral, J. (2024). Antioxidant, Antibacterial, α-Amylase, and α-Glucosidase Inhibition, and Anti-inflammatory Activities of Mimosa Rubicaulis Lam. *Current Bioactive Compounds*, *20*(1), 38-42.

112. Saifullah, S., & Adhikari, A. (2024). Isolation of nepetin (6-Methoxyluteolin) from Artemisia vulgaris and spectroscopic characterization: A bioactive flavonoid. *Pakistan Journal of Forestry*, *74*(1), 49-52.

113. Lama, A., Sapkota, A., Gurung, B., Sinjali, B. B., Mijar, K., Sharma, N., &

Adhikari, A. (2024). Green Synthesis of Silver Nanoparticle Using Usnea cornuta Extract and its Application on Formaldehyde Sensing and Organic Dye Degradation. *Journal of Institute of Science and Technology*, *29*(2), 83-93.

114. Karki, D., Phunyal, A., & Adhikari, A. (2024). Estimation of Total Phenolic Content, Total Flavonoid Content, Anti-oxidant Activity and Molecular Docking Studies of Stereocaulon piluliferum Th. *Journal of Plant Resources*, *22*(1), 104-112.

115. Baral, J., & Adhikari, A. (2024). Bio-pesticidal, Antimicrobial, and Anti-inflammatory Potentials of n-Hexane Fraction of Zanthoxylum armatum DC and its Chemical Profiling. *Journal of Nepal Chemical Society*, *44*(1), 41-51.

116. Pokharel, B., Pandey, D.S., Sapkota, A., Yadav, B., Gurung, V., Adhikari, M. P., Regmi

117. L.N. & Adhikari N. B. (2024), A comparative study of state of the art deep learningmodels for semantic segmentation of pores in scanning electron microscope images of activated carbon, IEEE, 12: 50217-50243.

118. Adhikari M.P., Rawal, N. B., Pradhananga, A.R., & Adhikari N.B. (2024) Assessmentof water quality index and role of tributaries on the degradation of Bagmati River water, J. Water and Environment Technology, 22(6), 355-270.

119. Aryal, G.M., Kandel, K., Sharma, N., Acharya, Y., Joshi, M.K., Gautam, B.R., Joshi, K.R., Pandit, R. and Neupane, B.B., 2024. Fabrication of antimicrobial nanocomposite mat using Lokta fiber. Biomass Conversion and Biorefinery, pp.1-11.

120. Kandel, K. P., Aryal, G. M., Adhikari, M., Adhikari, B. P., Darden, D., Joshi, K. R., Joshi, M. K.,. Neupane, B. B. (2024). Hydrothermal doping of Ag and ZnO nanoparticles in Sterculia cellulose mat for antimicrobial and photocatalytic applications. Biomass Conversion and Biorefinery, 1-12.

121. Kandel, B., Adhikari, N., Chetri, A.K., Karki, A., Paudyal, H., Sharma, K.R., Giri, B. and Neupane, B.B., 2025. Distribution of microplastic contamination in Sapta-Gandaki river system, Nepal. *International Journal of Environmental Science and Technology*, *22*(8), pp.7065-7076.

122. Nakarmi, S., Pudasaini, S., Thapaliya, S., Upretee, P., Shrestha, R., Giri, B., Neupane, B.B. and Khanal, B. (2024). Deep-learning assisted detection and quantification of (oo) cysts of Giardia and Cryptosporidium on smartphone microscopy images. *Journal of Machine Learning for Biomedical Imaging*, 2, 956-976.

123. Bastakoti, S., Adhikari, A., Thaiba, B. M., Neupane, B. B., Gautam, B. R., Dangi, M. B., & Giri, B. (2024). Characterization and removal of microplastics in the Guheshwori Wastewater Treatment Plant, Nepal. *Science of The Total Environment*, *935*, 173324.

124. Karki, A., Thaiba, B. M., Shishir Acharya, K. C., Sedai, T., Kandel, B., Paudyal, H., ... & Neupane, B. B. (2024). Smartphone microscopic method for imaging and quantification of microplastics in drinking water. *Microscopy Research and Technique*, *87*(10), 2266-2274.

125. Sharma, N., Gautam, S. K., Adhikari, A., & Bhakta Neupane, B. (2024). Himalayan lichen biomass for green synthesis of silver nanocolloids: growth kinetics, effect of pH and metal sensing. *Royal Society Open Science*, *11*(3), 231633.

126. Bhandari, G., Dhakal, P. P., Tran, D. T., Nguyen, T. H., Dinh, V. A., Kim, N. H., & Lee, J. H. (2024). Pt Single Atom-Doped Triphasic VP-Ni3P-

MoP Heterostructure: Unveiling a Breakthrough Electrocatalyst for Efficient Water Splitting. *Small*, *20*(50), 2405952.

127. Dhakal, P. P., Pan, U. N., Kandel, M. R., Ghising, R. B., Prabhakaran, S., Kim, D. H., ... & Lee, J. H. (2024). Cobalt nanoparticles confined nitrogen–doped carbon integrated bimetallic Co2P–VP heterostructured composite: A MOF integrated 3D arrays for catalytic water splitting. *Composites Part B: Engineering*, *283*, 111640.

128. Kandel, M. R., Pan, U. N., Dhakal, P. P., Ghising, R. B., Sidra, S., Kim, D. H., ... & Lee, J. H. (2024). Manganese-Doped Bimetallic (Co, Ni) 2P Integrated CoP in N, S Co− Doped Carbon: Unveiling a Compatible Hybrid Electrocatalyst for Overall Water Splitting. *Small*, *20*(18), 2307241.

129. Dhakal, P. P., Bhandari, G., Nguyen, H. T., Tran, D. T., Kim, N. H., & Lee, J. H. (2024). Cobalt Vanadium Heterointerface Modulated Co 2 P/VP Heterostructure Electrocatalyst for Robust Water Splitting. *Composites Research*, *37*(4), 296-300.

130. Ghising, R. B., Pan, U. N., Kandel, M. R., Dhakal, P. P., Sidra, S., Kim, D. H., ... & Lee, J. H. (2024). Ruthenium single atoms implanted on NiS 2-FeS 2 nanosheet heterostructures for efficacious water electrolysis. *Journal of Materials Chemistry A*, *12*(6), 3489-3500.

Central Department of Computer Science and Information Technology

1. Saud, A. S., & Shakya, S. (October, 2024). Technical indicator empowered intelligent strategies to predict stock trading signals. Journal of Open Innovation: Technology, Market, and Complexity, 10(4), 100398. https://doi.org/10.1016/j.joitmc.2024.100398

2. Saud, A. S., & Shakya, S. (December, 2024). Ensemble Strategies Using 3-RNNs for Predicting Stock Closing Price of Subsequent Day. International Journal of Intelligent Engineering and Systems, 17(6), 531–544. https://doi.org/10.22266/ijies2024.1231.41

3. Pujara, M., & Paudel, N. (2024). Rainfall Prediction using Long Short-Term Memory and Gated Recurrent Unit with Various Meteorological Parameters. Nepalese Journal of Statistics, 8, 47- 60.

4. Paudel, N. (2024). Breast Cancer Prediction: A Comparative Study of Support Vector Machine and Logistic Regression. *National College of Computer Studies Research Journal*, *3*(1), 177-190.

Central Department of Geology

1. Acharya, M., Dhungana, S., Khadka, G., Sah, R. B., Paudayal, K. N., Paudyal, K. R. (2024). Geological study of the Khutti Khola Watershed, Siraha District, eastern Nepal. Journal of Nepal Geological Society, 67, 149-161. DOI: 10.3126/jngs. v67i1.74586.

2. Adhikari, P., Bhatia, H., Khatri, D. B., Sadananda, Srivastava, G., Mehrotra, R. C., Paudayal, K. N. (2024). Fig leaf from the Middle Siwalik sediments of eastern Nepal with implication on biogeography and palaeoclimate. Journal of Palaeontological Society of India, 1-16. DOI: 10.1177/05529360241258246

3. Adhikari, P., Rai, L. K., Pathak, S., Bhatia, H., Srivastava, G., Thakuri, N. S., Mehrotra, R. C., Paudayal, K. N. (2024). New records for the Middle Siwalik flora of eastern Nepal and their climatic significance. Earth History and Biodiversity, 1, 100003. DOI: 10.1016/j.hisbio.2024.100003.

4. Adhikari, P., Srivastava, G., Paudayal, K. N. (2024). An Overview of the Middle Miocene to Early Pleistocene Flora of the Siwalik Sediments in Nepal (In book: Flora and Vegetation of Nepal), 89-111. DOI: 10.1007/978-3-031-50702-1_4

5. Bhattarai, S., Dahal, R. K., and Pradhan, A. M. S. (2024). Comparative analysis of rainfall thresholds for landslide initiation using terrestrial rain gauges and satellite data in Nepal: Challenges and opportunities. Asian Journal of Engineering Geology, 1(Special Issue), 7–8.

6. Chaudhary, A. D., Adhikari, P., and Paudayal, K. N. (2024). Lithostratigraphy of the Siwalik Group from the ArjunKhola section, Dang district, Mid-western Nepal. Journal of Nepal Geological Society, 67, 59-70. DOI: 10.3126/jngs.v67i1.74584.

7. Chaulagai, K., and Dahal, R. K. (2024). Correlation of Bieniawski's RMR and Barton's Q system in the Nepal Himalaya. Indian Geotechnical Journal, 54(2), 707–720.

8. Chaulagai, K., and Dahal, R. K. (2024). Development of correlations between various rock mass classification systems in the Nepal Himalaya. Geological Society of America Abstracts, 56, 401663.

9. Cheng, J., LÜ, X, Zhu, LQingfeng, M. A., Humagain, S, Paudayal, K. N. (2024). Transport Pathways and Source Areas of Airborne Alnus Pollen on the Northern Slope of the Mt. Qomolangma Region. Advances in Earth Science, 9(4), 419-428. (in Chinese with English abstract).

10. Dahal, R. K. (2024). Engineering geology of recent hydro-climatic disasters in Nepal. Asian Journal of Engineering Geology, 1(Special Issue), 3–4.

11. Dhakal, O., Loche, M., Dahal, R., and Scaringi, G. (2024). Influence of temperature on the residual shear strength of landslide soil: Role of the clay fraction. EarthArXiv. DOI: 10.31223/X5HH6H.

12. Gupta A., Panthee S. and Selvam J. (2024). Relationship between UCS and Anisotropic Angle: A Case Study for Slate of Himalaya Region, International Journal of Innovative Technology and Exploring Engineering (IJITEE), 14(2), 21-24. DOI: 10.35940/ijitee. D4598.14020125

13. Hasegawa, S., Malla, A. B., Guragain, S., Acharya, A., and Dahal, R. K. (2024). Post-disaster engineering geological assessment of the 2024 Noto Earthquake, Noto Peninsula, Japan.

14. Kafle, D., Gautam, U., Pathak, D., Rawat. R. K. (2024). Spatial variation on hydrogeochemical parameter in the Hetauda Valley, central Nepal. Geotourism, 21(3–4 (78–79)), 19-38. DOI: 10.7494/geotour.2024.3-4(78-79).19

15. KC, B., Sapkota, S., Maharjan, S., Bhattarai, A., Paudyal, K. R., and Paudel, L. P. (2024). Mineralogy and texture of the eastern part of the Palung Granite, Lesser Himalaya, central Nepal; Journal of Nepal Geological Society, 67, 163-175. DOI: 10.3126/jngs. v67i1.74587.

16. Khadka, G., Dhungana, S., Acharya, M., Sah, R. B., and Paudyal, K. R. (2024). Hydrogeological assessment of groundwater resources in Khutti Khola Watershed, Siraha District, Eastern Nepal. Journal of Nepal Hydrogeological Association (JNHA), 1, 79-93; ISSN: 3059-9725 (Online). DOI: 10.3126/jnha.v1i1.78224.

17. Khan, I., Bahuguna, H., Kainthola, A., Kanungo, D. P., Dahal, R. K., Das, S., and Sarkar, S. (2024). Assessing landslide susceptibility in Indian Himalayas: Comparing polygon and point-based inventories with modified frequency ratio approach.

18. Khan, I., Yadav, V., Kainthola, A., Bahuguna, H., Kanungo, D. P., Dahal, R. K., Sarkar, S., and Asgher, M. S. (2024). Advanced bivariate geostatistical modeling for high-resolution landslide susceptibility zonation for effective risk management in the Northwestern Himalaya, India. Earth Systems and Environment, 1–28. DOI: 10.1007/s41748-024-00407-2.

19. Khanal, S., and Dahal, R. K. (2024). Influence of variations in precipitation at pore water pressure causing surface layer failure of naturally undulated slope of the Nau Kilo at Narayangadh-Mugling Road, Central Nepal. Asian Journal of Engineering Geology, 1(Special Issue), 15–16.

20. Kharel, U., & Panthee, S. (2024). A Comparison of Statistical Validity of In-Situ Hydraulic Conductivity Prediction Models of Rock Mass Inferred from Borehole Logs and Lugeon Test Data. Bulletin of the Department of Geology, 24, 37–46. DOI: 10.3126/bdg. v24i.68376

21. Khatri, D. B., Zhang, W., Fang, X., Qingquan, M., Dawen, Z., Tao, Z., Maodu, Y., Yulong, X., Paudayal, K. N. (2024). Magnetostratigraphy of the Late Cretaceous to Early Eocene sediments from the Tulsipur section, western Nepal: Tectonic implications for the Indian northern passive margin, Palaeogeography Palaeoclimatology Palaeoecology, 647(3-4), 112207. DOI: 10.1016/j. palaeo.2024.112207

22. Koirala, A., and Dahal, R. K. (2024). Numerical modeling of debris flow originating from topographic hollows at Koyalghari and Simaltal area along Narayangadh-Mugling Highway. Asian Journal of Engineering Geology, 1(Special Issue), 19–20.

23. Lamsal, S., and Paudyal, K. R. (2024). Thrust boundary delineation and metamorphic zonation mapping through petrography in the Tamghas-Arkhabang section, western Nepal; Journal of Nepal Geological Society, 67, 35-48. DOI: 10.3126/jngs. v67i1.74582.

24. Lamsal, S., Dhakal, A., Maharjan, S., and Paudyal, K. R. (2024). Rocks, ridges, and recreation: The geotourism renaissance in the Dhaubadi area of Gandaki province, western Nepal, Geotourism (published from AGH University of Science and Technology, Krakow, Poland), 21, 3-4 (39-54). DOI: 10.7494/ geotour.2024.3-4(78-79).39.

25. Manish, K. C., Silwal, C. B., Dangi, P., Pathak, D. (2024). Comparing frequency ratio and analytical hierarchy models for landslide susceptibility in the Dharan Sub-Metropolitan Region of Eastern Nepal. Journal of Development Innovations, 8(1), 1-17. DOI: 10.69727/jdi. v8i1.103

26. Neupane, S., Paudayal, K. N., Song, L., Humagain, S., Kaphle, B., Nepal, J., Ullah, A., Li, W., and Cao, X. (2024). Modern pollen distribution along a Himalayan elevation gradient in Central Nepal. Review of Palaeobotany and Palynology, 331, 1-12. DOI: 10.1016/j.revpalbo.2024.105206.

27. Pandey, S., and Paudyal, K. R. (2024). Exploring the potential of geotourism along the trek route of the Pokhara Ghandruk section of Gandaki province, Nepal; Geotourism (published from AGH University of Science and Technology, Krakow, Poland), 21, 3-4 (78-79); DOI: 10.7494/geotour.2024.3-4(78-79).71.

28. Paudayal, K. R., Sah, R. B., Paudel, P. N., Acharya, P. C., Sayami, M., Khadka, G., Thapa, A., Paudayal, K. N. (2024). Water Management in Hariwan Municipality of Nepal: Groundwater Harvesting from Riverbeds and Aquifers. Bulletin of Department of Geology, 24, 1-14. DOI: 10.3126/bdg.v24i.68372.

29. Paudyal, K. R. (2024). Modern Techniques and Methods for hydrogeological investigation and research in the recent

world; Bulletin of Nepal Hydrogeological Association, 9, ISSN 2594-3286 (Print) and ISSN 2705-4578 (Online). Link: https://nha.org.np.

30. Paudyal, K. R. (2024). नेपालमा भू बिज्ञान को सामाजिक पक्ष. Bulletin of Nepal Geological Society, 41, 85-91. ISSN 2676-1386 (Print) and ISSN 2676-1394 (Online). Link:https://ngs.org.np.

31. Paudyal, K. R., Maharjan, R., and Shrestha, B. (2024). Landslide susceptibility mapping of the Main Boundary Thrust region in Thungsingdanda-Bandipur section of Nawalparasi and Palpa Districts, Gandaki and Lumbini Provinces, Nepal; The Geographical Journal of Nepal; Central Department of Geography, Tribhuvan University, Kathmandu, Nepal,17, 23-52. DOI: 10.3126/gjn.v17i01.63934.

32. Paudyal, K. R., Maharjan, R., Shrestha, B., & Maharjan, N. (2024). A Comparative of Frequency Ratio Method, Weight of Evidence, and Analytical Hierarchy Process for Landslide Susceptibility Assessment in the Main Boundary Thrust (MBT) Region in Ranitar-Belarang Section of Udayapur District, Koshi Province, Nepal. Earth Sciences Research Journal, 28(3), 325-348.DOI: 10.15446/esrj. v28n3.112740

33. Pokhrel. G., and Rijal, M. L. (2024). Recent Trends in the Study of Springs in Nepal: A Review. Bulletin of the Department of Geology, 24, 47–55.

34. Regmi, S., and Dahal, R. K. (2024). Consequences of slope instability and existing practices of mitigation in hydropower projects of Nepal. Geoenvironmental Disasters, 11(1), 26. DOI: 10.1186/s40677-024-00345-x.

35. Regmi, S., and Dahal, R. K. (2024). Kinematic and block theory analysis in dolomitic rockmass for dam-site stability. In EUROENGEO 2024: 4th European Regional Conference of IAEG. DOI: 10.5592/CO/EUROENGEO.2024.131.

36. Regmi, S., Liu, K.-F., and Dahal, R. K. (2024). Rock and debris fall detection using total gray level method. Asian Journal of Engineering Geology, 1(Special Issue), 5–6.

37. Rijal, M. L. (2024). Understanding the Position of Transboundary Aquifer in Nepal for Increasing Prosperity and Water Diplomacy. WASH Journal, 21.

38. Sapkota, A., Lamsal, S., and Paudyal, K. R. (2024). Mountain hydrogeology and influence of active fault: A study of the Bhimgethi-Devisthan section in Western Nepal; Journal of Nepal Hydrogeological Association (JNHA), 1, 1-15, ISSN: 3059-9725 (Online). DOI: 10.3126/jnha. v1i1.78218.

39. Shah, D., Pathak, D., Shakya, N., Gautam, R., Shrestha, S. R. (2024). Hydrogeological studies in the Western part of Banke District, Nepal (Province 5). Journal of Nepal Hydrogeological Association, 1, 43-56. DOI: 10.3126/jnha. v1i1.78221

40. Shrestha, M., Noppradit, P., Shrestha, R. P., and Dahal, R. K. (2024). Understanding livelihood insecurity due to landslides in the mid-hill of Nepal: A case study of Bahrabise Municipality. International Journal of Disaster Risk Reduction, 104, 104399. DOI: 10.1016/j.ijdrr.2024.104399.

41. Tayebi, S., Jabed, M. A., Ruano, A. L., Lee, G. O., da Silva, P. F., Ahmed, S., Dahal, R. K., Soltani, A., Khan, M. I., Rahman, M. A., Islam, M. A., and Haque, U. (2024). Stakeholder perspectives on landslide triggers and impacts in five countries. Landslides, 21(8), 2033–2043. DOI: 10.1007/s10346-024-02135-5.

Central Department of Food Technology

1. Adhikari, B., Bhattarai, S., & Dahal, L. (2024). Effect of wheat gluten on the quality attributes of plant-based meat analogue formulated with pea, soy and pumpkin seed flours. *Himalayan Journal of Science and Technology*, *8*(1), 45–52. https://doi.org/10.3126/hijost.v8i1.83142
2. Khadka, D. B., Adhikari, L., Khadka, P., Sharma, A., Sharma, A., & Karki, D. B. (2024). Three phase partitioning of serine protease from ash gourd (*Benincasa hispida*), its characterization and application on whey protein hydrolysis. *Himalayan Journal of Science and Technology*, *8*(1),71–86. https://doi.org/10.3126/hijost.v8i1.83152
3. Gautam, N., Basyal, B., & Bhattarai, K. (2024). Effects of drying temperature on bioactive compounds retention in dragon fruit (*Hylocereus undatus*) peel powder. *Himalayan Journal of Science and Technology*, *8*(1), 62–70. https://doi.org/10.3126/hijost.v8i1.83488
4. Karki, S. (2024). Preparation and quality analysis of yacon (*Smallanthus sochifolius*) wine. *Himalayan Journal of Science and Technology*, *8*(1), 38–44. https://doi.org/10.3126/hijost.v8i1.83141
5. Bhujel, M., Rai, V., & Maskey, B. (2024). Recent developments in non-thermal processing techniques to improve the quality and safety of milk and milk products. *Himalayan Journal of Science and Technology*, *8*(1), 20–31. https://doi.org/10.3126/hijost.v8i1.83139
6. Maskey, B., & Karki, D. B. (2024). Efficient three phase partitioning of actinidin from kiwifruit (*Actinidia deliciosa*) and its characterization. *Preparative Biochemistry and Biotechnology*, *54*(1), 95–102. https://doi.org/10.1080/10826068.2023.2209877
7. Maskey, B., Karki, D. B., & Shrestha, N. K. (2024). Optimization of three-phase partitioning system for the purification of protease from *Calotropis gigantea* latex using response surface methodology. *Chemical Papers*, *78*(4), 2549–2559. https://doi.org/10.1007/s11696-023-03259-4

Central Department of Environmental Science

1. Alam, Md.A., Mishra, K., Shrestha, S.M., & Chaudhari, S.K. (2024). Assessment of arsenic contamination in groundwater of the Rajpur Municipality, Rautahat District, Nepal. *Journal of Nepal Geological Society*, 67(1), 71–80. https://doi.org/10.3126/jngs.v67i1.74585
2. Baral, S.K., Phuyal, R., Bhasima, S., & Parajuli, I. (2024). Bacterial Isolates and Antibiogram Profile in Clinically Suspected Otitis Media Patient. *Acta Scientific Microbiology*. 7 (12), 78-84. https://actascientific.com/ASMI/pdf/ASMI-07-1459.pdf
3. Basnet, N., Sitaula, S., Bohara, R., Bhattarai, S., Rawal, S., Uprety, M. P., ... & Pant, R. R. (2024). Hydro-chemical characteristics of Biring and Tangting Rivers (Nepal) and evaluation of water quality for drinking and irrigation purposes. *Environmental Research*, *261*, 119697. https://doi.org/10.1016/j.envres.2024.119697
4. Bhatta, R., Gurung, S., Joshi, R., Tuladhar, S., Regmi, D., Tripathee, L., Paudyal, R., Guo, J., Kang, S., & Sharma, C.M. (2024). Index based irrigation suitability of Ramsar sites (Rara and Ghodaghodi) in western Nepal. *Journal of Nepal Chemical Society*, 44(1), 112–121. https://doi.org/10.3126/jncs.v44i1.62685
5. Bhusal, P., Shrestha, S. M., Dhital, N. B., Bhandari, G. S., Das, B., & Pandit, R. (2024). Analysis of in-vehicle air quality and load factor as environmental and

social dimensions of sustainable urban mobility: A case study from Kathmandu valley, Nepal. *Journal of Air Pollution and Health*, 9(1), 41-58. https://doi.org/10.18502/japh.v9i1.15078

6. Bishwakarma, K., Wang, G., Zhang, F., Pant, R. R., Yuxuan, X., & Adhikari, S. (2024). Chemical weathering and CO2 consumption rates of the Koshi River Basin: modelling and quantifying. *Journal of Hydrology*, *641*, 131760. https://doi.org/10.1016/j.jhydrol.2024.131760

7. Bista, R.B., Thakuri, S., Koirala, P., & Bhattarai, A. (2024). Assessing water deficit induced water stress of households and their welfare in small cities of Nepal. *Economic Journal of Development Issues*, 37(1), 117-130. https://doi.org/10.3126/ejdi.v37i1.63921

8. Bohara, R., Sitaula, S., Basnet, N., Awasthi, M. P., Rawal, S., Joshi, T. R., ... & Pant, R. R. (2024). Hydrochemical Characterization and Water Quality of Perennial Rivulets (Darchula), Sudurpashchim Province, Nepal. *Tribhuvan University Journal*, *39*(2), 1-26. https://doi.org/10.3126/tuj.v39i2.72872

9. Dhital N.B., Sapkota R.P., Sharjeel A., & Yang H-H (2024). Estimating potentially preventable ambient PM 2.5- attributable adult deaths by improving air quality in Nepal. *Atmospheric Pollution Research*, 15(8), 102175. https://doi.org/10.1016/j.apr.2024.102175

10. Gautam, R., & Shrestha, S.M. (2024). Hydrogeochemical evaluation and characterization of water quality in the Phewa Lake, Pokhara, Nepal. *Environmental Science and Pollution Research*, 31(50), 60568-60586. https://doi.org/10.1007/s11356-024-35213-6.

11. Ghimire, N.P., Chauhan, R., Thakuri, S., & Aryal, A. (2024). First results on lake bathymetry of Panch-Pokhari Complex, Langtang region, central Nepal. *Journal of Tourism and Himalayan Adventures*, 6(1), 87–95. http://doi.org/10.3126/jtha.v6i1.67395

12. Joshi, T. R., Awasthi, M. P., Joshi, J., Pant, R. R., Bist, H. S., & Thagunna, G. S. (2024). Perception-based assessment of the water supply system in Bhimdatta Municipality, Sudurpashchim Province, Nepal. *Journal of Engineering Technology and Planning*, *5*(1), 114-131. https://doi.org/10.3126/joetp.v5i1.69730

13. Kafle, J., Adhikari, K. P., Poudel, E. P., & Pant, R. R. (2024). Mathematical modeling of pollutants dispersion in the atmosphere. *Journal of Nepal Mathematical Society*, *7*(1), 61-70. https://doi.org/10.3126/jnms.v7i1.67487

14. Kandel, K., Sharma, C.M., Rawat, B., Paudyal, R., Li, M., Pandey, A., & Zhang, Q. (2024). Synthesis analysis of hydrogeochemistry of Nepal Himalayan rivers: Perspective from major ions and trace elements. *Ecological Indicators*, 163, 112080. [Q1] https://doi.org/10.1016/j.ecolind.2024.112080

15. Karki, D. R., Bhujel, S., Parajuli, K., Pant, R. R., & Sharma, M. L. (2024). Study of Antimicrobial Activity of ZnO Nanoparticles Dopped Natural Hydroxyapatites. *Journal of Nepal Chemical Society*, *44*(1), 31-40. https://doi.org/10.3126/jncs.v44i1.62677

16. KC, R., Rai, U., Ghimire, M., & Khadka, U.R. (2024). Wetlands in the Hindu Kush Himaayan Region: Eco-economic Fuctions and Conservation Strategies. In *Sustainable Ecological Restoration and Conservation in the Hindu Kush Himalayan Region: A Comprehensive Review* (pp. 234-250). GB: CABI. https://doi.org/10.1079/9781800622579.0017

17. Khatri, K., & Gurung, S. (2024). Inter-basin water transfers: Balancing water scarcity solutions with environmental and socio-economic impacts from Nepalese perspective. *Pragyaratna*, 6(2), 97-110. https://doi.org/10.3126/pragyaratna.v6i2.70589

18. Khatri, K., Gurung, S., Jha, B.R., Sthapit, M., & Khadka, U.R. (2024). Freshwater fish diversity and IUCN Red List status of

glacial-fed (Bheri) and spring-fed (Babai) rivers in the wake of inter-basin water transfer. *Journal of Threatened Taxa*, 16(1), 24535-24549. doi.org/10.11609/jott.8084.16.1.24535-24549

19. Lim, H., Medvigy, D., Mäkelä, A., Kim, D., Albaugh, T.J., Knier, A., Blasko, R., Campoe, O.C., Deshar, R., ... & Oren, R. (2024). Overlooked branch turnover creates a widespread bias in forest carbon accounting. *Proceedings of the National Academy of Sciences*, 121(42), e2401035121. [Nature Indexed]. https://doi.org/10.1073/pnas.2401035121
20. Mahato, A.K., Shah, D.N., & Tachamo-Shah, R.D. (2024). Evaluation of freshwater springs utilizing benthic macroinvertebrates as key bioindicators in the Panchadewal Binayak Municipality, Middle Karnali Watershed, Nepal. *Nepal Journal of Environmental Science*, 12(1), 19-28. https://doi.org/10.3126/njes.v12i1.60000
21. Moazzam, M.F.U., Thakuri, S., Rahman, G., & Lee, B.G. (2024). Unravelling the elevation-dependent warming in the Indus Basin. *Physics and Chemistry of the Earth, Parts A/B/C*, 133, 103514. https://doi.org/10.1016/j.pce.2023.103514
22. Nepal, J., Pant, R. R., Shrestha, S., Paudel, S., Bishwakarma, K., Awasthi, M. P., & Dhital, Y. P. (2024). Water balance estimation and runoff simulation of Chameliya Watershed, Nepal. *Environmental Earth Sciences*, *83*(3), 117. https://doi.org/10.1007/s12665-024-11430-7
23. Pant, R. R., Koirala, M., Adhikari, D., & Gaire, N. P. (2024). Ecological Restoration in Nepal: A Comprehensive Policy Overview. In *Sustainable Ecological Restoration and Conservation in the Hindu Kush Himalayan Region: A Comprehensive Review* (pp. 147-164). GB: CABI. https://doi.org/10.1079/9781800622579.0011
24. Patel, D. K., Thakur, T. K., Thakur, A., Karuppannan, S., Swamy, S. L., & Pant, R. R. (2024). Groundwater potential zone mapping using AHP and geospatial techniques in the upper Narmada basin, central India. *Discover Sustainability*, *5*(1), 355. https://doi.org/10.1007/s43621-024-00560-4
25. Paudel, G., Pant, R. R., Joshi, T. R., Saqr, A. M., Đurin, B., Cetl, V., ... & Bishwakarma, K. (2024). Hydrochemical Dynamics and Water Quality Assessment of the Ramsar-Listed Ghodaghodi Lake Complex: Unveiling the Water-Environment Nexus. *Water*, *16*(23), 3373. https://doi.org/10.3390/w16233373
26. Pokharel, G.P., & Thakuri, S. (2024). Ecosystem services, threats, and management practices of wetlands in Morang District of Nepal. *Our Nature*, 22(1), 47-57. https://doi.org/10.3126/on.v22i1.67351
27. Poudel, S., Pant, R. R., Chhetri, M. K., & Thapa, L. B. (2024). Functional, reproductive and biochemical traits of the invasive Chromolaena odorata in dry and moist sites of Ramechhap District, Nepal. *Journal of Institute of Science and Technology*, *29*(2), 37-47. https://doi.org/10.3126/jist.v29i2.64889
28. Poudel, S., Pant, R. R., Thapa, L. B., & Chettri, M. K. (2024). Impacts of invasive weed *Chromolaena odorata* on growth and development of threatened native tree Aegle marmelos under water stress conditions. *Journal of Ecology and Environment*, *48*, 42. https://doi.org/10.5141/jee.24.072
29. Rawat, B., Sharma, C.M., Tripathee, L., Wan, X., Cong, Z., Paudyal, R., Pandey, A., Kandel, K., Kang, S., & Zhang, Q. (2024). Concentration, seasonality, and sources of trace elements in atmospheric aerosols from Godavari in the southern Himalayas. *Environmental Pollution*, 344, 123359. [Q1] https://doi.org/10.1016/j.envpol.2024.123359
30. Regmi, D., Bhatta, R., Gurung, S., Tuladhar, S., Dahal, B.M., Raut, N., Kafle, K.R., Kayastha, R., Prasad, A., Tripathee, L., Thapa, D., & Sharma, C.M. (2024). Bioaccumulation of heavy metals

by macrophytes in Ghodaghodi Lake, a Ramsar site in Nepal. *Nepal Journal of Environmental Science*, 12(1), 7–17. https://doi.org/10.3126/njes.v12i1.67301

31. Sapkota R.P., Deshar, R., & Koirala, M. (2024). Strategies for Forest and Grassland Restoration in the Himalayan Regions. In Z. Shang, D. Gauchan, & M. Koirala (Eds.) *Sustainable Ecological Restoration and Conservation in the Hindu Kush Himalayan Region: A Comprehensive Review*. Centre for Agriculture and Bioscience International (CABI) Digital Library, pp. 317-325. https://doi.org/10.1079/9781800622579.0021
32. Sapkota, S., & Shrestha, S.M. (2024). Assessment of air pollution tolerance index and anticipated performance index of roadside plants used for greenbelt development in the Kathmandu Valley, Nepal. *Environmental Challenges*, 14, 100818. https://doi.org/10.1016/j.envc.2023.100818.
33. Shen, M., Van Klink, R., Sagouis, A., Petsch, D.K., Abong'o, D.A., Alahuhta, J., Al-Shami, S.A., Armendáriz, L.C., Bae, M.-J., Begot, T.O., …. Sharma, C.M., …., & others. (2024). FreshLanDiv: A global database of freshwater biodiversity across different land uses. *Global Ecology and Biogeography*, 33(12), e13917. https://doi.org/10.1111/geb.13917
34. Singh, R., Kayastha, S.P., Shrestha, S.M., & Sapkota, R.P. (2024). Hydro-geochemical conditions under projected climate change scenarios of Marshyangdi River, Nepal. *Theoretical and Applied Climatology*, 155, 5375–5387. https://doi.org/10.1007/s00704-024-04890-1
35. Tachamo-Shah, R.D., Shah, D.N., Pandey, A., Maharjan, J., Doody, T.M., & Cuddy, S. (2024). Seasonal variations in macroinvertebrate diversity and community composition in Kamala River of Churia range, Nepal. *Journal of Institute of Science and Technology*, 29(1), 13-24. https://doi.org/10.3126/jist.v29i1.52941
36. Thakuri, S., Basnet, A., Rawal, K., Chauhan, R., Manandhar, R., & Rai, P.Y. (2024). Technologies, emission estimation, and feasibility of cleaner technologies in brick industry of Nepal. *Environmental Challenges*, 15, 100928. https://doi.org/10.1016/j.envc.2024.100928
37. Thapa, B., Khanal, L., Pant, R. R., Bhatta, C. R., Subedi, P., Upadhyaya, L. P., ... & Kyes, R. C. (2024). Hydrochemistry and Irrigation Quality of High-Altitude Lakes: A Case Study of the Ramaroshan Lake Complex, Nepal Himalayas. *Limnological Review*, *24*(1), 30-52.
38. Uprety M.P., Adhikari, S., Awasthi, M.P., Raut, G.K., & Sapkota R.P. (2024). Assessment of river water quality using benthic macroinvertebrates as bioindicators of Hanumante River, Kathmandu Valley, Nepal. *Journal of Institute of Science and Technology*, 29(2), 129–141. https://doi.org/10.3126/jist.v29i2.54302

Central Department of Hydrology and Meteorology

1. Dawadi B**.**, Lamichhane D, Rana D., Bohora A., Shrestha CB., Giri S., 2024. Diurnal Cycle of precipitation and extreme in Nepal. Journal of Science and Technology 29(2), 9-17. https://doi.org/10.3126/jist.v29i2.66620.
2. Sigdel S., Zheng X,, Babst F., Camarero J.J., Gao S., Li X., Lu X., Pandey JR, Dawadi B, Sun J., Zhu H, Wang T., Liang E., Peñuelas J., 2024 Acceleratedsuccession in Himalayan alpine treelines under climatic warming. Nat. Plants (2024). https://www.nature.com/articles/s41477-024-01855
3. Lamichhane D., Bao Q., Dhital YP., Devkota R., Bhattarai U., Nepal B., Pokharel AK., Dawadi**.** B***.** 2024. Precipitation Concentration variability and its association with geographical factors and ENSO over Nepal from 1990 to 2020. Journal and Earth and Environment, https://doi.org/10.1007/s41748-024-00461-6

4. Zhuang Y., Dawadi B, Steiner J., Dash RK., Bühler Y, Munch J., Bartelt P. 2024. The Interplay of Climate Variability and Snowfall Anomalies on the Risk of Ice-Rock Avalanches: A study of the 2015 Langtang Avalanche. Journal of Communications Earth & Environment. https://www.nature.com/articles/s43247-024-01624-z

5. Budhathoki B, Adhikari TR, Shrestha S., Awasthi RP., Dawadi B., Gao HK, Dhital YP, 2024. Application of Hydrological Models to Streamflow Estimation at Ungauged Trans-boundary Himalayas River Basin, Nepal''. Journal of Hydrology Research. doi: 10.2166/nh.2024.026.

6. Budhathoki B, Adhikari TR, Shu L., Shrestha S., Awasthi RP., Dawadi B., Baniya B., Dhital YP, 2024. Evaluation of distributed and semi-distributed hydrological models in complex River Basin system, Nepal. Journal of HydroResearch 8 (2025) 49–57. https://doi.org/10.1016/j.hydres.2024.09.006

7. Bagale, D., Sigdel, M. & Aryal, D. (2024). Winter Drought Monitoring Using Standard Precipitation Index over Nepal. *Natural Hazards*, 2023:1-14. https://doi.org/10.1007/s11069-023-06242

8. Bagale, D (2024). Temporal variability of seasonal and annual rainfall in Nepal. Journal of *Nepal Hydrogeological Association (JNHA)*, 2024:1-97-106. https://doi.org/10.3126/jnha.v1i1.78222

9. Gaire, A., Bagale, D., Acharya, P. & Acharya, R. (2024). Spatial and Temporal Variability of Rainfall in the Western Region of Nepal. *Journal of Hydrology and Meteorology*, 12(1): 68-80 https://DOI:10.3126/jhm.v12i1.72656.

10. Bagale, D., Sigdel, M., Aryal, D. & Dawadi, D. (2024). VARIABILITY OF WINTER RAINFALL OVER NEPAL DURING THE DRY YEARS. Malaysian Applied Geography (MAGG) 2(2) 65-71. http://doi.org/10.26480/magg.02.2024.65.71

11. Kuo Zhang, Min Feng, Yijie Sui, Jinhao Xu, Dezhao Yan, Zhimin Hu, Fei Han, Earina Sthapit (2024). Identifying thermokarst lakes using deep learning and high-resolution satellite images. Science of Remote Sensing; https://doi.org/10.1016/j.srs.2024.100175

12. Zhimin Hu, Min Feng *, Yijie Sui, Dezhao Yan, Kuo Zhang, Jinhao Xu, Rui Liu, Earina Sthapit. Identifying Alpine Lakes with Shoreline.*Water* 2024, *16*(22), 3287; https://doi.org/10.3390/w16223287

13. Pokharel, B., K. Jagannathan, S. Wang, et al., 2024: Can we rely on drought-ending "miracles" in the Colorado River Basin? Journal of American Water Resources Association, AWR-23-0080-P. https://doi.org/10.1111/1752-1688.13204.

14. Kuikel, S., Pokharel, B. and Bhattarai, N., 2024: The Effect of Wildfires on Air Quality in Kathmandu, Nepal. Environmental Advances, p.100493. https://doi.org/10.1016/j.envadv.2024.100493

15. Kuinkel, D., Promchote, P., Upreti, K.R., Wang, S.Y.S., Dahal, N. and Pokharel, B., 2024. Projected changes in precipitation extremes in Southern Thailand using CMIP6 models. Theoretical and Applied Climatology. https://doi.org/10.1007/s00704-024-05150-y

16. Kathayat, B., Panday, A.K., Pokharel, B. and Chapagain, N.P., 2024. Intensifying Haze and Disappearing Dense Fog in Winter at Tribhuvan International Airport, Kathmandu: Impacts in Aviation. Journal of Institute of Science and Technology, 29(1), pp.35-45.

17. Gharti Magar, B., Poudel, J.M., Paudel, B. and Pokharel, B., 2024: Climate change in outskirts of Kathmandu Valley: local perception and narratives. Natural Hazards, pp.1-18. https://doi.org/10.1007/s11069-024-06473-9.

18. Sharma, S., Dahal, P., Marahatta, S., Shrestha, A., Panday, V.P., and Pokharel, B., 2024: Historical Trend and Future Projection of Extreme Precipitation in Nepal from High-resolution CMIP6 Data. Submitted for the Monograph on "Severe Storms: Anatomy, Early Warning Systems and Aftermath in Changing Climate

Scenarios" Book Chapter. https://link.springer.com/book/10.1007/978-981-97-7075-5?sap-outbound-id=D73A2E7C64636A8BDC69F513B8F09A7872384899.

19. Luo, L., Zhao, Y., Duan, Y., Dan, Z., Acharya, S., Jimi, G., Bai, P., Yan, J., Chen, L., Yang, B. & Xu, T., (2024). Relationships between Precipitation and Elevation in the Southeastern Tibetan Plateau during the Active Phase of the Indian Monsoon. *Water,* 16(18), .2700. https://doi.org/10.3390/w16182700
20. Singh, A., Shrestha, D., Ghimire, K., Mishra, S., Rana, D., & Acharya, S. (2024). Assessing machine learning models to generate permafrost distribution map in Solukhumbu, Nepal. *Geodesy and Geodynamics.* https://doi.org/10.1016/j.geog.2024.08.003
21. Pokhrel N., P. Wagnon, F. Brun, A. Khadka, T. Matthews, A. Goutard, D. Shrestha, B. Perry, M. Réveillet (2024). Brief Communication: Accurate and autonomous snow water equivalent measurements using a cosmic ray sensor on a Himalayan glacier, EGUsphere [preprint], https://doi.org/10.5194/egusphere-2024-1760.
22. Khadka A., F. Brun, P. Wagnon, D. Shrestha, T.C. Sherpa, 2024, Surface energy and mass balance of Mera Glacier (Nepal, Central Himalaya) and their sensitivity to temperature and precipitation, 2024, JoG, doi:10.31223/X50415
23. Vincent J., P. Wagnon, J. Charton, R. Braucher, L. Martin, I. Schimmelpfennig, D. Swingedouw, D. Verfaillie, F. Brun, S. Gairoard, D. Shrestha, G. Aumaître, K. Keddadouche, F. Zaïdi, (2024), Comparing the evolution of debris-free and debris-covered glaciers during the end of the Lateglacial and the Holocene in Dudh Koshi basin, Everest region, Nepal, Quaternary Science Reviews, 344, 108994, doi.org/10.1016/j.quascirev.2024.108994
24. BP Puri, TR Adhikari, M Sigdel*, B Devkota, S Shrestha (2024), Spatial and Temporal Variations of Surface Air Temperature (1962–2022) across Physiographic Regions in the Koshi Basin, Nepal, Journal of Hydrology and Meteorology 12 (1), 46-57
25. Khanal K, Baniya B, Sigdel M, Khadka J, Dhital YP (2024), Spatial and Temporal Variation of Precipitation Extreme in the Kathmandu Valley During Last Three Decades, Journal of Hydrology and Meteorology 12 (1), 34-45.
26. Khanal A, Sigdel M *, B Baniya B, X Liu (2024), Assessing Drought Pattern Through Satellite Based Observation in the Koshi River Basin, Nepal, Prevention and Treatment of Natural Disasters 3 (2), 210-226.
27. Baniya B, Tang Q, Adhikari TR, Zhao G, Haile GG, Sigdel M, He L (2024), Climate change induced Melamchi extreme flood and environment implication in central Himalaya of Nepal, Natural Hazards 120 (12), 11009-11029.

Central Department of Mathematics

Scimago Journal

1. Ajaya Kumar Chaudhary, Chet Raj Bhatta & Uday Kumar Karn (2024), Extension and Generalization of Banach Contraction in Metric and in Menger Space, Communications on Applied Nonlinear Analysis ISSN: 1074-133X Vol 32 No. 2 , 53-63.
2. Chudamani Pokharel, Jeevan Kafle and Chet Raj Bhatta, (2024) Analysis of Flow Characterstics of the Blood *Through* Curved Artery with Mild Stenosis, Journal of Jilin University (Engineering and Technology Edition), ISSN 1671-5497, Vol: 43 Issue: 03, DOI: 10.5281/zenodo.10851926, 155-169

3. Chudamani Pokharel, Pushpa Nidhi Gautam, Chet Raj Bhatta & Jeevan Kafle (2024) Analysis of Blood Flow Through Stenosed Artery with Einstein Viscosity, Tianjin Daxue Xuebao (ZiranKexueyuGongchengJishu Ban)/ Journal of Tianjin University Science and Technology ISSN (Online):0493-2137 E-Publication: Online Open Access Vol: 57 Issue: 04 DOI: 10.5281/zenodo.10947228

4. Nabaraj Adhikari, & Wutiphol Sintunavarat, (2024). "Exploring the Julia and Mandelbrot Sets of $z^p + \log(c^t)$ Using a Four-Step Iteration Scheme Extended with s-Convexity." Mathematics and Computers in Simulation, 220, 357-381. (https://doi.org/10.1016/j.matcom.2024.01.010).

5. Nabaraj Adhikari, & Wutiphol Sintunavarat, (2024). "The Julia and Mandelbrot Sets for the Complex-Valued Function $z^p - qz^2 + rz + \sin(c^w\}$ Exhibit Mann and Picard–Mann Orbits Along with s-Convexity." Chaos, Solitons & Fractals, 181, 1-20. (https://doi.org/10.1016/j.chaos.2024.114600).

6. Raghu Bir Bhatta, Samir Shrestha, Dinesh Panthi, Chet Raj Bhatta, (Communicated in International Journal of Applied Mathematics), Mathematical Modeling of Communicable Diseases Transmission Dynamics: Yoga Efficacy as Prevention Strategy (2024).

7. Parshuram Chaudhary, Dinesh Panthi & Chet Raj Bhatta (2024), Int. J. Math. And Appl., 12(2), 35-42, ISSN: 2347-1557.

8. Ajaya Kumar Chaudhary, Chet Raj Bhatta & Dilip Kumar Sah, (2024), Menger Space and Some Contraction Mappings, Communications on Applied Nonlinear Analysis, ISSN: 1074-133X, vol 31, No. 7s, 641-648.

9. Raghu Bir Bhatta, Samir Shrestha, Dinesh panthi, Chet Raj Bhatta & Madhav Poudel, (2024), "IMPACT OF YOGACHARA ON TRANSMISSION DYNAMICS INFECTIOUS DISEASE: SIQS MODEL ANALYSIS AT SATURATED INCIDENCE RATE", JOURNAL OF JILIN UNIVERSITY (Engineering and Technology Edition) JILIN DAXUE XUEBAO, ISSN:1671-5497, E-publication: Online open Access, Vol: 43, Issue: 09-2024, DOI: 10.5281/zenodo.13832375, 127-140.

10. Pitambar Tiwari, Chet Raj Bhatta (2024), Hermite- Hadamard Integral Inqualities of Differentiable m- Convex functions, The Nepali Mathematical Sciences Report Vol.41, 1, 68-78, Mathematical reviews and Zentralblatt Math.

11. Pitambar Tiwari, Chet Raj Bhatta, (2024) q- Hermite- HadamardInequalities for the Products on Extended Geometric Convex Functions, Bulletin of Allahabad Mathematical Society(India), Vol.39, Part1, 1-22, Mathematical reviews (MathSciNet), Current Mathematical Publications (USA), Zentralblatt Math.

12. Pitambar Tiwari, Chet Raj Bhatta, (2024), Generalized Convexities: Hermite-HadamardInqualities and their Quantum Estimates, Submitted to "The Arabian Journal of Mathematics, Mathematical reviews (MathSciNet), Scopus, and zentralblatt Math (zbMath),

13. Durga Prasad Khanal, Shiva Prakash Gupta, Urmila Pyakurel, Tanka Nath Dhamala (2024), Inflow-dependent Quickest Multi-Commodity Flow Problems with Partial Lane Reversals JIMO,

14. Badri Prasad Pangeni and Tanka Nath Dhamala (2024), Non-Conservative Maximum Flow by Centiles-Method in Uncertain Network, Journal of Uncertain Systems. https://doi.org/10.1142/S1752890924500260.

15. Badri Prasad Pangeni and Tanka Nath Dhamala (2024), Maximum Flow in Hybrid Network with Intermediate Storage, OPSERACH, https://doi.org/10.1007/s12597-024-00816-7.

16. Badri Prasad Pangeni and Tanka Nath Dhamala (2024), Non-Conservative Maximum Flow Minimum Cost Solution in Uncertain Network, Journal of Jilin

University (Engineering and Technology Edition), 43(5) 76-92. https://DOI:10.5281/zenodo.11145894.

17. Badri Prasad Pangeni and Tanka Nath Dhamala (2024), Order Guided Non-Conservative Maximum Flow in Uncertain Network Interdiction Problem with Budget Constraint, Journal of Uncertain Systems, doi: 10.1142/S1752890924500053.

18. Nabaraj Adhikari, & Wutiphol Sintunavarat, (2024). " Exploring the Complex Dynamics of Julia and Mandelbrot Sets for the Complex-valued Mapping $\sin(z^k) + az + c$ Using Four-Step Iterative Scheme with s-Convexity Communications on Applied Nonlinear Analysis ISSN: 1074-133X Vol 32, 63-90. (https://internationalpubls.com)

19. Poudel, M. P., Lim, D., Pahari, N. P., & Rathie, A. K. (2024). A note on evaluation of a new class of integrals involving generalized hypergeometric function. Aust. J. Math. Anal. Appl. 21 (2), Art.6, 1-11.

20. Poudel, M. P., Pahari, N. P. & Bahadur, G.B. (2024). Generalization of classical summation relation of certain Appell's double hypergeometric functions associated with theory of approximation. Communication on Applied Non Linear analysis. 31 (1), 52-61. DOI: https://doi.org/10.52783/cana.v31.305.

21. Poudel, M. P., Pahari, N. P., Basnet, G. B. & Paudel, R.P.; Generalization of Classical Summation Relation of Certain Appell's Double Hypergeometric Functions Associated with Theory of Approximation; Communication on Applied Nonlinear Analysis; Vol. 31, No. 1 (2024). DOI: https://doi.org/10.52783/cana.v31.305.

22. Pokharel, J.K., Pahari N.P., & Basnet, G.B.; Generalized Cesaro Sequence Space of Non-absolute and absolute type as a complete paranormed space; Jilin Daxue Xuebao (Gongxueban)/Journal of Jilin University (Engineering and Technology Edition); Vol: 43 Issue: 04 (2024); DOI: 10.5281/zenodo.10940377.

23. Pudasaini, S.P., Tiwari, C.N., Dangol, B.R., Kafle, J., Pokhrel, P. R., Kattel, P. (2024). Impact Pressure Coefficient and Object Mobilization Length in Mass Flows. *Physics of Fluids*. https://doi.org/10.1063/5.0211644

24. Pudasaini SP, Dangol BR, Tiwari CN, Pokhrel PR, Kattel P, Kafle J (2024) The Champati Slide. *Physics of Fluids*.

25. Pudasaini SP, Dangol BR, Tiwari CN, Pokhrel PR, Kattel P, Kafle J (2024) Novel Mechanical-Dynamical Aspects with Native Nepalese Complex Granular Slides. *Physics of Fluids*.

26. Pokharel, C., J. Kafle and C. R. Bhatta, (2024). Analysis of flow characteristics of the blood flow through curved artery with mild stenosis", Journal of Jilin University (Engineering and Technology Edition, 43(3), http://dx.doi.org/10.5281/zenodo.10851926, 155-169.

27. Pokharel, P. N. Gautam, C. R. Bhatta and J. Kafle, (2024). Analysis of blood flow through stenosed artery with Einstein viscosity", Journal of Tianjin University Science and Technology, 57(4), http://dx.doi.org/10.5281/zenodo.10947228, 36-52.

28. C. Pokharel, S. Pokharel, J. Kafle and C. R. Bhatta, (2024). Analysis of blood flow through stenosed curved artery with Einstein viscosity", Communications on Applied Nonlinear Analysis, 31(3s), https://doi.org/10.52783/cana.v31.757, 169-185.

29. C. Pokharel, P. N. Gautam, C. R. Bhatta and J. Kafle, (2024). \Analysis of hemodynamic parameters on two-layered blood flow in a curved artery", Biomath, 13(2), https://doi.org/10.55630/j.biomath.2024.06.286, 1-15.

30. Kattel P, Tiwari, CN, Dangol BR and Kafle J* (2024) Journal of Applied Fluid Mechanics, 17(1), 284-296, 2024. doi.org/10.47176/jafm.17.1.1917

Nepjol Publication

31. Durga Prasad Khanal, Urmila Pyakurel, Tanka Nath Dhamala, and Stephan Dempe (2024), Bi-level Problem with Facility Allocation for Evacuation Planning, Journal of Bangladesh Math. Soc. 44.2 (2024) 017–027 \\ DOI: https://doi.org/10.3329/ganit.v44i2.78528 (GANIT) (accepted), MathSciNet, Ebsco, CrossRef.
32. Uday Kumar Karn, Chet Raj Bhatta & Ajay Kumar Chaudhary (2024), Compatible Mappings and Its Various Variants in Metric Space, Journal of Nepal Mathematical Society (JNMS) Research Article ISSN: 2616-0153 (Print), 2616-0161 (Online),Vol. 7, Issue 2, 108-115, DOI: https://doi.org/10.3126/jnms.v7i2.73110
33. Chudamani Pokharel, Jeevan kafle & Chet Raj Bhatta (2024), Impact of Effective Viscosity on Blood Flow Through Sinusoidal Stenosed Curved Artery, Journal of Nepal Mathematical Society (JNMS) Research Article ISSN: 2616-0153 (Print), 2616-0161 (Online) ,Vol. 7, Issue 2, : 08-21 , DOI: https://doi.org/10.3126/jnms.v7i2.73100
34. Poudel, M. P., Pahari, N. P., & Panthi, D. (2024). Product of two 2 F 2 Generalized Hyper-Geometric Functions and their Special Cases. The Nepali Mathematical Sciences Report, 41(2), 122-133.DOI: https://doi.org/10.3126/nmsr.v41i2.73231
35. Paudel, R. P., Pahari, N. P., & Poudel, M. P. (2024). Few Theorems on an Extension of Bailey's Formula Involving Product of Two Generalized Hypergeometric Functions. Journal of Nepal Mathematical Society, 7(2), 82-89. DOI: https://doi.org/10.3126/jnms.v7i2.73107
36. Basnet, G. B., Pahari, N. P., & Poudel, M. P. (2024). A Result on an Integral Involving Product of Two Generalized Hypergeometric Functions and Its Applications. Journal of Nepal Mathematical Society, 7(2), 22-29.DOI: https://doi.org/10.3126/jnms.v7i2.73101
37. Paudel, R. P., Pahari, N. P., & Poudel, M. P. (2024). Few theorems on an extension of Baily's formula involving product of two generalized hypergeometric functions. Journal of Nepal Mathematical Society (JNMS), 7(2). DOI: https://doi.org/10.3126/jnms.v7i2.73107
38. Basnet, G.B., Pahari, N.P., Paudel, R.P.; Double Integrals Involving Generalized Hypergeometric Function and Its Applications; The Nepali Mathematical Sciences Report; Vol. 41, No. 2, Pages 79 – 89 (2024); DOI: https://doi.org/10.3126/nmsr.v41i2.73227.
39. Pokharel, J.K., Pahari N.P., & Basnet, G.B.: Generalized Cesaro Summable Vector Valued Sequence Space of Bounded Type; The Nepali Mathematical Sciences Report; Vol. 41, No. 1, Pages 34 – 42 (2024). DOI: https:// doi.org/10.3126/nmsr. v41i1.67457.
40. Pokharel, J.K., Pahari N.P., &; Paudel, G.P (2024). On topological structure of total paranormed double sequence space, Journal of Nepal Mathematical Society, 6(2) 53-59.DOI: https://doi.org/10.3126/jnms.v6i2.63026
41. Phanindra Prasad Bhandari and Shree Ram Khadka (2024). Evacuation Plan for Potential Victims of Jyotinagar Landslide at Butwal, The Nepali Mathematical Sciences Report, Year: 2024, Volume: 41, No. 2, Pages: 90-104.
42. Bhandari P.P. and Khadka S.R. Evacuation Planning Problems on Uniform Path Lenght Network with Prioritized Destinations, Journal of Applied and Engineering Mathematics.
43. S. Thakuri & B. H. Subedi, Applications of Galois Theory. Journal of Nepal Mathematical Society(JNMS),7(2) (2024)90–99. DOI: https://doi.org/10.3126/jnms.v7i2.73108
44. B. P. Bhandari, J. Kafle and C. Pokharel, (2024). Effect of blood flow through mild stenosed artery with effective viscosity", Bibchana, 21(3), http://nepjol.info/index.

php/BIBECHANA, 262-272.

45. Pariyar, S., & Kafle, J. (2024). Generalizing the Mittag-Leffler Function for Fractional Differentiation and Numerical Computation. *The Nepali Mathematical Sciences Report*, *41*(1), 1–14. https://doi.org/10.3126/nmsr.v41i1.67446

46. Kafle, J., Adhikari, K. P., & Poudel, E. P. (2024). Air pollutant dispersion using advection-diffusion equation. *Nepal Journal of Environmental Science*, *12*(1), 1–6. https://doi.org/10.3126/njes.v12i1.47531

47. Kafle, J., Adhikari, K. P., Poudel, E. P., & Pant, R. R. (2024). Mathematical Modeling of Pollutants Dispersion in the Atmosphere. *Journal of Nepal Mathematical Society*, *7*(1), 61–70. https://doi.org/10.3126/jnms.v7i1.67487

48. Chhatkuli, K. N., Nidhi Gautam, P., & Kafle, J. (2024). A Mathematical Modeling of Blood Flow Through Artery with Bell-Shaped Stenosis. *Journal of Nepal Mathematical Society*, *7*(2), 40–49. https://doi.org/10.3126/jnms.v7i2.73103

49. Pokharel, C., Kafle, J., & Bhatta, C. R. (2024). Impact of Effective Viscosity on Blood Flow through Sinusoidal Stenosed Curved Artery. *Journal of Nepal Mathematical Society*, *7*(2), 8–21. https://doi.org/10.3126/jnms.v7i2.73100

50. Ghimire, J.L., Adhikari, G., Pahari, N.P. (2024). On I-Convergence Difference Sequence Spaces Defined by Orlicz Function in 2-Normed Space, *Journal of Nepal Mathematical Society*, 6(2), 60 - 66.

Central Department of Microbiology

1. Adhikari NP, Adhikari S, Rijal KR. Community composition and co-occurrence of free-living and particle-attached bacteria in the source region of the Ganges and Brahmaputra Rivers. Int Microbiol. 2024 Oct 14. doi: 10.1007/s10123-024-00607-6.

2. Aryal, S., Adhikari, R., Regmi, B., & Joshi, D. R. (2024). Antibacterial Compounds of Actinomycetes Isolated from Altitude Soils. Journal of Nepal Health Research Council, 22(04), 784-791. https://doi.org/10.33314/jnhrc.v22i04.5552

3. Baidya P, Zhang M, Xiao Y, Zhang H, Yu L, Li W. Genetically engineered whole-cell biocatalyst for efficient CO2 capture by cell surface display of carbonic anhydrase from Bacillus cereus GLRT202 on Escherichia coli. Biochemical Engineering Journal, 211 (2024) 109446. https://doi.org/10.1016/j.bej.2024.109446

4. Bajracharya S, Thapa J, Thapa Magar P, Mandal AK, Manandhar N, Chaudhary A, Dhakal D, Thapa Shrestha U. Antibiogram profile of respiratory pathogens and identifying the predisposing factors of respiratory tract infections among the patients visiting Bhaktapur Hospital. TUJM Volume 11. 2024.

5. Baral R, Tuladhar R, Manandhar S, Singh A. Detection of blaKPC gene among carbapenemase producing Klebsiella pneumoniae isolated from different clinical specimens at tertiary care hospital of Nepal. BMC Microbiology, 24(1) 2024.

6. Bhandari S, Upreti MK, Angbuhang KB, Shrestha B, Thapa Shrestha U. Biofilm formation capacity and Carbapenem-resistance in *Acinetobacter-calcoaceticus-baumannii* isolated from inpatients in a tertiary care hospital in Nepal. BMC Res Notes 18, 225 (2024). https://doi.org/10.1186/s13104-025-07211-5.

7. Bhandari S, Upreti MK, Angbuhang KB, Shrestha B, Thapa Shrestha U. Increased biofilm-associated carbapenem-resistant *Acinetobacter calcoaceticus–baumannii* complex infections among hospitalised patients in Kathmandu Model Hospital, Nepal. Journal of Global Antimicrobial Resistance, 2024; 39:1-2. ISSN 2213-7165.

8. Bharati N, Dumre SP, Shah Y, Nabesima T, Dhimal M, Pandey S, Kapandji M, Takamatsu Y, Urano T, Pandey BD, Morita

K, Tun MYN, Pandey K. Circulating serotypes and genotypes of dengue virus during the 2023 outbreak in Eastern Nepal. Journal of Clinical Virology, 174, 2024, 105721. https://doi.org/10.1016/j.jcv.2024.105721

9. Byanjankar N, Joshi TP, Dhakal A, Joshi DR, Koju, R, Qi Z, Hu C, Liu R, (2024). Removal of Dimethyl Arsenic Acid from Aqueous Solution by Ferric Manganese Binary Oxide. Water Air and Soil Pollution, 235(3), 196. https://doi.org/10.1007/s11270-024-07008-5

10. Commons RJ, Rajasekhar M, Allen EN, Yilma D, Chotsiri P, Abreha T, Adam I, Awab GR, Barber BE, Brasil LW, Chu CS, Cui L, Edler P, Gomes MDSM, Gonzalez-Ceron L, Grigg MJ, Hamid MMA, Hwang J, Karunajeewa H, Lacerda MVG, Ladeia-Andrade S, Leslie T, Longley RJ, Monteiro WM, Pasaribu AP, Poespoprodjo JR, Richmond CL, Rijal KR, Taylor WRJ, Thanh PV, Thriemer K, Vieira JLF, White NJ, Zuluaga-Idarraga LM, Workman LJ, Tarning J, Stepniewska K, Guerin PJ, Simpson JA, Barnes KI, Price RN; World Wide Antimalarial Resistance Network Paediatric Primaquine Vivax Study Group. Primaquine for uncomplicated Plasmodium vivax malaria in children younger than 15 years: a systematic review and individual patient data meta-analysis. Lancet Child Adolesc Health. 2024 Nov;8(11):798-808. doi: 10.1016/S2352-4642(24)00210-4.

11. Commons RJ, Rajasekhar M, Edler P, Abreha T, Awab GR, Baird JK, Barber BE, Chu CS, Cui L, Daher A, Gonzalez-Ceron L, Grigg MJ, Hwang J, Karunajeewa H, Lacerda MVG, Ladeia-Andrade S, Lidia K, Llanos-Cuentas A, Longley RJ, Pereira DB, Pasaribu AP, Pukrittayakamee S, Rijal KR, Sutanto I, Taylor WRJ, Thanh PV, Thriemer K, Vieira JLF, Watson JA, Zuluaga-Idarraga LM, White NJ, Guerin PJ, Simpson JA, Price RN; World Wide Antimalarial Resistance Network (WWARN) Vivax Primaquine Dosing Efficacy, Tolerability and Safety Study Group. Effect of primaquine dose on the risk of recurrence in patients with uncomplicated Plasmodium vivax: a systematic review and individual patient data meta-analysis. Lancet Infect Dis. 2024 Feb;24(2):172-183. doi: 10.1016/S1473-3099(23)00430-9.

12. Dahal, C, Adhikari S, Sharma Regmi R, Sapkota S, Adhikari N, Sharma S, Banjara MR, Sharma Chalise B, Ghimire G, Rijal KR. Detection of plasmid-mediated mcr-1 gene in multidrug-resistant *Escherichia coli* from clinical specimens at a tertiary hospital in Nepal. Infectious Diseases & Immunity 5, no. 2 (2024): 112-119.

13. Gaihre S, Prajapati K, Dhungel S, Dawadi P, Joshi, DR, Prasai Joshi T (2024) Occurrence of biofilm-forming *Escherichia coli* in drinking water supply system in Kathmandu, Water Environment Research, 2024, 1-12, https://doi.org/10.1002/wer.11096

14. GC G, Banjara MR, Gautam I, Ghimire P, Rijal KR. Soil bacteria that kill mosquito larvae. Kathmandu University Medical Journal 2024; 22 (3): 185-190.

15. Gc G, Parajuli K, Gautam I, Banjara MR, Ghimire P, Rijal KR. Efficacy of Native Bacillus thuringiensis against Mosquito Vector. J Nepal Health Res Counc. 2024 Mar 22;21(3):479-485. doi: 10.33314/jnhrc. v21i3.4742.

16. Gharty Chhetri G.C, G., Banjara, M. R., Ghimire, P., & Rijal, K. R. (2024). A Cross-Sectional Survey of *Aedes aegypti* and *Aedes albopictus* Immature in the Discarded Tires. Tribhuvan University Journal, 39(2), 146–158. https://doi.org/10.3126/tuj.v39i2.72993

17. Ghimire B, Pokharel MK, Banjara MR, Rijal KR, Ghimire P. Extended spectrum beta lactamase *Escherichia coli* in Bagmati river, Kathmandu valley. J Nepal Health Res Counc. 2024; 21(4): 672-679.

18. Ghimire L, Banjara MR, Abdulla AM. Antibiotic susceptibility of Staphylococcus aureus with VanA and MecA genes. J Nepal Health Res Counc. 2024; 21(4): 616-622.

19. Ghosh D, Sagar SK, Uddin MR, Rashid MU, Maruf S, Nath R, Islam MN,

Aktaruzzaman MM, Sohel ANM, Banjara MR, Kroeger A, Aseffa A, Mondal D. Post kala-azar dermal leishmaniasis burden at the village level in selected high visceral leishmaniasis endemic upazilas in Bangladesh. Int J Infect Dis. 2024:107213.

20. K C S, Khanal S, Joshi T P, Khadka D, Tuladhar R, Joshi DR* (2024) Antibiotic resistance determinants among carbapenemase producing bacteria isolated from wastewaters of Kathmandu, Nepal. Environmental Pollution 343:123155. https://doi.org/10.1016/j.envpol.2023.123155

21. Karbwang J, Torres CE, Navarro AM, Wongwai P, Jimenez EB, Shetty Y, Ramalingam S, Koli P, Amir L, Rachmawati SD, Waworundeng M, Rizki H, Noor ASM, Ghimire P, Gyanwali P, Sharma S, Ghimire N, Wanigatunge C, Yimtae K. The readiness of the Asian research ethics committees in responding to the COVID-19 pandemic: A multi-country survey. F1000Res. 2024 Jan 8;13:19. doi: 10.12688/f1000research.143138.1. PMID: 39165349; PMCID: PMC11333877.

22. Kattel HP, Sharma S, Alfsnes K, Pathak R, Rijal KR, Ghimire P, Andreassen AK, Banjara MR. Epidemiological characteristics of hepatitis C patients attending a tertiary care hospital. J Nepal Health Res Counc 2024; 22 (64): 608-615.

23. Khanal S, K C S, Prasai Joshi P, Han Z, Wang C, Maharjan J, Tuladhar R, Joshi DR* (2024). Extended-spectrum β-lactamase-producing bacteria and their resistance determinants in different wastewaters and rivers in Nepal, Journal of Hazardous Materials, 2024, 134660, https://doi.org/10.1016/j.jhazmat.2024.134660

24. Lamichhane A, Regmi S, Pandit K, Upadhaya S, Acharya J, Koirala S, Aryal S, Gurung K, Thapa J, Adhikari S, Sharma S, Poudel P, Sharma S Identification of fungal pathogens among COVID-19 and non COVID-19 cases in Bhaktapur hospital, Nepal. BMC Res Notes 17, 347 (2024). https://doi.org/10.1186/s13104-024-07010-4

25. Lek D, Shrestha M, Lhazeen K, Tobgyel T, Kandel S, Dahal G, Ghimire YC, Shrestha B, Ghimire P, Hein PS, Peto TJ, Callery JJ, Tripura R, von Seidlein L, Amaratunga C, Lynch CA, Dondorp AM, Adhikari B. Malaria elimination challenges in countries approaching the last mile: a discussion among regional stakeholders. Malar J. 2024 Dec 26;23(1):401. doi: 10.1186/s12936-024-05215-3. PMID: 39722002; PMCID: PMC11670476.

26. Maharjan E, Wong MY, Thapa U, Adhikari R, Joshi DR* (2024) Fungicidal activity of seeds of Abrus precatorius L., Datura metel L., and Diploknema butyracea (Roxb.) HJ Lam against phytopathogenic fungi. Scientific World, 17(17) 114-122.

27. Mantel P, Vasoo S, Cruz R, De Assis D, Faisal AA, Jaime H, Rijal KR, Salmon S, Basseal JM. Scenario-based outbreak response training: perspectives from a multidisciplinary trainee team. Western Pac Surveill Response J. 2024 Aug 8;15(5 Spec edition):1-3. doi: 10.5365/wpsar.2024.15.5.1116. PMID: 39144473; PMCID: PMC11321908.

28. Monsieurs P, Cloots K, Uranw S, Banjara MR, Ghimire P, Burza S, Hasker E, Dujardin JC, Domagalska MA. Source tracing of Leishmania donovani in emerging foci of visceral leishmaniasis, Western Nepal. Emerg Infect Dis. 2024; 30(3): 611-613.

29. Niroula M, Banjara MR. Extended spectrum ß-lactamase producing Escherichia coli from Bagmati River water. Journal of Institute of Science and Technology 2024; 29(2): 1-8.

30. Pandit K, Sharma S, Aryal S, Lamichhane A, Regmi S, Paudel P, Koirala S, Sharma S, Adhikari S, Rijal KR, Poudel P, Concurrent presence of Staphylococcal Cassette Chromosome mec types of Meticillin-Resistant *Staphylococcus aureus* in hospital environments and post-operative patients at a hospital in Kathmandu, Nepal, Infection Prevention in Practice, https://doi.org/10.1016/j.infpip.2024.100436

31. Parajuli, R. P. P., Bharati, N., Bhandari, S., Patel, D. K., Neupane, A., Ansari, Z., ... &

Dumre, S. P. (2024). Antibiotic Resistance Pattern of Bacteria Isolated from Clinical Specimens: A Hospital-Based Cross-sectional Study in Kathmandu, Nepal. Nepal Medical College Journal, 26(2), 132-137.

32. Rajasekhar M, Simpson JA, Ley B, Edler P, Chu CS, Abreha T, Awab GR, Baird JK, Bancone G, Barber BE, Grigg MJ, Hwang J, Karunajeewa H, Lacerda MVG, Ladeia-Andrade S, Llanos-Cuentas A, Pukrittayakamee S, Rijal KR, Saravu K, Sutanto I, Taylor WRJ, Thriemer K, Watson JA, Guerin PJ, White NJ, Price RN, Commons RJ; WorldWide Antimalarial Resistance Network (WWARN) Vivax Primaquine Dosing Efficacy, Tolerability and Safety Study Group. Primaquine dose and the risk of haemolysis in patients with uncomplicated *Plasmodium vivax* malaria: a systematic review and individual patient data meta-analysis. Lancet Infect Dis. 2024 Feb;24(2):184-195. doi: 10.1016/S1473-3099(23)00431-0.

33. Rimal, S., Shrestha, S., Paudel, S. W., Shah, Y., Bhandari, G., Pandey, K., Kharbuja, A., Kapandji, M., Gautam, I., Bhujel, R., Takamatsu, Y., Bhandari, R., Klungthong, C., Shrestha, S. K., Fernandez, S., Malavige, G. N., Pandey, B. D., Urano, T., Morita, K., ... Dumre, S. P. (2024). Molecular and Entomological Characterization of 2023 Dengue Outbreak in Dhading District, Central Nepal. Viruses, 16(4), 594. https://doi.org/10.3390/v16040594

34. Raya S, Malla B, Shrestha S, Sthapit N, Kattel H, Sharma ST, Tuladhar R, Maharjan R, Takeda T, Kitajima M, Tandukar S, Haramoto E. Quantification of multiple respiratory viruses in wastewater in the Kathmandu Valley, Nepal: potential implications of wastewater-based epidemiology for community disease surveillance in developing countries. Science of The Total Environment, 2024, 920, 170845

35. Sadhewa A, Chaudhary A, Panggalo LV, Rumaseb A, Adhikari N, Adhikari S, Rijal KR, Banjara MR, Price RN, Thriemer K, Ghimire P, Ley B, Satyagraha AW. Field assessment of the operating procedures of a semi-quantitative G6PD Biosensor to improve repeatability of routine testing. PLoS One 2024; 19(1): e0296708.

36. Sadhewa A, Chaudhary A, Panggalo LV, Rumaseb A, Adhikari N, Adhikari S, Rijal KR, Banjara MR, Price RN, Thriemer K, Ghimire P, Ley B, Satyagraha AW. Field assessment of the operating procedures of a semi-quantitative G6PD Biosensor to improve repeatability of routine testing. PLoS One. 2024 Feb 29;19(2): e0300016. doi: 10.1371/journal.pone.0300016.

37. Sharma, S., Acharya, J., Thapa, J., Khadka, D. K., Aryal, S., Kayastha, M., Sharma, S., Chalise, B. S., Karn, R., Banjara, M. R., Ghimire, P., & Singh, A. Limitations of Normal CSF Cell Counts in Excluding Bacterial Meningitis: A Multicentric Hospital-Based Study in Kathmandu, Nepal. Journal of Institute of Science and Technology, Volume 29(2), December 7, 2024. DOI: 10.3126/jist. v29i2.67889

38. Shrestha A, Joshi DR, Vaidya D, Shrestha SM, Singh A (2024) Bacteriospermia in men among infertile couples in the Nepalese population. Systems Biology in Reproductive Medicine. 2024 Dec 31;70(1):240-8.

39. Shrestha PM, Kattel HP, Sharma S, Bista P, Basnet BK, Ghimire P, Rijal KR. Metallo-β-lactamase-producing Pseudomonas aeruginosa Isolates from Two Tertiary Care Centres in a District of Nepal: A Descriptive Cross-sectional Study. JNMA J Nepal Med Assoc. 2024 Feb 29;62(271):202-206. doi: 10.31729/jnma.8498. PMID: 39356784.

40. Subedi A, Upreti MK, Rana JC, Sapkota RP, Thapa Shrestha U. Vulvovaginal candidiasis, an increasing burden to women in the tropical regions attending Bharatpur Hospital, Chitwan. Journal of Medical Mycology, 2024; 34 (4): 101509.

41. Syangtan G, Khanal LK, Bista S, Chand AB, Maharajhan BL, Dawadi P, Tuladhar R, Rai SK, Joshi DR* (2024) Panton-Valentine leucocidin gene in methicillin resistant Staphylococcus aureus isolated from tertiary care hospital in Nepal. The Journal of Infection in Developing

Countries. 2024 Jul 29;18(07):1010-9.

42. Tandukar S, Sthapit N, Thakali O, Baral R, Tiwari A, Shakya J, Tuladhar R, Joshi DR, Sharma B, Shrestha BR, Sherchan SP (2024) Long-term longitudinal monitoring of SARS CoV-2 in urban rivers and sewers of Nepal, Science of The Total Environment, 951, 175138 doi. org/10.1016/j.scitotenv.2024.175138.

43. Tandukar S, Thakali O, Baral R, Tiwari A, Haramoto E, Tuladhar T, Joshi DR, Sherchan SP (2024) Application of wastewater-based epidemiology for monitoring COVID-19 in hospital and housing wastewaters. Science of the Total Environment 24:931:171877. doi: 10.1016/j.scitotenv.2024.171877

44. Tandukar S, Thakali O, Tiwari A, Baral R, Malla B, Haramoto E, Shakya J, Tuladhar R, Joshi DR, Sharma B, Shrestha BR, Sherchan SP (2024) Application of Skimmed-Milk Flocculation Method for Wastewater Surveillance of COVID-19 in Kathmandu, Nepal. Pathogens 2024, 13(5), 366; 10.3390/pathogens13050366

45. Tiwari, A., Poudel, P., Khanal, S., Lekhak, S., Adhikari, S., Regmi, R. S., Sharma, S., Panta, O. P., & Karki, T. B. (2024). Emergence of mcr-1 gene in colistin-resistant Escherichia coli isolates from chicken in Chitwan, Nepal. Foodborne Pathogens and Disease, 21(7), 403-408. https://doi.org/10.1089/fpd.2024.0151

Central Department of Physics

1. Khanal, M., Acharya, A., Maharjan, R., Gyawali, K., Adhikari, R., Mulmi, D. D., ... & Lamichhane, H. P. (2024). Identification of potent inhibitors of HDAC2 from herbal products for the treatment of colon cancer: Molecular docking, molecular dynamics simulation, MM/GBSA calculations, DFT studies, and pharmacokinetic analysis. *PloS one*, *19*(7), e0307501.

2. Sah, M., Khadka, M., Lamichhane, H. P., & Mallik, H. S. (2024). Physical analysis of aspirin in different phases and states using density functional theory. *Heliyon*, *10*(11).

3. Sharma, S., Chalise, R., Basnet, S., Lamichhane, H. P., & Khanal, R. (2024). Development of a low-cost plasma source using fly-back transformer for atmospheric pressure gliding arc discharge. *Physics of Plasmas*, *31*(4).

4. Acharya, A., Khanal, M., Maharjan, R., Gyawali, K., Luitel, B. R., Adhikari, R., ... & Lamichhane, H. P. (2024). Quantum chemical calculations on calcium oxalate and dolichin A and their binding efficacy to lactoferrin: An in silico study using DFT, molecular docking, and molecular dynamics simulations. *AIMS Biophysics*, *11*(2), 142-165.

5. Karki, D., Phunyal, A., Lamichhane, T. R., Rayamajhi, A., Sapkota, A., Nyaupane, H., ... & Adhikari, A. (2024). Chemical profiling, in-vitro and in silico α-glucosidase inhibition, antioxidant and antibacterial activities of Hypotrachyna cirrhata (Fr.) Hale ex Sipman. All Life, 17(1), 2424894.

6. Gyawali, K., Maharjan, R., Acharya, A., Khanal, M., Ghimire, M. P., & Lamichhane, T. R. (2024). Identification of catechin as main protease inhibitor of SARS-CoV-2 Omicron variant using molecular docking, molecular dynamics, PCA, DCCM, MM/GBSA and ADMET profiling. Natural Product Research, 1-8.

7. Chhetri, S. P., Bhandari, V. S., Maharjan, R., & Lamichhane, T. R. (2024). Identification of lead inhibitors for 3CLpro of SARS-CoV-2 target using machine learning based virtual screening, ADMET analysis, molecular docking and molecular dynamics simulations. RSC advances, 14(40), 29683-29692.

8. Khanal, M., Acharya, A., Maharjan, R., Upadhyay, D. R., Dhobi, S. H., Shah, B. R., Adhikari R., Mulmi D. D., Lamichhane T. R., & Lamichhane, H. P. (2024). Investigation of naturally occurring

radionuclides in selected medicinal plants and associated soils, and calculation of soil-to-plant transfer factors. Journal of Environmental Radioactivity, 280, 107556.

9. Maharjan, R., Gyawali, K., Acharya, A., Khanal, M., Ghimire, M. P., & Lamichhane, T. R. (2024). Artemisinin derivatives as potential drug candidates against Mycobacterium tuberculosis: insights from molecular docking, MD simulations, PCA, MM/GBSA and ADMET analysis. Molecular Simulation, 1-12.
10. Kattel, R., Subedi, B., & Lamichhane, T. R. (2024). Evaluation of Sb2O3 influences on radiation shielding properties of Sb2O3–B2O3–Bi2O3–TeO2 glass system using Phy-X/PSD and SRIM software. International Journal of Environmental Science and Technology, 21(3), 3317-3328.
11. G. Bahadur Acharya, S.-H. Kim, and M. P. Ghimire. "Electronic and optical properties of ternary kagome Rb2Ni3S4: a density functional study". In: Modelling Simul. Mater. Sci. Eng. 32.6 (2024), pp. 065012-1–10.
12. D. C. Jones, S. Das, H. Bhandari, X. Liu, P. Siegfried, M. P. Ghimire, S. S. Tsirkin, I. I. Mazin, and N. J. Ghimire. "Origin of spin reorientation and intrinsic anomalous Hall effect in the kagome ferrimagnet TbMn6Sn6". Physical Review B 110.11 (2024), pp. 115134-1–11.
13. D. Bhattarai, D. B. Shahi, D. P. Kalauni, and M. P. Ghimire. "Emergence of Weyl Points and Large Anomalous Hall Conductivity in Layered Bi2TeMnI2". Physical Chemistry Chemical Physics 26.43 (2024), pp. 27583–27590.
14. G. B. Acharya, B. Karki, M. P. Ghimire, and B. Srinivasan. "Weyl Characteristics Induced an Anomalous Hall Effect in Double Half-Heusler Alloy Cr2FeCoAs2: A Density-Functional Study". ACS Applied Electronic Materials 6.11 (2024), pp. 8260–8268.
15. K. Malla and M. P. Ghimire. "Prediction of lattice parameters of tetragonal oxyhalides AOX". In: Scientific World 17.17 (2024), pp. 44–52.
16. First-principles insights into thermoelectric behavior of XNiAs (X= Sc, Y) half-Heusler compounds A Giri, P Khatri, HK Neupane, NP Adhikari Materials Research Express 11 (11), 115501 2024
17. Prediction of binding energy using machine learning approach B Pandey, S Giri, RD Pant, M Jalan, A Chaudhary, NP Adhikari AIP Advances 14 (10) 2024
18. Thermoelectric properties of low thermal conductivity half Heuslers TiXPb (X= Ni, Pd, Pt): A first principles investigation P Khatri, NP Adhikari, P Ghosh Computational Materials Science 244, 113250 2024
19. Investigating molecular interactions between Kaiso and nuclear co-repressor using molecular simulations B Thapa, NP Adhikari AIP Advances 14 (6) 1 2024
20. Mechanical and thermoelectric response of 18-valence electron half-Heusler tellurides XFeTe (X= Ti, Hf): A theoretical perspective P Khatri, NP Adhikari Materials Today Communications 39, 108853 7 2024
21. First-principles study of superconducting transition temperature of niobium and vanadium as a function of pressure H Oli, B Acharya, NP Adhikari AIP Advances 14 (4) 2 2024
22. Base flipping mechanism and binding strength of methyl-damaged DNA during the interaction with AGT RP Koirala, NP Adhikari Journal of Biological Physics 50 (1), 71-87 2024
23. Investigation of HDAC7-MEF2A interactions using molecular simulations N Gautam, PP Chapagain, NP Adhikari, PB Tiwari Biophysical Journal 123 (3), 136a 2024

24. Insights from in silico study of receptor energetics of SARS-CoV-2 variants Lokendra Singh Dhami, Prabin Dahal, Bidhya Thapa, Narayan Gautam, Nurapati Pantha, Rameshwar Adhikari, Narayan Prasad Adhikari Physical Chemistry Chemical Physics 26 (11), 8794-8806

25. Pokharel, P., Yadav, S. K., Pantha, N., Sharma, B., & Adhikari, D. (2024). Structural, electronic, optical, magnetic, and mechanical properties of SmMnO3 perovskite with europium and yttrium doping: A first-principles study. AIP Advances, 14(12).

26. Pokharel, P., Yadav, S. K., Pantha, N., & Adhikari, D. (2024). Strain-dependent electronic, mechanical and piezoelectric properties of ZrSiO3 2D monolayer: A first principle approach. Journal of Physics and Chemistry of Solids, 193, 112198.

27. Pokharel, P., Yadav, S. K., Pantha, N., & Adhikari, D. (2024). First-Principles Investigations of Structural, Electronic, and Elastic Properties of ZrSiO3 Perovskite: Layer Dependence, Surface Termination, and Pressure Effects. physica status solidi (b), 261(8), 2400156.

28. Adhikari, D., Karki, R., Adhikari, K., & Pantha, N. (2024). First-principles study on the selective separation of toxic gases by Mg-MOF-74. ACS omega, 9(4), 4849-4856.

29. Rai, R. K., Kaphle, G. C., Ray, R. B., & Niraula, O. P. (2024). Exploring the electronic transport, magnetic, and optical properties of strongly correlated systems: A numerical analytical continuation approach. International Journal of Modern Physics B, 38(25), 2450341.

30. Sah, S. K., Chaudhary, R. P., Jha, M. K., Koirala, I., & Jha, I. S. (2024). Thermodynamics of lead-free Sn-Au-Sb liquid alloys: a theoretical approach. Welding International, 38(12), 823-834.

31. Sah, S. K., Jha, I. S., & Koirala, I. (2024). Thermodynamic activity in Zn–Cu–Sn–In liquid solder alloys: a comprehensive analysis using the molecular interaction volume model. Welding International, 38(4), 265-276.

32. Upadhyay, D.R., Koirala, G., Shah, B.R., Tajudin, S.M., & Khanal, R. (2024). Assessing Radioactive Contaminants in Kathmandu Soils: Measurement and Risk Analysis, Environmental Monitoring and Assessment, 196, 190. https://doi.org/10.1007/s10661-023-12284-5

33. Chalise, R., Dahal, A., Basnet, S., Sharma, S., Panta, D.R., & Khanal, R. (2024). Effect of Plasma-Activated Water on Chlorophyll Retention in Detached Tejpat (Cinnamomum tamala) Leaves. Heliyon, 10, e24480. http://dx.doi.org/10.2139/ssrn.4502908

34. Acharya, N.P., Basnet, S., & Khanal, R. (2024). Nonlinear dust-ion acoustic solitary waves for collisional electronegative dusty plasma in the presence of trapped electron distribution. Physica Scripta, 99, 035603. http://dx.doi.org/10.1088/1402-4896/ad23bc

35. Basnet, S., Patel, A., Thapa, S.B., & Khanal, R. (2024). Ion flow and dust charging at the sheath boundary for dusty plasma with electron emitting surface: Applications to laboratory and lunar dusty plasmas. Plasma Physics and Controlled Fusion, 66, 055013. https://doi.org/10.1088/1361-6587/ad34f9

36. Upadhyay, D.R., Phuyal, A., Tajudin, S.M., & Khanal, R. (2024). Assessment of Natural Radioactivity Levels and Hazard Indicators in Tarakeshwor Municipality, Nepal through In-situ Technique and Multivariate Analysis. Heliyon, 10, e30822. https://doi.org/10.1016/j.heliyon.2024.e30822

37. Chalise, R., Tamang, A., Kattel, A., Sharma, S., Basnet, S., & Khanal, R. (2024). Impact of Plasma-Activated Water on Germination, Growth, and Production of Green Leafy Vegetables. AIP Advances, 14, 065318. https://doi.org/10.1063/5.0205372

38. Upadhyay, D.R., Dulal, A., Tajudin, S.M., & Khanal, R. (2024). Behavior of silver tellurite glasses against gamma rays, neutrons, and ions using theoretical and the PHITS Monte Carlo method. Materials Research Express, 11, 075202. https://doi.org/10.1088/2053-1591/ad63fe)

39. Basnet, S., Chalise, R., Acharya, N.P., & Khanal, R. (2024). Comprehensive Study of Kinetic Trajectory Simulation Method for Multi-Component Magnetized Plasma-Wall Interaction Process. Fundamental Plasma Physics, 11, 100067. https://doi.org/10.1016/j.fpp.2024.100067

40. Chalise, R., Dhungana, S., Sharma, S., Basnet, S., Baniya, H., Acharya, T.R., Lamichhane, P., & Khanal, R. (2024). Development and Characterization of Atmospheric Pressure Gliding Arc Plasma Jet. Physica Scripta, 99, 105611. https://doi.org/10.1088/1402-4896/ad75d2

41. Acharya, N.P., Basnet, S., Misra, A., & Khanal, R. (2024). Dust-ion-acoustic damped solitary waves and shocks in laboratory and Saturn's E-ring magnetized nonthermal dusty plasmas with anisotropic ion pressure and dust-charge fluctuation. Physics of Plasmas, 31, 093701. https://doi.org/10.1063/5.0220030

42. Pandit S.K., Pandey B.P., Shrestha S., Kavi K.K. and Niraula O.P., Comparative Studies on the Source Pocket Hetero Dielectric Double Gate TFET (SP-HD-DG-TFET): Varying Width of the Source Pocket, Physics of the Solid State Vol. 66 No. 12 (2024,) 565–570. ISSN 1063-7834 DOI: 10.1134/S1063783424601048

43. Energy Calculation of Pentaquarks Using Thomas Fermi Quark Model: A Theoretical Study B Aryal, S Baral, GC Kaphle; arXiv preprint arXiv:2401.03007.

44. Pandey B.P., Pandit S.K., Shrestha S., Kavi K.K. and Niraula O.P., Optimization of Source Pocket Height on Source Pocket Half Hetero Dielectric Double Gate TFETs (SP-HHD-DG-TFET) (2024) (Accepted for Jordan Journal of Physics)

45. Electronic structure and magnetic properties of 3d-substituted double perovskite Bi 2NiCrO6 S Sharma, H Neupane, A Belbase, N Thami, GC Kaphle, D Yadav; APS March Meeting Abstracts 2024,BB04. 004

46. First Principles Investigation of Structural, Electronic and Mechanical Properties of NaVF K Kshetri, U Chaudhary, E Tamang, GC Kaphle; Orchid Academia Siraha 3 (1), 117-130. Investigating Structural, Mechanical, Electronic and Magnetic Properties of Spin-Gapless Quaternary

NATIONAL

47. Acharya, A., Khanal, M., Maharjan, R., Gyawali, K., Khanal, K., Kshetri, M. B., ... & Lamichhane, H. P. (2024). Experimental FTIR characterization of kidney stones, DFT analysis of CaC2O4 and its interactions with lysozyme. *BIBECHANA*, *21*(3), 311-320.

48. Dhoju, N., & Lamichhane, T. R. (2024). Inhibitory Activity of Myricetin and Chlorogenic Acid against Dengue Virus NS2b/NS3 Protease through In Silico Approaches. Journal of Institute of Science and Technology, 29(2), 85-98.

49. P. Koirala and M. Ghimire. "Lattice parameters prediction of orthorhombic oxyhalides using machine learning". In: Himalayan Physics 11 (2024).

50. B Thapa, NP Adhikari (2024). Characterization of the molecular interactions between Kaiso and CTCF using AlphaFold2 and molecular dynamics simulations BIBECHANA 21 (3), 290-299 2024.

51. P Khatri, NP Adhikari (2024). Lattice thermal conductivity in half-Heusler compounds XNiSn (X= Ti, Zr, Hf) using Slack's model Bibechana 21 (1), 12-22 4 2024

52. Sigdel, R., & Pantha, N. (2024). Estimation of global solar radiation (gsr) over Biratnagar, Morang, Nepal. Butwal Campus Journal, 7(2), 220-231.

53. Mainali, I., Khadka, P., & Pantha, N. (2024). Comparative study of UV index in the selected sites of Nepalse teritory. BIBECHANA, 21(3), 281-289.

54. Sah, S. K., & Koirala, I. (2024). Thermodynamic Modeling and Activity Analysis of Bi-In-Sn Ternary Liquid Alloys at High Temperatures. Journal of Institute of Science and Technology, 29(2), 75-82.

55. Panthi, N., Bhandari, I. B., & Koirala, I. (2024). Structural Asymmetry in two Thallium-based Alloys: Tl-Mg and Tl-Na. Journal of Institute of Science and Technology, 29(1), 25-33

56. Sah, S. K., Jha, I. S., & Koirala, I. (2024). Theoretical exploration of thermodynamic characteristics in lead-free liquid alloys: Zn-Bi-In System. BIBECHANA, 21(2), 83-94.

57. Chalise, R., KC, N., Mishra, A., Kalakhety, H., & Khanal, R. (2024). Radiation level over the Bishnumati River Bridges: A Study from Balaju to Teku in Kathmandu, Nepal. Bibechana, 21, 124. https://doi.org/10.3126/bibechana.v21i2.6126

58. Upadhyay, D.R., Adhikari, P., Khatri, B.V., Tajudin, S.M., Kalakhety, H., & Khanal, R. (2024). In-situ Assessment of Natural Radioactivity Concentrations and Hazard Indicators in the Mining Area of Lalitpur, Nepal. Journal of Institute of Science and Technology, 29, 1. https://doi.org/10.3126/jist.v29i1.60793

59. Chalise, R., Regmi, K., Nepal, S., Sharma, S., Basnet, & Khanal, R. (2024). Characterization of Atmospheric Circular Dielectric Barrier Discharge via Electrical and Optical Methods. Bibechana, 21, 195. https://doi.org/10.3126/bibechana.v21i3.6203

60. Adhikari, H., Chalise, R., Kalakhety, H., & Khanal, R. (2024). Assessment of natural background radiation levels in Ranipokhari, Kathmandu, Nepal, following the 2015 earthquake and during reconstruction. Himalayan Physics, 11, 12. https://doi.org/10.3126/hp.v11i1.61269

61. Chalise, R., Kattel, A., Yadav, A.K., Sharma, S., Basnet, S., & Khanal, R. (2024). Impact of Plasma-Activated Water on Germination and Growth of Basmati Rice. Journal of Nepal Physical Society, 10, 22. https://doi.org/10.3126/jnphyssoc.v10i1.72832

62. Heusler Alloy CrMnVAl. RB Ray, RK Rai, GC Kaphle, Pragya Darshan प्रज्ञा दर्शन दर्शन 6 (1), 80-88

63. Reasoning in STEAM Education: Unlocking the Power of Induction, Deduction, and Abduction IR Upadhyaya, GC Kaphle; Journal of Lumbini Engineering College 6 (1), 50-59(2024).

64. DR Poudel, GG Khatri, GC Kaphle (2024), Hydrogen Fuel: A Global Concern, Policies, Future & Its Overall Impact on Prosperous Nepal Journal of Lumbini Engineering College 6 (1), 15-22.

65. RB Ray, RK Rai, DK Yadav, GC Kaphle (2024). Exploring FeMnVAl Heusler Alloy: Physical, Mechanical, and Magnetic Properties Journal of Lumbini Engineering College 6 (1), 93-104.

Central Department of Statistics

1. Banjade, I. P., & Shrestha, S.L. (2024). Five-dimensional unequally weighted mapping methodology for measuring the level of human development: an application in Bagmati Province, Nepal. Asia-Pac J Reg Sci, 8:1135–1161. https://doi.org/10.1007/s41685-024-00359-1
2. Banjade, I. P., Shrestha, S .L. (2024) Assessing Human Development in Nepal through Descriptive and Cluster Analysis: Progress and Disparities. Applied Research Quality Life, 19: 945–958. https://doi.org/10.1007/s11482-024-10278-0
3. Bhusal, Madhav Kumar, & Shankar Prasad Khanal(2025). Statistical models for predicting the number of under-five mortality in Nepal. PLoS One, 20.5: e0324321. https://doi.org/10.1371/journal.pone.0324321
4. Nepal, S. R., & Shrestha, S. L. (2024). Modeling the ecological footprint and assessing its influential factors: A systematic review. Environ Sci Pollut Res, 31: 50076–50097. https://doi.org/10.1007/s11356-024-34549-3.
5. Shrestha, I. K., & Khanal, S. P. (2024). Factors associated with time to first birth after marriage: A systematic review. BIBECHANA, 21(2), 180–194. https://doi.org/10.3126/bibechana.v21i2.62448
6. Sitaula, P., & Uprety, P. (2024), The Influence of Psychological Factors and Risk Propensity on Investment Decisions, Journal of Business and social Science

Central Department of Zoology

1. Adhikari, J.N., Bhattarai, B.P., & Thapa, T.B. (2024). Correlates and impacts of human-mammal conflict in the central part of Chitwan Annapurna Landscape, Nepal. Heliyon. 2024 Feb 16;10(4):e26386. https://doi.org/10.1016/j.heliyon.2024.e26386.
2. Adhikari, J.N., Bhattarai, B.P., Baral, S., &Thapa, T.B. (2024). Landscape-level habitat connectivity of large mammals in Chitwan Annapurna Landscape, Nepal. Ecology and Evolution. 14(8):e70087. https://doi.org/10.1002/ece3.70087.
3. Ali, A., Khanal, L., López-Bao, J. V., & Kyes, R. C. (2024). Photographic evidence of the Kashmir grey langur *Semnopithecus ajax* in Pakistan warrants detailed taxonomic assessment of langurs across the Himalayas. Asian Primates Journal, 11(1):2-10.
4. Arima, H., Nishimura. T., Koirala, S., Nakano, M., Ito, H., Ichikawa, T., Pandey, K., Pandey, B.D., & Yamamoto, T (2024). Sex differences in genotype frequency and the risk of polycythemia associated with rs13419896 and rs2790859 among Tibetan highlanders living in Tsarang, Mustang, Nepal. Journal of Physiology and Anthropology. 43(1):25. https://doi.org/10.1186/s40101-024-00372-5.
5. Baral, K., Bhandari, S., Adhikari, B., Kunwar, R.M., Sharma, H.P., Aryal, A. and Ji, W. (2024). Prey selection by leopards (*Panthera pardus fusca*) in the mid-hill region of Nepal. Ecology and Evolution, 14(2), p.e10924. https://doi.org/10.1002/ece3.10924
6. Bharati, N., Dumre, S.P., Shah, Y., Nabesima, T., Dhimal, M., Pandey, S., Kapandji, M., Takamatsu, Y., Urano, T., Pandey, B.D., Morita, K., Ngwe Tun, M.M., & Pandey K. Circulating serotypes and genotypes of dengue virus during the 2023 outbreak in Eastern Nepal. Journal of Clinical Virology. 105721. https://doi.org/10.1016/j.jcv.2024.105721.
7. Bhattarai, B., Adhikari, D., Adhikari, J. N., & Bhattarai, B. P. (2024). Effects of invasive

alien plants and habitat structure on bird assemblages in a unique lowland forest in eastern Nepal. Ornis Hungarica, *32*(2), 1-25. https://dx.doi.org/10.2478/orhu-2024-0019

8. Dahal, D.R., Thapa, S., & Singh, N.B. (2024). Responses of insectivorous bats to climate change in Nepal. Journal of Zoology 323 (1), 29-44. https://doi.org/10.1111/jzo.13159

9. Dahal, D.R., Thapa, S., Singh, N.B. (2024). Species diversity and elevational distribution of bats in Nepal. Acta Chiropterologica 26 (1), 101-111. https://doi.org/10.3161/15081109ACC2024.26.1.009

10. Dhakal, P., Dhakal, M., Dhakal, D., Shakya, P., Singh, B., Gupta Kalwar, R., Shahi, R., Pandey, S., Niraula, D., Karki, A., Mahato, M.K., Tamang, S., Chhetri, B., Thapa, M., Parajuli, R., Subedi, J.R., Pandey, K., Maharjan, M., & Parajuli RP. (2024). Prevalence of intestinal parasites in humans and domestic animals in Jirel community, Dolakha, Nepal. Journal of Family Medicine and Primary Care. 13(8):3408-3414. https://doi.org/10.4103/jfmpc.jfmpc_197_24.

11. Gautam J., Parajuli, R.P.P., & Pandey K. (2024). Prevalence and associated factors of intestinal parasitic infections in the Badi indigenous communities of Western Nepal. Journal of Health Population and Nutrition. 43(1):211. https://doi.org/10.1186/s41043-024-00694-1.

12. Gautam, R., Baral, N., & Sharma, H.P. (2024). Preference of trees for nest building by critically endangered white-rumped vultures (*Gyps bengalensis*) in Nepal. Ecology and Evolution, 14(3), p.e11175. https://doi.org/10.1002/ece3.11175

13. Hyongaju, S., Subba, A., Maharjan, M., & Khanal, L. (2024). Roost characteristics of Indian flying fox along urban noise gradient: A case study in Sallaghari Forest, Kathmandu Valley, Nepal. Ecocycles, 10(1):105–114. https://doi.org/10.19040/ecocycles.v10i1.439

14. Katuwal, H.B., Sharma, H.P., Rokka, P., Das, N.K., & Quan, R.C. (2024). Knowledge, attitudes, and conservation challenges for the Lesser Adjutant in Nepal. Global Ecology and Conservation, 49, p.e02795. https://doi.org/10.1016/j.gecco.2023.e02795

15. KC, S., Regmi, S., Pant, B., Nepali, A., Katuwal, H. B., & Sharma, H. P. (2024). Factors influencing Chinese pangolin (*Manis pentadactyla*) burrow selection in the Chandragiri-Champadevi hills of Kathmandu Valley, Nepal. Heliyon, 10(4) https://doi.org/10.1016/j.heliyon.2024.e25774

16. Khanal, L., Subba, A., Chand, B., Singh, G. B., Thapa, B., & Chalise, M. K. (2024). Distribution records of Assamese macaques (*Macaca assamensis pelops*) from the Bheri River Basin in western Nepal. Nepalese Journal of Zoology, 8(1):86-91. https://doi.org/10.3126/njz.v8i1.67114

17. Khanal, L.; Li, X., Subba, A., Ulak, S. Kyes, R.C., & Jiang, X.-L. (2024). Phylogeography of the *Sinica* Group of Macaques in the Himalayas: Taxonomic and Evolutionary Implications. Biology, 13:795. https://doi.org/10.3390/biology13100795

18. Limbu, A., Thapa, A., Khanal, L., Gurung, S., Cruz, N. J., & Thapa, T. B. (2024). Habitat characteristics of the endangered Himalayan red panda in Panchthar–Ilam–Taplejung Corridor, Eastern Nepal. Ecologies, 5(3):342-353. https://doi.org/10.3390/ecologies5030021

19. Limbu, J. H., Rajbanshi, D., Khanal, L., & Adhikari, R. C. (2024). First record of *Garra kempi* Hora, 1921 (Cypriniformes: Cyprinidae) from Lohandra River of Nepal. Journal of Threatened Taxa, 16(6):25440–25445. https://doi.org/10.11609/jott.2024.16.6.25283-25494

20. Limbu, J. H., Rajbanshi, D., Khanal, L., Hui, W., Adhikari, R. C., Thapa, S., . . . Li, C. (2024). DNA barcoding of catfishes (Order: Siluriformes) with new records of two species from

eastern Nepal. Journal of Applied Ichthyology, 2024(1):907672. https://doi.org/10.1155/2024/4907672

21. Limbu, J., Rajbanshi, D., Subba, A., Khanal, L., Yang, J.-Q., & Li, C. (2024). First record of the non-native vermiculated sailfin catfish *Pterygoplichthys disjunctivus* (Weber, 1991) from Lohandra River, Eastern Nepal. BioInvasions Records, 13(2):557-564. https://doi.org/10.3391/bir.2024.13.2.20
22. Luu, M.N., Imoto, A., Matsuo, Y., Huy, N.T., Bhattachan, P.G., Dumre, R.B., Pandey, K., Yamashita, S., Seposo, A.K.C., Zabala, J., Riva-Moscoso, A., Ordóñez, J.N.P., Uitrakul, S., Principe-Meneses, F.S., & Dila, K.A.S. (2024). Anxiety and its risk factors among non-Japanese residents living in Japan undergoing COVID-19 situation: A cross-sectional survey. PLoS One. 19(3):e0280144. https://doi.org/10.1371/journal.pone.0280144
23. Magar, Y.G., Pant, B., Regmi, S., Katuwal, H.B., Belant, J.L. & Sharma, H.P. (2024). Economic effects of wild boar damage to crops in protected areas of Nepal. Global Ecology and Conservation, p.e03301. https://doi.org/10.1016/j.gecco.2024.e03301
24. Mehta, P.K., & Maharjan, M. (2024). Assessment of microfilaremia in 'hotspots' of four lymphatic filariasis endemic districts of Nepal during post-MDA surveillance. PLoS Neglected Tropical Disease. 18(1):e0011932. doi: 10.1371/journal.pntd.0011932.
25. Mehta, P.K., & Maharjan, M. (2024). Entomological assessment in 'hotspots' of four lymphatic filariasis endemic districts, Central Nepal during post-MDA surveillance. Journal of Vector Borne Disease. 61(1):136-142. https://doi.org/10.4103/0972-9062.392252.
26. Mweu, A. W., Onditi, K. O., Khanal, L., Musila, S., Kioko, E., & Jiang, X. (2024). Comparative Phylogeography of Two Specialist Rodents in Forest Fragments in Kenya. Life, 14(11):1469. https://doi.org/10.3390/life14111469
27. Nepali, A., Katuwal, H.B., Kc, S., Regmi, S. and Sharma, H.P. (2024). Flight initiation distance and bird tolerance to humans in rural and urban habitats. Royal Society Open Science, 11(10), p.240332. https://doi.org/10.1098/rsos.240332
28. Ogawa, H., Khatiwada, S., Paudel, P. K., Koirala, S., Khanal, L., & Chalise, M. K. (2024). Distribution and group composition of Assamese and rhesus macaques in northwestern Kathmandu, Nepal. Mammal Study, 49(3):1-9, 9. https://doi.org/10.3106/ms2023-0061
29. Pandey, S.T., Gautam, R. and Sharma, H.P. (2024). Community perspectives on sustaining a Vulture Safe Feeding Site. Global Ecology and Conservation, p.e03332. https://doi.org/10.1016/j.gecco.2024.e03332
30. Pant, S.R., Bhattarai, B.P., Baral, H.S., & Thapa, T.B. (2024). Diversity, Species Richness, and Community Composition of Wetland Birds in the Lowlands of Western Nepal. Ecology and Evolution. 14(12):e70538. https://doi.org/10.1002/ece3.70538.
31. Pei, X., Chen, Z., Li, Q., Li, X., Pu, C., Luo, K., Luo, J., Pu, M., Wang, H, Khanal, L., & Jiang, X. (2024). A new species of the genus *Soriculus* (Soricidae, Eulipotyphla, Mammalia) from Medog in the eastern Himalaya. ZooKeys 1195:139-155. https://doi.org/10.3897/zookeys.1195.115699
32. Prajapati, S., Subedi, J. R., & Ghimire, T. (2024). Intestinal parasites in goats (Capra hircus Linnaeus, 1758) in Bhaktapur, Nepal. Annals of Parasitology, *70*(1), 23–34. https://doi.org/10.17420/ap7001.518
33. Rimal, S., Shrestha, S., Paudel, S.W., Shah, Y., Bhandari, G., Pandey, K., Kharbuja, A., Kapandji, M., Gautam, I., Bhujel, R., Takamatsu, Y., Bhandari, R., Klungthong, C., Shrestha, S.K., Fernandez, S., Malavige, G.N., Pandey, B.D., Urano, T., Morita, K., Ngwe Tun, M.M., & Dumre S.P. (2024). Molecular and Entomological

Characterization of 2023 Dengue Outbreak in Dhading District, Central Nepal. Viruses. 16(4):594. https://doi.org/10.3390/v16040594.

34. Sharma, H.P., Bhattarai, B.P., Regmi, S., Bhandari, S., et al. (2024). Occurrence and temporal overlap of sympatric jungle cats and leopard cats in Parsa–Koshi Complex, Nepal. Scientific Reports, 2387. https://doi.org/10.1038/s41598-024-52644-w

35. Sharma, H.P., Katuwal, H.B., Regmi, S., Suwal, R.N., Acharya, R., Nepali, A., KC, S., Aryal, B., Tamang, K., Rawal, B. and Basnet, A. (2024). Population and conservation threats to the vulnerable Sarus crane *Grus antigone* in Nepal. Ecology and Evolution, 14(2), p.e10929. https://doi.org/10.1002/ece3.10929

36. Sharma, N., Subedi, J. R., Thapa, M., & Pandey, K. (2024). Intestinal helminth parasites of *Felis catus* in Syangja, Nepal. *Journal of Animal Science and Veterinary Medicine, 9(1),* 1-6.

37. Shrestha, B.B., Chaudhary, T., Shrestha, U.B., Devkota, A. & Sharma, H.P. (2024). To what extent are Nepal's protected areas protected from plant invasions: an analysis of threats. Biological Invasions. https://doi.org/10.1007/s10530-024-03495-z

38. Shrestha, S., Sharma, S., Kyes, R. C., & Khanal, L. (2024). Comparative analysis of mother–infant interactions between free-ranging and captive rhesus macaques in Kathmandu, Nepal. Journal of Animal Behaviour and Biometeorology 12:e2024011. https://doi.org/10.31893/jabb.2024011

39. Subba, A. and Khanal, L. (2024). Threats to the Critically Endangered yellow-headed tortoise *Indotestudo elongata* in Jalthal Forest, eastern lowland Nepal. Oryx 58(1): 129-132. https://doi.org/10.1017/s0030605323001308.

40. Subba, A., Limbu, J. H., & Khanal, L. (2024). New distribution record and habitat characteristics of stinging catfish (*Heteropneustes nani* Hossain, Sarker, Sharifuzzaman and Chowdhury, 2013) from Nepal. Punjab University Journal of Zoology, 39(1):15-20. https://doi.org/10.17582/journal.pujz/2024/39.1.15.20

41. Subba, A., Tamang, G., Lama, S., Limbu, J. H., Basnet, N., Kyes, R. C., & Khanal, L. (2024). Habitat Occupancy of the Critically Endangered Chinese Pangolin (*Manis pentadactyla*) Under Human Disturbance in an Urban Environment: Implications for Conservation. Ecology and Evolution, 14(12):e70726. https://doi.org/10.1002/ece3.70726

42. Subedi, B., Regmi, S., Bhattarai, B. P., Katuwal, H. B., Ram, A. K., Belant, J. L., & Sharma, H. P. (2024). Farmland increases Indian crested porcupine occupancy in Parsa-Koshi complex, Nepal. Plos one, 19(12), e0315307 https://doi.org/10.1371/journal.pone.0315307

43. Tachibana, H., Pandey, K., Yoshida, N., Kakino, A., Imai, T., Feng, M., Makiuchi, T., Kobayashi, S., Chalise, M., & Pandey BD. (2024). Survey of Entamoeba infections in schoolchildren and macaques in Kathmandu, Nepal, and analysis of genetic polymorphisms of Entamoeba nuttalli and Entamoeba dispar isolates. Acta Trop. 258:107340. https://doi.org/10.1016/j.actatropica.2024.107340.

44. Tamang, G., Katuwal, H.B., Subba, A., & Singh, N.B. (2024). Breeding ecology of the Asian openbill in eastern Nepal: Larger trees support higher fledgling success. Ecology and Evolution. 14(6):e11504. https://doi.org/10.1002/ece3.11504.

45. Tamang, G., Katuwal, H.B., Subba, A., & Singh, N.B. (2024). Nutritional dynamics in early development of Asian openbill: A study of hatchling and nestling feeding patterns. Ecology Frontiers 44 (4), 726-732. https://doi.org/10.1016/j.ecofro.2024.03.005

46. Thapa, B., Khanal, L., Pant, R.R., Bhatta, C.R., Subedi, P., Upadhyaya, L.P., . . . Kyes, R.C. (2024). Hydrochemistry and irrigation quality of high-altitude lakes: A case study of the Ramaroshan Lake

Complex, Nepal Himalayas. Limnological Reviews 24(1): 30-52. https://www.mdpi.com/2300-7575/24/1/3

47. Timberlake, T.P., Cirtwill, A.R., Sapkota, S., Bhusal, D.R., Devkota, K., Karki, R., Joshi, D., Saville., N, Korsch S., Baras S., Roslin T., Memmmott, J. (2024). Agricultural specialization increases the vulnerability of pollination services for smallholder farmers. Applied Ecology 61 (9), 2123-2134. https://doi.org/10.1111/1365-2664.14732

48. Timsina, B., Münzbergová, Z., Kindlmann, P., Bhattarai, B. P., Shrestha, B., Raskoti, B. B., & Rokaya, M. B. (2024). Associations between Epiphytic Orchids and Their Hosts and Future Perspectives of These in the Context of Global Warming. Diversity, 16(4), 252. https://doi.org/10.3390/d16040252

49. Tiwari, P., Bhattarai, B. P., Adhikari, J. N., & Bhattarai, B. (2024). Patterns, Causes and Perceptions of Human-Large Carnivore Conflict in the Chitwan National Park, Nepal. Journal of Resources and Ecology, 15(4), 838-849. https://doi.org/10.5814/j.issn.1674-764x.2024.04.005

50. Wang, S.-Y., Li, Y.-X., Li, Q., Song, W.-Y., Wang, H.-J., He, S.-W., Onditi, K.O., Khanal, L., Xueyou, L., Chen, Z.Z. & Jiang, X.-L. (2024). A new species of mountain vole (Rodentia, Cricetidae, *Neodon*) from south Xizang, China. Zoological Research: Diversity and Conservation, 1(4):282-289. https://doi.org/10.24272/j.issn.2097-3772.2024.011

51. Yadav B.P., Subedi J.R. and Adhikari R.B. 2024. Gastrointestinal parasites among Musahar Community in Balan-Bihul, Saptari, Nepal. Nepalese Journal of Zoology, 8(2): XX–XX. https://doi.org/10.3126/njz.v8i2.xxxxx

Bhaktapur Multiple Campus, Bhaktapur

1. Adhikari, B. R. (2024). Computational Analysis of Average Value and Amplitude in Magnetized Plasma Sheath. *Swarnadwar*, *4*(1), 38–42. https://doi.org/10.3126/swarnadwar.v4i1.71151

2. Chaudhary, K. N., Rimal, S., Sapkota, M. P., Pandey, M., & Joshi, P. (2024). Carbon derived from Jute Sacks For Low-Cost and Efficient Counter Electrodes of Dye-Sensitized Solar Cells. INDIAN J PURE APPL PHYS, 62, 875–883. DOI: 10.56042/ijpap.v62i10.11987

3. Joshi, P., Lawaju, U., Nakarmi, M. L., Rai, R. C., Khatri, S., & Pradhan, R. (2024). Olive Oil Lampblack for Supercapacitor Electrodes. INDIAN J PURE APPL PHYS, 62. https://doi.org/10.56042/ijpap.v62i7.8435

4. Karki, R., Karmacharya, D. K., & Dhakal, N. (2024). Association of Aquatic Invertebrates with the Water Quality in the Ponds of Bhaktapur. *Swarnadwar*, *4*(1), 1–14. https://doi.org/10.3126/swarnadwar.v4i1.71107

5. Khadka, O., Lawaju, U., Koju, S., Rai, R. C., Nakarmi, M. L., & Joshi, P. (2024). Activated carbon derived from coffee waste as supercapacitor electrode material. Scientific World, 17(17), 19–26. https://doi.org/10.3126/sw.v17i17.66416

6. Kharbuja, A. (2024). Diversity of Grass (Poaceae) Flora at Nagarkot, Bhaktapur, Nepal. *Swarnadwar*, *4*(1), 28–37. https://doi.org/10.3126/swarnadwar.v4i1.71110

7. Koju, S., Lawaju, U., Khadka, O., Rai, R. C., Nakarmi, M. L., & Joshi, P. (2024). Preparation of Activated Carbon Based on Buddleja Paniculata as a Low-Cost Electrode Material for Supercapacitor Application. Journal of Nepal Physical Society, 10(1), 77–83. https://doi.org/10.3126/jnphyssoc.v10i1.72846

8. Maharjan, N., Joshi, P., Janzen, E., Edgar, J. H., & Nakarmi, M. L. (2024). Investigation

of the origin of atomic-like emission at 4.09 eV from h-BN by correlating PL and XPS spectra. *Applied Physics Letters*, *125*(26), 261102. https://doi.org/10.1063/5.0243547

9. Maharjan, N., Joshi, P., Janzen, E., Edgar, J. H., Khan, N., & Nakarmi, M. L. (2024). Atomic-like UV emission generated in hexagonal boron nitride single crystals by thermal annealing. Journal of Luminescence, 275, 120756. https://doi.org/10.1016/j.jlumin.2024.120756

10. Nath, H. N., Dhamala, T. N., & Dempe, S. (2024). Saving a path minimizing egress time of a dynamic contraflow: a bi-objective programming approach. *OPSEARCH*, *61*(1), 98-120. https://doi.org/10.1007/s12597-023-00690-9

11. Raikhola, S. S. (2024). Mathematical Foundations of Real Numbers and its Application in Computation. *Swarnadwar*, *4*(1), 71–86. https://doi.org/10.3126/swarnadwar.v4i1.71153

Degree Campus, Biratnagar

1. Rai, S.K. & Dhakal, S. (2024). *Algal Flora of Nepal: 2. Glaucophyta, Rhodophyta, Ochrophyta, Dinoflagellata, Euglenophyta, and Chlorophyta*. Published by National Herbarium and Plant Laboratories, Godawari, Lalitpur, Department of Plant Resources (DPR), Ministry of Forest and Environment, Government of Nepal. 284p. ISBN: 978-9937-9476-5-7

2. Rai, S.K. & Ghimire, N.P. (2024). A comprehensive review of algal exploration in Nepal. In: M.B. Rokaya, & S.R. Sigdel (Eds.), *Flora and Vegetation of Nepal. Plant and Vegetation*, *19* (pp. 115-172). Springer, Cham. https://doi.org/10.1007/978-3-031-50702-1_5

3. Poudel, P., Ghimire, N.P. & Rai, S.K. (2024). Algal diversity and its relationship with seasonal variation of water quality in Gajedi Lake, Rupandehi District, Nepal. *International Journal on Algae*, 26(4), 375-392. https://doi.org/10.1615/InterJAlgae.v26.i4.60 (SCImago rank Q4)

4. Dorji, P., Suberi, B, Ghimire, N.P., & Rai, S.K. (2024). Diversity of freshwater algae of Khotokha Ramsar Wetland, Wangduephodrang District, Bhutan. *Asian Journal of Conservation Biology*, 13(1), 3-11. https://doi.org/10.53562/ajcb.80595 (SCImago rank Q4)

5. Gacchhadar, P.K., Mandal, T.N. & Baniya, C.B. (2024) Pattern of plant biomass and carbon stock along different elevational forests of eastern Nepal. Banko Jankari vl.34(1), pp 15-29. https:// doi.org/0.3126 banko. v34il.62716

6. Parajuli, S. & Mandal, T.N. (2024) Microbial biomass carbon in grassland soil aggregates of Biratnagar, eastern Nepal. Nepal Journal of Botany vl.1, 34-41.

7. Shrestha, S., Gautam, T. P., Raut, J. K, Goto, B.T., Chaudhary, S. & Mandal T.N. (2024) Edaphic factors and elevation gradient influence arbuscular mycorrhizal colonization and spore density in the rhizosphere of *Shorea robusta* Gaertn. Ecological Frontiers vl 44 (2)257-265. https://doi.org/10.1016/J.Chnaes.2023.05.011.

8. Siwakoti, E.A., Mandal, T.N. & Baniya, C.B. (2024) Vascular macrophytes in natural lakes at different elevations of eastern Nepal. Pleione vl.18(2):135-145 doi: 10.26679/Pleione.18.2.2024.135-145

9. Bhattarai, S. Adhikaree S. and Adhikari R.C. (2024). Impacts of Solid Waste Disposal in Keshaliya River, Biratnagar, Nepal. Indian Journal of Environmental Protection, 44 (12),1125-1130. https://www.e-ijep.co.in/44-12-1125-1130/.

10. Adhikari, R.C. & K. Chakraborty. (2024). Comparative investigations on Feeding Behaviour of Rhesus Monkey

(Macaca mulatta, Zimmerman 1780) in Two Habitats of Different Altitude in Nepal. DOI No.: http://doi.org/10.53550/EEC.2024.v30i05s.028.

11. Adhikari, R. & Chakraborty, K. (2024). Food and Feeding Activities of Rhesus Monkey (Macaca mulatta Zimmermann 1780) in Different Altitudinal Habitats in Nepal. Journal of Wildlife and Biodiversity, 8(4), 343–363. https://doi.org/10.5281/zenodo.13840731.
12. Limbu, J. H., Rajbanshi, D., Khanal, L., & Adhikari, R. C. (2024). First record of Garra kempi Hora, 1921 (Cypriniformes: Cyprinidae) from Lohandra River of Nepal. Journal of Threatened Taxa. 16(6): 25440-25445. https://doi.org/10.11609/jott.8897.16.6.25440-25445

Mahendra Morang Adarsh Multiple Campus, Biratnagar

1. Narayan Yadav, S., Rai, S., Bhattarai, A., and Sinha, B. (2024). Impact of sodium polystyrene sulfonate on micellization behaviour of cetyltrimethylammonium bromide in the presence of methyl red in ethanol–water mixture: A conductometric investigation. Journal of Molecular Liquids, 399, 124387. https://doi.org/10.1016/j.molliq.2024.124387
2. Yadav, S. N., Rai, S., Bhattarai, A., and Sinha, B. (2024). Interaction between methyl red and cetyltrimethylammonium bromide under the influence of sodium polystyrene sulphonate in ethanol-water binary solvent systems: A spectrophotometric investigation. Heliyon, 10(12), e33014. https://doi.org/10.1016/j.heliyon.2024.e33014
3. Yadav, S. N., Rai, S., Sinha, B., and Bhattarai, A. (2024). Influence of Polyelectrolyte (NaCMC) on Surfactant (DTAB) in the Absence and Presence of Methyl Orange Dye in Ethanol–Water Mixed Solvent at Three Different Temperatures. ChemistrySelect, 9(48). https://doi.org/10.1002/slct.202404772
4. Yadav, S. N., Rai, S., Bhattarai, A., and Sinha, B. (2024). Surface, micellization, and thermodynamic behavior of cetyltrimethylammonium bromide in sodium polystyrene sulfonate with and without methyl red in water–ethanol mixed solvent media at varying temperatures: A tensiometric analysis. Journal of Molecular Liquids, 414, 126173. https://doi.org/10.1016/j.molliq.2024.126173
5. Shah, S. K., Adhikari, M. B., and Bhattarai, A. (2024). Analysis of Heavy Metal Contamination in Industrial Wastewater along the Biratnagar– Duhabi Industrial Corridor: Their Environmental Impacts. Tribhuvan University Journal, 39(2), 27–46. https://doi.org/10.3126/tuj.v39i2.72877
6. Yadav, C. K., Adhikari, M. K., Maharjan, J., and Bhattarai, A. (2024). An analysis of cetylpyridinium chloride (CPC) by FESEM, EDX methods, and its applications. Rajarshi Janak University Research Journal, 2(1–2), 1–7. https://doi.org/10.3126/rjurj.v2i1-2.72263
7. Shahi, N., Shah, S. K., Yadav, A. P., and Bhattarai, A. (2024). Effect of Methyl Red on the surface properties of DTAB in CH3OH–H2O. Results in Chemistry, 12, 101863. https://doi.org/10.1016/j.rechem.2024.101863
8. Baral, D., Budhathoki, S., Bhattarai, A., and Chaudhary, N. K. (2024). Revolutionizing Age Determination: Theoretical Insights into Radiocarbon (14C) Dating. Contemporary Research: An Interdisciplinary Academic Journal, 7(2), 77–95. https://doi.org/10.3126/craiaj.

v7i2.72151

9. Shah, S. K., Sah, P. K., and Bhattarai, A. (2024). Physicochemical and Heavy Metal Analysis in Industrial Wastewater: Impact on Biodiversity in Morang District, Koshi Province, Nepal. Butwal Campus Journal, 7(1), 65–73. https://doi.org/10.3126/bcj.v7i1.71722

10. Chaudhary, N. K., Guragain, B., Chaudhary, N., Adhikari, J., Chatterjee, A., and Bhattarai, A. (2024). Synthesis, Corrosion Inhibition, In Silico ADME, DFT, and Antibacterial Activity of Pyridine-Based Schiff Base and Its Cu (II) Complex. Applied Organometallic Chemistry, 39(3). https://doi.org/10.1002/aoc.7884

11. Sah, M. K., Ettarhouni, Z. O., Mezoughi, A. B., Abughrin, S. E., El-Beshti, H. S., Alhammali, E. A., … Bhattarai, A. (2024). Exploring the role of aspartic acid in modulating micellization behavior of cationic cetyltrimethylammonium bromide. Journal of Molecular Liquids, 412, 125856. https://doi.org/10.1016/j.molliq.2024.125856

12. Yadav, C. K., Shahi, N., Niraula, T. P., Yadav, A. P., Neupane, S., and Bhattarai, A. (2024). Effect of percentage of methanol on micellization position of mixed surfactant interaction in the absence and presence of dye. Results in Chemistry, 11, 101834. https://doi.org/10.1016/j.rechem.2024.101834

13. Yadav, C. K., Shahi, N., Adhikari, M. K., Neupane, S., Rakesh, B., Yadav, A. P., and Bhattarai, A. (2024). Effect of cetyl pyridinium chloride on corrosion inhibition of mild steel in acidic medium. International Journal of Electrochemical Science, 19(10), 100776. https://doi.org/10.1016/j.ijoes.2024.100776

14. Güzeloğlu, A., Bhattarai, A., and Wilczura-Wachnik, H. (2024). Dynamic light scattering study on quercetin/surfactant/solvent system. Tenside Surfactants Detergents, 61(5), 466–473. https://doi.org/10.1515/tsd-2024-2596

15. Pronina, A. A., Kutasevich, A. G., Grigoriev, M. S., Hasanov, K. I., Sadikhova, N. D., Javadzade, T. A., … Bhattarai, A. (2024). Crystal structure and Hirshfeld surface analysis of 1-[6-bromo-2-(3-bromophenyl)-1,2,3,4-tetrahydroquinolin-4-yl]pyrrolidin-2-one. Acta Crystallographica Section E Crystallographic Communications, 80(9), 967–972. https://doi.org/10.1107/s2056989024008144

16. Yadav, B., Bhattarai, A., and Yadav, C. K. (2024). Determination of Critical MicelleDetermination of Critical Micelle Concentration (CMC) of Sodium Stearate and FESEM Study. Intellectual Inception: A Multidisciplinary Research Journal of Bhojpur Campus, 2(1), 100–111. https://doi.org/10.3126/iimrjbc.v2i1.68654

17. Ibrahimova, N. Z., Tagiyev, D. B., Lyatifov, I. U., Akkurt, M., Hasanov, K. I., and Bhattarai, A. (2024). Crystal structure of bis[(η5-tert-butylcyclopentadienyl)tricarbonylmolybdenum(I)](Mo—Mo). Acta Crystallographica Section E Crystallographic Communications, 80(8), 882–885. https://doi.org/10.1107/s2056989024006959

18. Rudnitskaya, O. V., Komarovskikh, M. R., Pekarskaya, M. G., Pshenichnyy, D. S., Akkurt, M., Khalilov, A. N., … Mamedov, I. G. (2024). Synthesis, molecular and crystal structure of [(NH2)2CSSC(NH2)2]2[RuBr6]Br2·3H2O. Acta Crystallographica Section E Crystallographic Communications, 80(8), 886–889. https://doi.org/10.1107/s2056989024006832

19. Pronina, A. A., Podrezova, A. G., Grigoriev, M. S., Hasanov, K. I., Sadikhova, N. D., Akkurt, M., and Bhattarai, A. (2024). Crystal structure and Hirshfeld surface analysis of 1-[6-bromo-2-(4-fluorophenyl)-1,2,3,4-tetrahydroquinolin-4-yl]pyrrolidin-2-one. Acta Crystallographica Section E Crystallographic Communications, 80(7), 777–782. https://doi.org/10.1107/s2056989024005826

20. Podrezova, A. G., Nikitina, E. V., Grigoriev, M. S., Akkurt, M., Hasanov, K. I., Sadikhova, N. D., and Bhattarai, A. (2024). Crystal structure and Hirshfeld surface analysis of (Z)-4-oxo-4-{phenyl[(thiophen-2-yl)methyl]amino}but-2-enoic acid. Acta Crystallographica Section E Crystallographic Communications, 80(6), 572–576. https://doi.org/10.1107/s2056989024003967

21. Sadikhova, N. D., Akkurt, M., Ismayilov, V. M., Yusubov, N. N., Hasanov, K. I., and Bhattarai, A. (2024). Crystal structure and Hirshfeld surface analysis of 3,3′-[ethane-1,2-diylbis(oxy)]bis(5,5-dimethylcyclohex-2-en-1-one) including an unknown solvate. Acta Crystallographica Section E Crystallographic Communications, 80(6), 615–619. https://doi.org/10.1107/s2056989024004286

22. Guseinov, F. I., Çelikesir, S. T., Akkurt, M., Ovsyannikov, V. O., Ugrak, B. I., Lavrova, O. M., … Bhattarai, A. (2024). Synthesis, crystal structure and Hirshfeld surface analysis of (3Z)-4-[(4-amino-1,2,5-oxadiazol-3-yl)amino]-3-bromo-1,1,1-trifluorobut-3-en-2-one. Acta Crystallographica Section E Crystallographic Communications, 80(6), 582–585. https://doi.org/10.1107/s2056989024004080

23. Rasaili, P., Rai, S., Sachin, K., Saha, B., and Bhattarai, A. (2024). Arsenic contamination of groundwater sources and a comparative study of its remediation by various conventional and recent approaches in Nepal. Vietnam Journal of Chemistry, 62(3), 281–295. https://doi.org/10.1002/vjch.202200116

24. Shahi, N., Shah, S. K., Singh, S., Yadav, C. K., Yadav, B., Yadav, A. P., and Bhattarai, A. (2024). Comparison of dodecyl trimethyl ammonium bromide (DTAB) and cetylpyridinium chloride (CPC) as corrosion inhibitors for mild steel in sulphuric acid solution. International Journal of Electrochemical Science, 19(5), 100575. https://doi.org/10.1016/j.ijoes.2024.100575

25. Yakovleva, E. D., Shelukho, E. R., Grigoriev, M. S., Hasanov, K. I., Sadikhova, N. D., Akkurt, M., and Bhattarai, A. (2024). Crystal structure and Hirshfeld surface analysis of (Z)-4-({[2-(benzo[b]thiophen-3-yl)cyclopent-1-en-1-yl]methyl}(phenyl)amino)-4-oxobut-2-enoic acid. Acta Crystallographica Section E Crystallographic Communications, 80(5), 537–542. https://doi.org/10.1107/s2056989024003232

26. Naghiyev, F. N., Khrustalev, V. N., Akkurt, M., Asadov, K. A., Bhattarai, A., Khalilov, A. N., and Mamedov, İ. G. (2024). Crystal structure and Hirshfeld surface analysis of dimethyl 4′-bromo-3-oxo-5-(thiophen-2-yl)-3,4,5,6-tetrahydro-[1,1′-biphenyl]-2,4-dicarboxylate. Acta Crystallographica Section E Crystallographic Communications, 80(5), 446–451. https://doi.org/10.1107/s2056989024002858

27. Mamedov, İ. G., Khrustalev, V. N., Akkurt, M., Kerimli, F. Sh., Bhattarai, A., Khalilov, A. N., and Naghiyev, F. N. (2024). Crystal structure and Hirshfeld surface analysis of 2,4-diamino-6-[(1Z,3E)-1-cyano-2,4-diphenylpenta-1,3-dien-1-yl]pyridine-3,5-dicarbonitrile monohydrate. Acta Crystallographica Section E Crystallographic Communications, 80(5), 495–500. https://doi.org/10.1107/s2056989024002962

28. Yadav, C. K., Bhattarai, A., and Chaudhary, Y. (2024). Transmission Electron Microscopy and Dynamic Light Scattering-Fundamental Perspective. Cognition, 6(1), 9–16. https://doi.org/10.3126/cognition.v6i1.64432

29. Sah, M. K., Edbey, K., Ettarhouni, Z. O., Bhattarai, A., and Kumar, D. (2024). Conductometric and spectral analyses of dye-surfactant interactions between indigo carmine and N-alkyltrimethylammonium chloride. Journal of Molecular Liquids, 399, 124413. https://doi.org/10.1016/j.molliq.2024.124413

30. Burkin, G. M., Kvyatkovskaya, E. A., Khrustalev, V. N., Hasanov, K. I., Sadikhova, N. D., Akkurt, M., and Bhattarai, A. (2024). Crystal structure and Hirshfeld surface analysis of 8-benzyl-1-[(4-methylphenyl)sulfonyl]-2,7,8,9-tetrahydro-1H-3,6:10,13-diepoxy-1,8-benzodiazacyclopentadecine ethanol hemisolvate. Acta Crystallographica Section E Crystallographic Communications, 80(4), 418–422. https://doi.org/10.1107/s2056989024002275

31. Naghiyev, F. N., Khrustalev, V. N., Akkurt, M., Dobrokhotova, E. V., Bhattarai, A., Khalilov, A. N., and Mamedov, İ. G. (2024). Crystal structure and Hirshfeld surface analysis of 6-imino-8-(4-methylphenyl)-1,3,4,6-tetrahydro-2H-pyrido[1,2-a]pyrimidine-7,9-dicarbonitrile. Acta Crystallographica Section E Crystallographic Communications, 80(4), 378–382. https://doi.org/10.1107/s2056989024002500

32. Sah, M. K., Thakuri, B. S., Pant, J., Gardas, R. L., and Bhattarai, A. (2024). The Multifaceted Perspective on the Role of Green Synthesis of Nanoparticles in Promoting a Sustainable Green Economy. Sustainable Chemistry, 5(2), 40–59. https://doi.org/10.3390/suschem5020004

33. Sahu, Y. R., Chaudhary, N. K., and Bhattarai, A. (2024). Kinetic perspectives for the degradation of oxacillin: A penicillanic acid derivative. Edelweiss Applied Science and Technology, 8(3), 102–124. https://doi.org/10.55214/25768484.v8i3.1095

34. Naghiyev, F. N., Khrustalev, V. N., Akkurt, M., Mamedov, H. M., Bhattarai, A., Khalilov, A. N., and Mamedov, İ. G. (2024). Crystal structure and Hirshfeld surface analysis of 4-oxo-3-phenyl-2-sulfanylidene-5-(thiophen-2-yl)-3,4,7,8,9,10-hexahydro-2H-pyrido[1,6-a:2,3-d′]dipyrimidine-6-carbonitrile. Acta Crystallographica Section E Crystallographic Communications, 80(3), 325–329. https://doi.org/10.1107/s2056989024001658

35. Yıldırım, S. Ö., Akkurt, M., Pehlivanlar, E., Çetin, G., Şimşek, R., Butcher, R. J., and Bhattarai, A. (2024). Syntheses, characterizations, crystal structures and Hirshfeld surface analyses of methyl 4-[4-(difluoromethoxy)phenyl]-2,7,7-trimethyl-5-oxo-1,4,5,6,7,8-hexahydroquinoline-3-carboxylate, isopropyl 4-[4-(difluoromethoxy)phenyl]-2,6,6-trimethyl-5-oxo-1,4,5,6,7,8-hexahydroquinoline-3-carboxylate and tert-butyl 4-[4-(difluoromethoxy)phenyl]-2,6,6-trimethyl-5-oxo-1,4,5,6,7,8-hexahydroquinoline-3-carboxylate. Acta Crystallographica Section E Crystallographic Communications, 80(3), 281–288. https://doi.org/10.1107/s2056989024001233

36. Bhattarai, A., Banerjee, A., and Das, B. (2024). Dimension and Flexibility of Polystyrenesulfonate Chains in Methanol–Water. The Journal of Physical Chemistry B, 128(8), 2010–2017. https://doi.org/10.1021/acs.jpcb.3c07608

37. Bhattarai, A., and Singh, M. (2024). The interfacial tension at the liquid junction of petrol and Sodium dodecyl sulphate solution. Journal of Nepal Chemical Society, 44(1), 135–142. https://doi.org/10.3126/jncs.v44i1.62687

38. Yadav, C. K., Niraula, T. P., Neupane, S., Yadav, A. P., and Bhattarai, A. (2024). Study of Anti-Corrosion Properties of Sodium Dodecyl Sulphate and Cetyl Pyridinium Chloride. Journal of Nepal Chemical Society, 44(1), 163–172. https://doi.org/10.3126/jncs.v44i1.62690

39. Shikhaliyev, N. Q., İbrahimova, S. A., Atakishiyeva, G. T., Ahmedova, N. E., Babayeva, G. V., Khrustalev, V. N., … Bhattarai, A. (2024). Crystal structures and Hirshfeld surface analyses of methyl 4-{2,2-dichloro-1-[(E)-phenyldiazenyl]ethenyl}benzoate, methyl 4-{2,2-dichloro-1-[(E)-(4-methylphenyl)diazenyl]ethenyl}benzoate and methyl 4-{2,2-dichloro-1-[(E)-(3,4-dimethylphenyl)diazenyl]ethenyl}benzoate. Acta Crystallographica

Section E Crystallographic Communications, 80(2), 184–190. https://doi.org/10.1107/s2056989024000732

40. Naghiyev, F. N., Khrustalev, V. N., Akkurt, M., Dukhnovsky, E. A., Bhattarai, A., Khalilov, A. N., and Mamedov, İ. G. (2024). Crystal structure and Hirshfeld surface analysis of 4-(2-chloroethyl)-5-methyl-1,2-dihydropyrazol-3-one. Acta Crystallographica Section E Crystallographic Communications, 80(2), 223–227. https://doi.org/10.1107/s2056989024000835
41. Shikhaliyev, N. Q., İbrahimova, S. A., Atakishiyeva, G. T., Ahmedova, N. E., Babayeva, G. V., Khrustalev, V. N., … Bhattarai, A. (2024). Crystal structures and Hirshfeld surface analyses of methyl 4-{2,2-dichloro-1-[(E)-phenyldiazenyl] ethenyl}benzoate, methyl 4-{2,2-dichloro-1-[(E)-(4-methylphenyl)diazenyl]ethenyl} benzoate and methyl 4-{2,2-dichloro-1-[(E)-(3,4-dimethylphenyl)diazenyl] ethenyl}benzoate. Acta Crystallographica Section E Crystallographic Communications, 80(2), 184–190. https://doi.org/10.1107/s2056989024000732
42. Hajiyeva, S. R., Huseynov, F. E., Atioğlu, Z., Akkurt, M., and Bhattarai, A. (2024). Crystal structure and Hirshfeld surface analysis of (E)-2-[2-(2-amino-1-cyano-2-oxoethylidene)hydrazin-1-yl]benzoic acid N,N-dimethylformamide monosolvate. Acta Crystallographica Section E Crystallographic Communications, 80(2), 110–116. https://doi.org/10.1107/s2056989023011118
43. Guliyeva, N. A., Burkin, G. M., Annadurdyyeva, S., Khrustalev, V. N., Atioğlu, Z., Akkurt, M., and Bhattarai, A. (2024). Crystal structure and Hirshfeld surface analysis of dimethyl 4-hydroxy-5,4′-dimethyl-2′-(toluene-4-sulfonylamino)biphenyl-2,3-dicarboxylate. Acta Crystallographica Section E Crystallographic Communications, 80(1), 62–66. https://doi.org/10.1107/s205698902301071x
44. Ettarhouni, Z. O., Sah, M. K., Bhattarai, A., Griffiths, P. C., and Paul, A. (2025). A SWOLLEN LIQUID CRYSTALLINE TEMPLATE MECHANISM TO SYNTHESIZE HIERARCHICAL POROUS MATERIALS. Journal of Porous Media, 28(9), 69–78. https://doi.org/10.1615/jpormedia.2024052447
45. Alomar, T., AlMasoud, N., Awad, M., AlOmar, R., Merghani, N., El-Zaidy, M., and Bhattarai, A. (2024). Designing Green Synthesis-Based Silver Nanoparticles for Antimicrobial Theranostics and Cancer Invasion Prevention. International Journal of Nanomedicine, Volume 19, 4451–4464. https://doi.org/10.2147/ijn.s440847
46. Sadikhova, N. D., Atioğlu, Z., Guliyeva, N. A., Shelukho, E. R., Polyanskaya, D. K., Khrustalev, V. N., … Bhattarai, A. (2024). Crystal structure and Hirshfeld surface analysis of 3-benzyl-2-[bis(1H-pyrrol-2-yl)methyl]thiophene. Acta Crystallographica Section E Crystallographic Communications, 80(1), 72–77. https://doi.org/10.1107/s2056989023010800
47. Sadikhova, N. D., Atioğlu, Z., Guliyeva, N. A., Podrezova, A. G., Nikitina, E. V., Akkurt, M., and Bhattarai, A. (2024). Crystal structure and Hirshfeld surface analysis of diethyl (3aS,3a1R,4S,5S,6R,6aS,7R,9aS)-3a1,5,6,6a-tetrahydro-1H,3H,4H,7H-3a,6:7,9a-diepoxybenzo[de]isochromene-4,5-dicarboxylate. Acta Crystallographica Section E Crystallographic Communications, 80(1), 83–87. https://doi.org/10.1107/s2056989023010794
48. Mammadova, G. Z., Atioğlu, Z., Akkurt, M., Grigoriev, M. S., Volchkov, N. S., Azizova, A. N., … Antonova, A. S. (2024). Crystal structure of [1,3-bis(2,4,6-trimethylphenyl)imidazolidin-2-ylidene] dichlorido(2-{[(2-methoxyethyl)(methyl) amino]methyl}benzylidene)ruthenium. Acta Crystallographica Section E Crystallographic Communications, 80(1), 50–53. https://doi.org/10.1107/s2056989023010381

49. Bhattarai, A. (2024). Spirituality in the Army as Way of Creating Peace in the World, A Journal of Security Affairs, Ministry of Defence, pp.85-93.

50. Mukherjee, R., Sah, M. K., Dhibar, S., Bhattarai, A., and Saha, B. (2024). Overview of homogeneous hydroformylation catalysis. Elsevier. https://doi.org/10.1016/b978-0-443-15560-4.00003-4.

51. Ghimire, Y. Bhattarai, A., De, R. (2024). Polymers and their Nanostructures in Therapeutic Delivery: An Overview. Journal of Vishwa Adarsha College, 1(1), 175–212. https://doi.org/10.3126/jovac.v1i1.68065.

52. Yadav, C. K., and Bhattarai, A. (2024). Analysis of Percentage of Element of Mixed Surfactants in Mixed Solvent Media. Research Journal on Multi-Disciplinary Issues, 5(1), 87–96. https://doi.org/10.3126/rjmi.v5i1.73694.

53. Adhikari, M. K., Yadav, C. K., Chaudhary, S., Yadav, A. P., and Bhattarai, A. (2024). Exploring the Protective Effects of Surfactants against Corrosion: A Comprehensive Review. Journal of Institute of Science and Technology, 29(2), 159–174. https://doi.org/10.3126/jist.v29i2.70352.

54. Yadav, C. K., Yadav, B., Maharjan, J., and Bhattarai, A. (2024). Compositional Analysis of Avocado Pulp: A Product of the Dhankuta Multiple Campus, Tribhuvan University, Dhankuta, Nepal. Orchid Academia Siraha, 3(1), 47–54. https://doi.org/10.3126/oas.v3i1.78103.

55. Yadav, D. K., Thapa, Y., Yadav, C. K., Shahi, N., and Bhattarai, A. (2024). Madhesh Province's Examination System of Nepal: Problems and Difficulties. Damak Campus Journal, 13(1), 42–53. https://doi.org/10.3126/dcj.v13i1.74534.

56. Yadav, C. K., Maharjan, J., Rakesh, B., and Bhattarai, A. (2024). Analysis of Cetyl Pyridinium Chloride (CPC) by Raman Spectroscopy Method. Amrit Journal, 4(1), 40–47. https://doi.org/10.3126/amritj.v4i1.73751.

57. Budhathoki, S., Chaudhary, N., Guragain, B., Baral, D., Adhikari, J., and Chaudhary, N. K. (2024). Green synthesis of silver nanoparticles from Brassaiopsis hainla extract for the evaluation of antibacterial and anticorrosion properties. Heliyon, 10(15), e35642. https://doi.org/10.1016/j.heliyon.2024.e35642.

58. Chaudhary, N. K., Thakur, S., Budhathoki, S., and Baral, D. (2024). pH profile and acidity analysis of some Nepalese tea brands: effects of tea Type and temperature. BIBECHANA, 21(3), 321–327. https://doi.org/10.3126/bibechana.v21i3.68944.

59. Gautam, A., Malla, D., Khatiwada, A., Kafle, G., Shah, S. K., Kafle, S., (2024) Effects of open dumping site on surrounding air soil, and water: a case study of Biratnagar metropolitan city, 21(2), 171 – 179. https://doi.org/10.3126/bibechana.v21i3.60796

60. Das, B. D., Pradhan, S., Sardar, A., Paudel, N., and Mishra, R. K. (2024). EVALUATION OF WATER POLLUTION STATUS OF TRIYUGA RIVER IN UDAYAPUR DISTRICT, NEPAL. International Journal of Research -GRANTHAALAYAH, 12(1). https://doi.org/10.29121/granthaalayah.v12.i1.2024.5442.

61. Das, B. D., Sah, P. K. S., Sardar, A., Paudyal, S. P., and Paudel, N. (2024). Investigation of Medicinal Plants Utilized by Indigenous People in Saptari District of Madhesh Province, Nepal. BMC Journal of Scientific Research, 7(1), 122–134. https://doi.org/10.3126/bmcjsr.v7i1.72949.

62. Das, B. D., Khadka, P., … Sardar, A. (2024). Assessment of ethnomedicinal knowledge of the Limbu community in Chhathar rural municipality of Terhathum district, Nepal. Journal of Multidisciplinary Sciences, 6(2), 01–10. https://doi.org/10.33888/jms.2024.621.

63. Shrestha, S., Gautam, T. P., Raut, J. K., Goto, B. T., Chaudhary, S., and Mandal, T. N. (2024). Edaphic factors and

elevation gradient influence arbuscular mycorrhizal colonization and spore density in the rhizosphere of Shorea robusta Gaertn. Ecological Frontiers, 44(2), 257–265. https://doi.org/10.1016/j.chnaes.2023.05.011.

64. Siwakoti, E. A., Mandal, T. N., and Baniya, C. B. (2024). Vascular macrophytes in natural lakes at different elevations of eastern Nepal. Pleione, 18(2), 135–145. https://doi.org/10.26679/pleione.18.2.2024.135-145.

65. Sah, S. N. (2024). Some new examples of nuclear spaces. TUTA Journal, 149–154. https://doi.org/10.3126/tutaj.v12i1.74072

66. Sah, S. N. (2024). Some characterization of Atkinson & Fredholm operators. Medha: A Multidisciplinary Journal, 7(1), 125–130. https://doi.org/10.3126/medha.v7i1.73901

67. Dahal, S., **Adhikari, D**., & Yadav, S. K. (2024). Machine learning model to predict the formation energy of copper-based ternary alloys. *Journal of Institute of Science and Technology*, *29*(2), 99–105.

68. Sah, D. K., Mehta, U., **Adhikari, D**., & Yadav, S. K. (2024). Model-based study of temperature-dependent thermodynamic and surface properties of Al-Ti-Ni-Cr system in liquid state. *Physica B: Condensed Matter*, *695*, 416471.

69. Pokharel, P., Yadav, S. K., Pantha, N., Sharma, B., & Adhikari, D. (2024). Structural, electronic, optical, magnetic, and mechanical properties of $SmMnO_3$ perovskite with europium and yttrium doping: A first-principles study. *AIP Advances*, *14*(12).

70. Pokharel, P., Yadav, S. K., Pantha, N., & **Adhikari, D.** (2024). Strain-dependent electronic, mechanical and piezoelectric properties of $ZrSiO_3$ 2D monolayer: A first-principles approach. *Journal of Physics and Chemistry of Solids*, *193*, 1121984.

71. Mehta, U., Bharati, I., & **Adhikari, D.** (2024). Thermodynamic, structural and surface properties of Cd-Na alloys in liquid state. *Journal of Phase Equilibria and Diffusion*, 1–9.

72. Dhungana, A., Yadav, S. K., Gohivar, R. K., Novakovic, R., & **Adhikari, D.** (2024). Assessment of thermophysical properties of Al–Mg–Si liquid alloys. *Physica B: Condensed Matter*, *688*, 416160.

73. Pokharel, P., Yadav, S. K., Pantha, N., & **Adhikari, D.** (2024). First-principles investigations of structural, electronic, and elastic properties of $ZrSiO_3$ perovskite: Layer dependence, surface termination, and pressure effects. *Physica Status Solidi (b)*, 2400156.

74. Yadav, S., Pokharel, P., & **Adhikari, D.** (2024). First-principle study of structural, electronic and elastic properties of AlCu and Al_3Cu complexes of Al-Cu alloy. *APS April Meeting Abstracts*, *2024*, J16.007.

75. Shrestha, A. K., Shrestha, G. K., Shah, B. R., and Koirala, R. P. (2024). Assessment of radioactivity in sand samples from eastern Nepal in perspective of radiological hazards. Radiation Protection Dosimetry, 200(5), 429–436. https://doi.org/10.1093/rpd/ncad324.

76. Shrestha, A. K., Shrestha, G. K., Shah, B. R., and Koirala, R. P. (2024). Assessment of radioactivity and radiological hazards associated with bricks in eastern Nepal. Heliyon, 10(2), e24844. https://doi.org/10.1016/j.heliyon.2024.e24844.

77. Yadav, S. K., Yadav, D. R., Gohivar, R. K., and Mehta, U. (2024). Thermodynamic, structural and surface properties of Cu–Zr liquid alloy at different temperatures: A theoretical approach. BIBECHANA, 21(3), 328–335. https://doi.org/10.3126/bibechana.v21i3.70438.

78. Oli, P., Sah, D. K., Mehta, U., Gohivar, R. K., and Yadav, S. K. (2024). Thermodynamic, Structural and Surface Properties of Liquid Al-Sr Alloy at Different Temperatures. Adhyayan Journal, 11(11), 24–32. https://doi.org/10.3126/aj.v11i11.67053.

79. Yadav, S. K., Mehta, U., and Gohivar, R. K. (2024). Thermodynamic, structural, surface and transport properties of Au-Cu melt. BIBECHANA, 21(2), 150–158. https://doi.org/10.3126/bibechana.v21i2.66853.

81. Shrestha, A. K., Shrestha, G. K., Shah, B. R., and Koirala, R. P. (2024). Evaluation of natural radioactivity and radiological hazards associated with Nepalese cement. Journal of Radioanalytical and Nuclear Chemistry, 333(6), 2821–2829. https://doi.org/10.1007/s10967-023-09124-8.

82. Shrestha, A. K., Shrestha, G. K., Shah, B. R., and Koirala, R. P. (2024). Study of Radiation Shielding Properties of Lead, Concrete, and Water using Different Radionuclide Sources. Damak Campus Journal, 13(1), 25–32. https://doi.org/10.3126/dcj.v13i1.74480.

Acadmic Calendar-TU for year 2082 BS

Tribhuvan University

Generic Academic Calendar for Bachelor's Level Annual Program for Academic Year 2082

Institute of Science and Technology (IoST) (B. Sc. General)
Institute of Medicine (IOM)
Faculty of Education (FoE) (B. Ed.)
Faculty of Humanities and Social Sciences (FoHSS) (BA)
Faculty of Management (FoM) (BBS)

S.N.	Details	First Year	Second Year	Third Year	Fourth Year
1	Admission	2082 Shrawan to Mangsir	2083 Bhadra End	2084 Jestha End	2084 Chaitra End
2	Class Start	2082 Mangsir	2083 Bhadra End	2084 Jestha End	2084 Chaitra End
3	Exam Form	2083 Baisakh	2083 Falgun	2084 Poush	2085 Kartik
4	Class End	2083 Asar	2083 Chaitra End	2084 Magh End	2085 Mangsir End
5	Exam	2083 Shrawan End	2084 Baisakh End	2084 Falgun End	2085 Poush End
6	Result	2083 Kartik End	2084 Shrawan End	2085 Jestha End	2085 Chaitra End

Note:
* Sports Week: Paush 1st week every year
* After the final year results are released, there will be a make-up exam within two months.

Tribhuvan University

Generic Academic Calendar of Bachelor's Level Semester Program for Academic Year 2082

Institute of Agriculture and Animal Science (IAAS) (B.Sc.Ag; B.Sc.Hot; BV ScAH-5year); Institute of Engineering (IoE) (BE.Arch-5year); Institute of Forestry (IoF) (B.Sc.F); Institute of Science and Technology (IoST) (B.Sc.CSIT; BIT; B. Math. Sc.); BDS, B.Tech(Food) Faculty of Law (FoL); (BALLB-5year); Faculty of Humanities and Social Sciences(FoHSS) (BCA;BSW); Faculty of Education (BICTE); SNE Faculty of Management (BITM; BTTM; BHM; BBA; BPA; BBM; BMS; BBA-F);

S.N.	Details	I Semester	II Sem	III Sem	IV Sem	V Sem	VI Sem	VII Sem	VIII Sem	IX Sem	X Sem	XI Sem
1	Application Form	2082 Shrawan 2082 Kartik										
2	Entrance	2082 Aswin-Mangsir										
3	Admission	2082 Aswin-Mangsir										
4	Class Start	2082 Mangsir	2083 Baisakh	2083 Asoj	2083 Falgun	2084 Shrawan	2084 Poush	2085 Jestha	2085 Kartik	2085 Chaitra	2086 Bhadra	2086 Magh
5	Exams	2082 Chaitra	2083 Bhadra	2083 Magh	Asar 2084	2084 Mangsir	2085 Baisakh	2085 Asoj	2085 Falgun	2086 Shrawan	2086 Poush	2087 Jestha
6	Result	2083 Asar	2083 Mangsir	2084 Baisākh	2084 Asoj	2084 Falgun	2085 Shrawan	2085 Poush	2086 Jestha	2086 Kartik	2086 Chaitra	2087 Bhadra

Note:

Conditions to be applied while executing this calendar

* All practical (practicum) exams to be finished within two weeks after the final exams
* Each year, the MBBS admission will be decided in consultation with the Medical Education Commission of Nepal.
* If there are internships available for any existing or prospective future courses or programs, special consideration should be given to them.
* Sports Week: Paush 1st week every year
* After the final semester results are released, there will be a make-up exam within two months.

Tribhuvan University

Generic Academic Calendar of Master's Level Semester Program for Academic Year 2082

(All Institutes and Faculties except IOM)/FoHSS(PGD); FoE (PGDE)

S.N.	Details	I Semester	II Semester	III Semester	IV Semester
1	Application Form	2082 Mangsir			
2	Entrance/admission	2082 Poush			
3	Class Start	2082 Magh	2083 Asar	2083 Mangsir	2084 Baisakh
5	Exam	2083 Jestha	2083 Kartik	2083 Chaitra	2084 Bhadra
6	Result	2083 Bhadra	2083 Magh	2084 Asar	2084 Mangsir

Note:

Conditions to be applied while executing this calendar

* All practical exams (practicum) to be completed within 2 weeks after final exams
* TU's regional exam offices will oversee the regulation of practical exams.
* If there are internships available for any existing or prospective future courses or programs, special consideration should be given to them.
* Sports Week: Paush 1st week every year
* After the final semester results are released, there will be a make-up exam within two months.

केन्द्रीय विभागहरु /स्कूलका **website** निम्नानुसार रहेका छन् :

SN	Program	Home Page	e-mail/Contact Number
1	भौतिक शास्त्र (Physics)	https://cdp.tu.edu.np/	head@cdp.tu.edu.np/01-4331054
2	रसायन शास्त्र (Chemistry)	https://cdc.tu.edu.np/	info@cdc.tu.edu.np/01-4332034
3	वनस्पति शास्त्र (Botany)	https://cdb.tu.edu.np/	info@cdb.tu.edu.np/01-4331322
4	प्राणी शास्त्र (Zoology)	https://cdz.tu.edu.np/	info@cdz.tu.edu.np/01-4331896
5	माइक्रोबायोलोजी (Microbiology)	https://cdmi.tu.edu.np/	info@cdmi.tu.edu.np/01-4331869
6	वातावरण विज्ञान (Environmental Science)	https://cdes.tu.edu.np/	info@cdes.tu.edu.np/01-4332147
7	भूगर्भ शास्त्र (Geology)	https://cdgl.tu.edu.np/	head@cdgl.tu.edu.np/01-4332449
8	जल तथा मौसम विज्ञान (Hydrology and Meteorology)	https://cdhm.tu.edu.np/	info@cdhm.tu.edu.np/01-4331418
9	जैविकप्रविधि (Biotechnology)	https://cdbt.tu.edu.np/	head@cdbt.tu.edu.np/01-4336221
10	Biodiversity and Environmental Management (BEM)	https://cdb.tu.edu.np/	info@cdb.tu.edu.np/01-4331322
11	Environmental Health in Disaster (EHD)	https://cdes.tu.edu.np/	info@cdes.tu.edu.np/01-4332147
12	Engineering Geology (EGE)	https://cdgl.tu.edu.np/	head@cdgl.tu.edu.np/01-4332449
13	खाद्य प्रविधि (Food Technology)	https://cdft.tu.edu.np/	head@cdft.tu.edu.np/25576726
14	तथ्यांक शास्त्र (Statistics)	https://tueds.edu.np/	head@cds.tu.edu.np/01-4331710
15	गणित (Mathematics)	https://cdmath.tu.edu.np/	head@cdmath.tu.edu.np/01-4331977
16	कम्प्यूटर विज्ञान तथा सूचना प्रविधि (CSIT)	https://cdcsit.tu.edu.np/	info@cdcsit.tu.edu.np/01-4333010
17	Mountain and Mountaineering Science (M.Sc.MMS)	www.nma.gov.np	tanka.paudel@nepalmountain.edu.np/ 01-5244266
18	Master in Data Science (MDS)	https://sms.tu.edu.np/	info@sms.tu.edu.np/01-5314073
19	Master in Information Technology (MIT)	https://cdcsit.tu.edu.np/	info@cdcsit.tu.edu.np/01-4333010

नागरिक वडापत्र

विज्ञान तथा प्रविधि अध्ययन संस्थान डीनको कार्यालय त्रि.वि. बाट प्रदान गरिने सेवाहरु

क.सं.	प्रदान गरिने सेवा	सम्पर्क	दस्तुर	समय	प्रक्रिया	सम्पर्क इमेल	सम्पर्क नम्बर
1	पुनर्योग	परीक्षा शाखा, बल्खु	५००/-		नेपाल बैंकका रकम जम्मा गरी लेखा शाखामा रसिद काटी फाराम भरेर बुझाउने	exam@iost.tu.edu.np	०१-४३३०१२०
2	सम्बन्धपत्र प्रतिलिपि तथा लब्धाङ्कपत्र सच्याउने	परीक्षा शाखा, बल्खु	३००/-	२ दिन	नेपाल बैंकका रकम जम्मा गरी लेखा शाखामा रसिद काटी फाराम भरेर बुझाउने	exam@iost.tu.edu.np	०१-४३३०१२०
3	स्थानान्तरण	प्रशासन शाखा, कीर्तिपुर	३००/-	२ दिन	दुवै क्याम्पसको सहमति पत्र, बैंक भौचरको साथमा रथवं विद्यार्थीको हस्ताक्षर सहितको निवेदन बुझाउने	info@iost.tu.edu.np	०१-४३३०४४४
4	अङ्ग्रेजी माध्यमबाट पढेको सम्बन्धमा सिफारिस पत्रहरु	प्रशासन शाखा, कीर्तिपु	एक प्रति रु ३००/-र एक भन्दा बढी थप्दा प्रति एकाइ रु १००/-	२ दिन	परीक्षा नियन्त्रण कार्यालयबाट प्रमाणित ट्रान्सक्रिप्टको प्रतिलिपिहरु	info@iost.tu.edu.np	०१-४३३०४४४
5	पाठ्यक्रम प्रमाणीकरण	योजना शाखा, कीर्तिपुर	३००/-	२ दिन	पाठ्यक्रमको प्रतिलिपि	planning@iost.tu.edu.np	०१-४३३०४४४
6	विषय खुलाउने	योजना शाखा, कीर्तिपुर	१०००/-	२ हप्ता	विषय खुलाउने तह र एक तह मुनिका सबै कागजात सहित निवेदन बुझाउने	planning@iost.tu.edu.np	०१-४३३०४४४
7	Year Gap सम्बन्धमा सिफारिस	परीक्षा शाखा, बल्खु	५००/-	२ दिन		exam@iost.tu.edu.np	०१-४३३०१२०
8	कार्यक्रम नवीकरण	योजना शाखा, कीर्तिपुर	स्नातकका लागि रु ५१०००/- स्नातकोत्तरका लागि रु ३१०००/-	-	आवश्यक फाराम भरी पछिल्लो नवीकरणको पत्र लगायतका क्याम्पसको अद्यावधिक विवरण	planning@iost.tu.edu.np	०१-४३३०४४४
9	कार्यक्रम तथा विषय थप	योजना शाखा, कीर्तिपुर	७५,०००/- (सम्बन्धन प्राप्त क्याम्पस कलेज)	-	आवश्यक फाराम भरी क्याम्पसको अद्यावधिक विवरण र निर्णय	planning@iost.tu.edu.np	०१-४३३०४४४
10	स्थान तथा नाम परिवर्तन	योजना शाखा, कीर्तिपुर	५०,०००/-	-	आवश्यक फाराम भरी पछिल्लो नवीकरणको पत्र लगायतका क्याम्पसको अद्यावधिक	planning@iost.tu.edu.np	०१-४३३०४४४

Prof. Shankar Prasad Khanal, Ph.D.
Dean

Prof. Mahendra Maharjan, Ph.D.
Asst. Dean

Assoc. Prof. Khageshwar Mandal, Ph.D.
Asst. Dean

Assoc. Prof. Komal Raj Rijal, Ph.D.
Asst. Dean

Keshav Prasad Sharma
Deputy Administrator

Radhika Dulal
Deputy Fiscal Controller

Chetanath Neupane
Section Officer

Dipak Pandey
Section Officer

Nilu Shrestha
Head Office Assistant

Upendra Subedi
Head Office Asstant

Jayanti Phuyal
Head Office Asstant

Laxmi Tamang
Head Technical Asst. (I. T.)

Deepak Joshi
Head Technical Asst. (Computer)

Sabina Khadka
Head Technical Asst. (Computer)

Urmila Maharjan
Head Technical Asst. (Computer)

Sweta Tuladhar
Head Technical Asst. (Computer)

Jaluram Chaudhary
Technical Asst. (Computer)

Tirtha Kumari Khatiwada
Office Asst.

Nirmala Bhusal
Office Asst.

Bimala Ojha
Account Assistant

Asmita Dahal
Technical Asst. (Computer)

Sunita Koirala
Memographer

Maina Pode
Senior Office Helper

Binabati Tamang
Office Helper

Basu Dev Thapa
Office Helper

Mohan Maharjan
Office Helper

Krishna Khatri
Office Helper

Rita Lamichhane
Office Helper

Roshan Tamang
Driver

Megha Raj Shrestha
Driver

Buddha Maharjan
Driver

Proposed building, Dean office, Institute of Science and Technology, Tribhuvan University

Bulletin of IoST, Vol VII, December 2025

INSTITUTE OF SCIENCE & TECHNOLOGY, TRIBHUVAN UNIVERSITY, KIRTIPUR, NEPAL
Email: info@iost.tu.edu.np/ Webpage: https://iost.tu.edu.np/ Telephone: (977-1) 4330844 | (977-1) 4331755 | (977-1) 4330120 (Exam)