



CDM Newsletter

गणित केन्द्रीय विभाग

Central Department of Mathematics

<https://www.cdmathtu.edu.np>

Issue No. 1, September 2024

Editorial

It is our immense pleasure to share that the Central Department of Mathematics (CDM) has published its 1st issue of the Newsletter on the occasion of its 66th anniversary. This issue highlights the major activities of CDM, and its faculties and staffs from the first of Asoj, 2080 to the end of Bhadra, 2081. CDM is the oldest department in the history of science education at Tribhuvan University in Nepal and has been dedicated to producing high-level manpower in Mathematics and promoting basic as well as applied research in Mathematics. This Newsletter incorporates our past activities such as workshops, seminars, scientific talk series, and other activities of CDM along with the academic and research activities of faculties and staff. We express our considerable appreciation to all the faculties and staff for their willingness to share their activities, which has made this newsletter possible.

Editorial Board

Chief Editor:

Prof. Dr. Narayan Prasad Pahari

Editors:

Dr. Bishnu Hari Subedi

Dr. Jhavi Lal Ghimire

Message from the Head of Department

It is a great honor and tremendous pleasure for me to congratulate all the faculties, students, and Nepalese Mathematics Communities celebrating the 66th anniversary of Central Department of Mathematics (CDM), and launching its annual newsletter of Issue No. 1, September 2024 on this occasion. It has been a special privilege to undertake my responsibility as the Head of Department since 2080/10/24. CDM fosters a dynamic research environment where our faculty actively engages in Pure, Applied, and Computational Mathematics. After taking the responsibility of head, CDM has arranged a series of meetings with different mathematics stakeholders such as master first and third-semester students, faculties and staff, NMS Central and Provincial executive committees, CDM Alumni executives, CDM Math Council, M. Phil. / PhD scholars, Mathematics Department heads of TU constituent and affiliated campuses and discussed on the agendas such as present status of mathematics, problems, drawbacks in undergraduate curriculum and revisit, feedbacks, student interest in project writing, student declination in bachelor level and many more. With massive discussions with all of these stakeholders, CDM has prepared an academic calendar. CDM full body meeting has endorsed the calendar and that has been in operation. CDM, established in 1959/09/20 AD, under the Institute of Science and Technology (IoST) as a constituent institution of Tribhuvan University (TU). The department has mandates of producing highly qualified human resources (MSc, MPhil, and PhD graduates) in pure and applied Mathematics. The department plays a leading role of Mathematics subjects taught in different campuses of Tribhuvan University.

Last year, CDM arranged several research/ general talks of Nepalese and internationally renowned mathematicians. We are continuing to conduct CDM-NMS talk series and CDM Alumni talk series every month to share knowledge in teaching, learning, and research in Mathematics and Mathematical Sciences.

On behalf of HoD, I would like to acknowledge all the stakeholders and appreciate the dedication, and contribution paid by our faculty and the enthusiasm of our students. I am proud of our collective efforts to produce meaningful research and educate students who are ready to engage effectively in their professional endeavors. In a very short period, with warm cooperation from the faculties and staff, CDM has finally got renewed the LOI and worked hard on preparing the SSR. Finally, SSR has been forwarded to UGC from the Rectors office after a series of meetings with the QAA director, TU, and experts. Join us on this exhilarating mathematical journey towards a future enriched with knowledge and innovation.

Sincerely yours
Prof. Dr. Chet Raj Bhatta
Head of Department

CDM, Yesterday and Today

After the formal announcement of the commencement of M.A./M.Sc. classes in Economics, English, History, Mathematics, and Nepali, on July 14, 1959 A.D. (30th Ashadh 2016 B.S.), Central Department of Mathematics was established on September 20, 1959 A.D. (4th Aswin 2016 B.S.) at the University College in Tripureswor with only half a dozen students and a similar number of faculty members. The department has been of producing highly qualified human resources (MSc, MPhil and PhD graduates) on pure and applied mathematics. The department plays a leading role of Mathematics subjects taught on different campuses of Tribhuvan University.

Prof. Aasutosh Ganguly was the first head of the department; other faculty members at the time included professors Keshav Dev Bhattarai, Govinda Dev Pant, and Dhup Ratna Bajracharya. The first batch of students graduated from the department in 1961.

The CDM-TU offers graduate programs leading to the degrees of Master of Science (M. A. / M.Sc.), Master of Philosophy (M. Phil.), and Doctor of Philosophy (Ph. D.). These programs are designed to cater to students with a strong inclination towards research and teaching providing them with opportunities to pursue advanced studies and develop their interests in depth.

CDM has altogether 114 students out of them 75 are in Master's degree, 14 in M. Phil. Degree and 25 in Ph.D. In CDM, there are 14 faculties out of which 4 are Professors, 3 are Associate Professors, 7 Lecturers, 2 part-time faculty members and 4 part-time teaching assistants. In CDM, there are 4 administrative staff, and 3 office helpers. Among 20 faculties, 11 faculties are Ph.D. CDM has created an academic calendar focusing on academic environment. CDM is organizing seminar /workshop / conference / talk series and exposures at federal, provincial and international levels in partnership with Nepal Mathematical Society and Association of Nepalese Mathematicians in America (ANMA).

Faculty Members

There are 14 full-time faculty members in the department and 6 part-time teaching assistants as follows:

Professors

Chet Raj Bhatta, PhD (Harmonic Analysis), **HoD**
Tanka Nath Dhamala, PhD (Optimization)
Narayan Prasad Pahari, PhD (Functional Analysis)
Ajaya Singh, PhD (Complex Dynamics)

Associate Professors

Mr. Tulasi Prasad Nepal (Algebra)
Shree Ram Khadka, PhD (Optimization)
Durga Jang K. C., PhD (Differential Equations)

Lecturers

Bishnu Hari Subedi, PhD (Complex Dynamics)
Jhavi Lal Ghimire, PhD (Functional Analysis)
Pawan Shrestha, PhD (Differential Equations)
Mr. Ganga Ram D. C.
Nabaraj Adhikari, PhD (Complex Dynamics of Fractals)
Jeevan Kafle, PhD (Differential Equations)
Mr. Santosh Gnawali

Part-time teaching Assistants

Mr. Youba Raj Gaire
Ram Chandra Dhungana, PhD (Optimization)
Mr. Shanti Prasad Kafle
Mr. Baburam Devkota
Mr. Dipak Babu Amgain
Mr. Mohan Chandra Adhikari

Former Faculty Members

Late Prof. Ashutosh Ganguly
Late Prof. Keshav Dev Bhattarai
Late Prof. Govinda Dev Pant
Late Prof. Dhup Ranta Bajracharya (Former Head)
Prof. Purna Bahadur M.A.
Prof. Gambhir Man Shrestha
Prof. Tara Pada Chaudhary
Late Prof. Krishna Murari Saksena
Prof. V. D. Thawani
Prof. S. Jagannathan
Prof. P. Subba Rao
Prof. K. S. Rao
Prof. Suresh Chandra Arya
Prof. N. N. Agrawal
Prof. A. Roy
Prof. Ram Chandra Chaudhary
Prof. S. R. P. Sinha
Late Prof. Bhawani Shankar Rajbanshi
Late Prof. Ram Man Shrestha, PhD (Former Rector, TU)
Prof. Murari Prasad Ojha
Prof. Basudev Uprety, PhD
Prof. Santosh Man Maskey, PhD
Late Prof. Rameshwor P. Manandhar, PhD (Former Head)
Prof. Shankar Raj Pant, PhD (Former Head)
Late Prof. Yog Ratna Sthapit, PhD (Former Head)
Prof. Hom Nath Bhattarai, PhD (Former VC, NAST)
Prof. Yadav Prasad Koirala (Former Head)
Prof. Gajendra Bahadur Thapa, PhD (Former Head)
Prof. Hira Bahadur Maharjan, PhD (Former VC, TU)
Arjun Acharya, PhD
Mukta Bahadur Bhandari, PhD
Mahendra Panthee, PhD
Prof. Keshab Sitaula
Prof. Prakash Muni Bajracharya, PhD
Prof. Kedar Nath Uprety, PhD (Former Head)
Late Prof. Urmila Pyakurel, PhD

Administrative Staffs

Mrs. Sabina Shrestha, Account Officer
Mr. Bir Man Mali, Assistant Store Keeper
Mrs. Sangita Adhikari, Karyalaya Sahayek
Mrs. Pabitra Bhusal, Karyalaya Sahayek

Mrs. Dil Maya Podeni, Helping Staff
Mrs. Mana Maya Mangar, Helping Staff
Mr. Bishnu Hari Rimal, Helping Staff

Former Supporting Staffs

Mr. Ram Balak Sah, Account Officer
Mr. Keshav Raj Bhattarai, Account Officer
Late Mr. Dil Krishna Shrestha, Typist (Kha)
Mrs. Laxmi Kumari Basnet, Store Keeper
Mr. Sanu Babu Thapa, Helping Staff
Mr. Dev Prasad Dhital, Helping Staff
Late Mr. Lal Bahadur Galan, Helping Staff
Mrs. Bhagwati Thapa, Helping Staff

Former Head of Department

1. Late Prof. R.C. Chaudhary (2026 BS -2030 BS)
2. Late Prof. D. R. Bajracharya (2030 BS- 2048 BS)
3. Late Prof. R. P. Manandhar (2048 BS-2055 BS)
4. Late Prof. Y. R. Sthapit (2055 BS- 2059 BS)
5. Prof. S. R. Pant (2059 BS-2062 BS)
6. Prof. Y. P. Koirala (2062 BS- 2066 BS)
7. Prof. G. B. Thapa (2066-08-07 to 2070-01-08)
8. Prof. K. N. Uprety (2070/08/21-2074/10/04 and 2074/12/27-2076/10/01
9. Prof. N. P. Pahari (2074/10/21-2074/12/26
10. Prof. T. N. Dhamala (2076/10/02-2080/10/01

65th Anniversary of CDM

Central Department of Mathematics (CDM) successfully celebrated Math Day (its 65th anniversary) at the Central Department of Mathematics, Tribhuvan University (TU), Kirtipur on 4th Asoj, 2080. The Dean of IOST , Tribhuvan University Prof. Dr. Binil Aryal was the chief guest. On the occasion, Prof. Dr. Kedar Nath Uprety was felicitated for his contributions to Mathematics by Prof. Dhup Ranta Bajracharya Award for Life Time Achievements. In the program, distinguished professors, faculties of different campuses, research scholars, and students were attended. Central Department family extends special thanks to all of the participants for making grand success the event.



Committees in CDM

To fulfil the need of the department and improve its quality following committees were formed:

Internal Quality Assurance Accreditation Committee (IQAC)

1. Prof. Dr. Chet Raj Bhatta, HoD -Chair
2. Prof. Dr. Narayan Prasad Pahari- Member Secretary

3. Assoc. Prof. Tulasi Prasad Nepal- Member
4. Asst. Prof. Ganga Ram DC- Member
5. Asst. Prof. Dr. Bishnu Hari Subedi- Member
6. Asst. Prof. Dr. Jeevan Kafle-Member
7. Account Officer: Ms. Sabina Shrestha - Member
8. Storekeeper: Mr. Birman Mali - Member
9. Student Representative: Ms. Biddha Pokharel- Member

Self-Assessment Team (SAT)

1. Asst. Prof. Dr. Bishnu Hari Subedi- Coordinator:
2. Assoc. Prof. Tulasi Prasad Nepal-Member
3. Assoc. Prof. Dr. Shree Ram Khadka- Member
4. Asst. Prof. Dr. Jhavi Lal Ghimire- Member
5. Asst. Prof. Dr. Pawan Shrestha- Member

Central Department Research Committee (CDRC)

1. Prof. Dr. Chet Raj Bhatta, HoD - Chair
2. Prof. Dr. Tank Nath Dhamala- Member
3. Prof. Dr. Narayan Prasad Pahari- Member
4. Prof. Dr. Ajay Singh- Member
5. Asst. Prof. Dr. Jeevan Kafle- Member

Examination Committee

1. Prof. Dr. Chet Raj Bhatta, HoD - Chair
2. Prof. Dr. Ajay Singh- Member
3. Assoc. Prof. Tulasi Prasad Nepal- Member
4. Account Officer: Ms. Sabina Shrestha- Member
5. Office Assistant: Mrs. Pabitra Bhusal- Member

Building Construction / Infrastructure Management Committee

1. Prof. Dr. Narayan Prasad Pahari- Coordinator
2. Assoc. Prof. Dr. Durga Jang K.C. - Member
3. Asst. Prof. Dr. Bishnu Hari Subedi- Member
4. Asst. Prof. Nabaraj Adhikari- Member
5. Teaching Assistant: Youba Raj Gaire- Member
6. Account Officer: Ms. Sabina Shrestha- Member
7. Storekeeper: Mr. Birman Mali- Member

Publication Committee

1. Prof. Dr. Chet Raj Bhatta- Coordinator
2. Asst. Prof. Dr. Bishnu Hari Subedi- Member
3. Teaching Assistant Dr. Ram Chandra Dhungana - Member

Student Support, Counseling and Employment Committee

1. Prof. Dr. Chet Raj Bhatta, HoD - Member
2. Prof. Dr. Ajay Singh - Coordinator
3. Assoc. Prof. Dr. Durga Jang K.C.– Member
4. Asst. Prof. Dr. Pawan Shrestha - Member
5. Asst. Prof. Dr. Jhavi Lal Ghimire– Member
6. Asst. Prof. Dr. Jeevan Kafle – Member
7. Asst. Prof. Santosh Gnawali– Member
8. Office Assistant: Mrs. Pabitra Bhusal- Member
9. Student Representative: Ms. Biddha Pokharel- Member

Public Information Cell

1. Assoc. Prof. Dr. Shree Ram Khadka–Coordinator
2. Asst. Prof. Ganga Ram D C - Member
3. Office Assistant Mrs. Sangita Adhikari- Member

Feedback Committee

1. Prof. Dr. Ajay Singh - Coordinator
2. Asst. Prof. Dr. Jeevan Kafle – Member
3. Office Assistant: Mrs. Pabitra Bhusal- Member

Project Management Committee

1. Prof. Dr. Chet Raj Bhatta, HoD– Coordinator
2. Assoc. Prof. Dr. Durga Jang K.C. – Member
3. Store Keeper: Mr. Birman Mali – Member

Math Laboratory Committee

1. Asst. Prof. Dr. Jeevan Kafle– Coordinator
2. Teaching Assistant: Dr. Ram Chandra Dhungana– Member
3. Store Kepper: Mr. Birman Mali– Member

New Executive Committee of CDM Alumni Association, Nepal

Successfully conducted the first convention of CDM Alumni Association, Nepal, on 20th Magh, 2080 in CDM Kirtipur. From that convention, following new executive committee consisting of 15 members headed by Prof. Dr. Gyan Bahadur Thapa was formed.

1. President : Prof. Dr. Gyan Bahadur Thapa
2. Vice-President: Prof. Dr. Dinesh Panthi;
:Assoc. Prof. Dr. Ramesh Timsina
3. Secretary: Ganga Ram D C
4. Joint Secretary: Hari Prapanna Kandel
5. Treasurer: Dr. Buddhi Prasad Sapkota
6. Assistant Treasurer: Pramila Kharel

Members

1. Dr. Hari Nandan Nath
2. Dr. Ganga Ram Phaijoo
3. Dr. Durga Prasad Khanal
4. Anil Chandra Jha
5. Dr. Khagendra Adhikari
6. Martanda Poudel
7. Shankar Pariyar
8. Biseswar Prashad Bhatt

Central Department family congratulates to all of the participants for making grand success the convention.



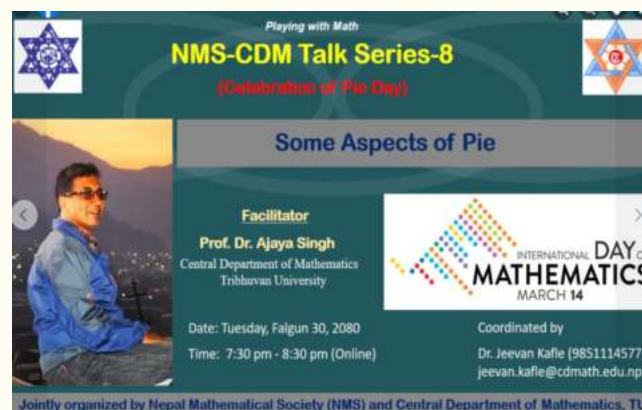
Appointment of New Head of Department

Tribhuvan University Executive Council has appointed Prof. Dr. Chet Raj Bhatta, Central Department of Mathematics, as the Head of the Department on 24th Magh, 2080. Prof. Dr. Tanka Nath Dhamala successfully completed his four-year tenure on 2nd Magh, 2080.



Celebration of International Mathematics Day (Pi Day)

CDM celebrated International Mathematics Day (Pi Day) via online on Falgun 30, 2080 in collaboration with the Nepal Mathematical Society (NMS) with the theme–Playing with Math. Prof. Dr. Ajay Singh from CDM delivered a talk in the program.



MoU with NMS and ANMA

Central Department of Mathematics formally signed an MoU with Nepal Mathematical Society (NMS) (on 7th Chaitra, 2080) and Association of Nepalese Mathematicians in America (ANMA) (on 26th Chaitra, 2080). Both organizations are actively working for the popularization and promotion of teaching, training and research activities in Mathematics. CDM believes that both organizations play a crucial role in shaping the future of Nepalese young mathematicians together joining the supportive hands in many directions.



Workshop on Climate Change

Two-day Workshop on Climate Change: Modelling, Mitigation, and Adaptation has successfully concluded on Chaitra 22-23, 2080. Various departments under the Institute of Sciences and Technology including Central Department of Mathematics, Central Department of Physics, Central Department of Environment Science, Central Department of Geology, Central Department of Hydrology and Meteorology whose area of research is modelling in natural and applied sciences came together to solve the issue of climate change. The program was inaugurated by Dean, IOST, TU and chaired by Head of Department Prof. Dr. Chet Raj Bhatta and coordination of Dr. Jeevan Kafle. The organizing team consists of CDM Student Council who took all the management responsibilities of the workshop and volunteer-ship of CDM Student Council.



MoU between the CDM and the Department of Mathematics, Patan Multiple Campus

A MoU was signed on 17th Baisakh, 2081 between the Central Department of Mathematics and the Department of Mathematics, Patan Multiple Campus. A fruitful interaction between the students and faculty regarding the Curriculum, textbooks and teaching delivery has provided enormous suggestions to the mathematics subject committee for improvement.



Community Outreach Program at Patan Multiple Campus



CDM has organized (on 17th Baishakh, 2081) one day Community outreach program/workshop on the topic “Current Status and Need Improvement in Undergraduate Mathematics Curriculum and Teaching” at Patan Multiple Campus, Lalitpur. The objective of the program was highlighted by coordinator Assoc. Prof. Dr. Shree Ram Khadka. The subject experts Prof. Dr. Narayan Prasad Pahari, Assoc. Prof. Dr. Tulasi Prasad Nepal, Assoc. Prof. Dr. Parmeswari Kattel, Asst. Prof. Dr. Hari Nandan Nath and Asst. Prof. Dr. Ajaya Kumar Chaudhary were the facilitators in addressing the issues raised by students and teachers in the workshop and Asst. Prof. Dr. Bishnu Hari Subedi and Asst. Prof. Dr. Pawan Shrestha were the rapporteurs of the workshop. Prof. Dr. Chet Raj Bhatta, HoD of CDM on behalf of head of subject committee put his remarks in various dimensions of teaching and learning of mathematics. On this occasion the faculties and students of Patan Multiple campus raises a serious issues to be addressed soon. The main objective of the outreach program is to develop student’s interest in mathematics at university level.



Workshop on LaTeX Tutorial

Central Department of Mathematics, Tribhuvan University organized three-day Workshop entitled “LaTeX Tutorial and Advanced Techniques for Beginners and Beyond” on Baishak 20-22, 2081 for the faculties, and students wishing to pursue research careers in mathematics.

About 39 participants participated in the program enriching them with essential skills of latex learning and beamer slide preparation. The chief guest of the opening session was Prof. Dr. Ishwar Koirala, Director (Research Directorate), Tribhuvan University. The program was chaired by Head of the Department of Mathematics, Prof. Dr. Chet Raj Bhatta and coordinated by Dr. Jeevan Kafle. The organizing team consists of CDM Student Council who took all the management responsibilities of the workshop under

the leadership of the President of the Council Mr. SandeshThakuri.



Community Outreach Program at Adarsha Azad Secondary School, Bhaktapur

CDM has organized (1st Jestha, 2081) one day Community outreach program/workshop for the promotion and improvement of school level Mathematics in collaboration with Adarsha Azad Secondary School, Bhaktapur on the topic “Current Status and Need Improvement in School Mathematics Curriculum and Teaching” at Adarsha Azad Secondary School Bhaktapur. The objective of the program was highlighted by the coordinator Assoc. Prof. Dr. Shree Ram Khadka. Prof. Dr. Prakash Muni Bajracharya, Asst. Prof. Dr. Bishnu Hari Subedi, and Asst. Prof. Dr. Pawan Shrestha were the facilitators to address the issues raised by students and teachers in the workshop and Assistant Prof. Ganga Ram D. C. was the rapporteur of the workshop. Prof. Dr. Chet Raj Bhatta was the Chief Guest of the program. The main objective of the outreach program is to develop student’s interest in mathematics and science in school.



Submission of NEHEP Report of Extended Performance Based Grants

Head of the Department Prof. Dr. Chet Raj Bhatta and Executive Director of Planning Directorate Prof. Dr. Dhurba Kumar Gautam has signed formally on NEHEP Project. CDM has submitted Nurturing Higher Education Project Report of Extended Performance Based Grants Submitted to NEHEP, TU-PSU Office of the Planning Directorate Tribhuvan University, Kirtipur, Kathmandu on 2081/02/11. In this regards, CDM, TU has made an attempt to discuss perspectives, schemes and practices of outreach programs. The objective of the outreach activities is to disseminate knowledge and raise awareness about current societal issues in the field of mathematical sciences and the environment. In the first phase, CDM, TU has identified the following sectors of potential outreach programs.

- Inter-campus mathematics network outreach of Tribhuvan University and other Universities of Nepal:
- School mathematics network improvement outreach programs CDM, TU

Workshop in Scientific Computing

Five-day workshop successfully concluded in Scientific Computing in Python jointly organized by Central Department of Mathematics,TU and Mathematical Biology Research Centre during Jestha 22-26, 2081. Prof. Dr. Kedar Nath Uprety, Former Head of the Department chairing the concluding session. Prof. Dr. Chet Raj Bhatta, HoD of the Department of Mathematics was the chief guest of the program. Assoc. Prof. Dr. Ramesh Chandra Timsina, Bhaktapur Multiple Campus Chief Assoc. Prof. Dr. Kabita Luitel and Asst. Prof. Dr. Hari Nandan Nath were the facilitators of this workshop .CDM Alumni Secretary Mr. Ganga DC coordinated this workshop. More than 70 participants from the various Central Departments took part in this workshop.



Infectious Disease Workshop II

On July 8–10, 2024, in Kathmandu, the Central Department of Mathematics, TU, Mathematical Biology Research Center (MBRC, Nepal), and Nepal Health Research Council (NHRC) collaborated to host an Infectious Disease Workshop II with the theme “Mathematical Modeling and Machine Learning for Epidemic Prevention and Control.” Professor Naveen K. Vaidya of San Diego State University in the United States; Dr. Meghnath Dhimal of the Nepal Health Research Council in Kathmandu; Professor Suresh Manandhar of Madan Bhandari University of Science and Technology; Professor Ananda Ballabh Joshi of the Public Health and Infectious Disease Research Center in Nepal; and Associate Professor Arjun Saud of the Central Department of Computer Science and Information Technology, TU, were the program’s main speakers



Tree Plantation Program

CDM Alumni Association successfully coordinated Tree Plantation Program at Central Department of Mathematics premises on 27th Jestha, 2081. Thirty-three different types of fruits and plants have been planted .CDM offers special thanks to Global IME Bank , Nepal Bank Limited Kirtipur Branch, and Thapa Nursary TU gate for necessary support.



AESIM School on Differential Equations, Numerical Methods

Central Department of Mathematics has successfully concluded “AESIM School on Differential Equations, Numerical Methods, and Their Applications with Scientific Computing” supported by CIMPA during 30th Jestha – 9th Ashad, 2081 . The program was facilitated by 14 renowned resource persons from Germany, Australia, India, and Nepal. Altogether 61 participants participated in the workshop, from Indonesia, Bangladesh, India, and Nepal, including 9 foreign participants. The scientific program structure included computing with Python and MATLAB, data science, machine learning, numerical methods such as the finite element method and mesh-free method, and mathematical modeling.The school ran for 12 days, comprising 32 sessions, including two online sessions and two participant presentation sessions. On June 15, there was a workshop excursion to Bosan Danda, coordinated by Prof. Dr. Ajaya Singh. Dr. Jeevan Kafle as coordinator and his supporting team made the school very interactive and fruitful. Prof. Dr. Kedar Rijal, Registrar was the chief guest of the AESIM School. The AESIM School was chaired by head of CDM Prof. Dr. Chet Raj Bhatta.The workshop will serve as a cornerstone for further collaboration between Nepalese researchers and foreign researchers.



Orientation program on MA/ MSc. Thesis Writing in Mathematics.

Central Department of Mathematics organized an Interaction program on MA/ MSc. Thesis Writing in Mathematics on Asar 14, 2081 to support the Master Level third Semester students. Different aspects

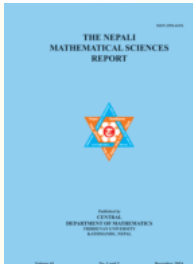
of Master level thesis writing in Mathematics and opportunities, research, and applications in various areas have been discussed by CDM faculties.HoD of Mathematics Prof. Dr. Chet Raj Bhatta, Prof. Dr. Narayan Prasad Pahari, Assoc. Prof. Dr. Durga Jang KC well explained about the various aspects of master thesis writing.



Publication of Nepali Mathematical Sciences Report Volume 41(1)

Volume 41 Issue 1, Year 2024 of The Nepali Mathematical Sciences Report (NMSR) has been published online versions on 19th Ashad, 2081. It consists of six research articles in different fields of pure and applied mathematics. CDM acknowledges all the authors and reviewers for their contributions to this issue.

It is a math-indexed peer-reviewed journal. CDM also has upgraded the submission of manuscript manual to online, make a better platform for researchers around the globe as an outlet for new results. CDM has a plan to initiate the process for obtaining the SCimago ranking of the Journal.



SSR Finalizing Meeting

Central Department of Mathematics organized a discussion meeting on 23rd Ashad 2081 with the faculties and staffs in CDM in presence of the experts Prof. Dr. Bal Mukunda Bhandari, and Prof Dr. Krishna Das Manandhar, and the Director, QAA Dr. Prem BahadurThapa to finalize Self-Study Report(SSR) submitted by Central Department of Mathematics.



Three-day Workshop Cum Conference in Project Work

Central Department of Mathematics in collaboration with Nepal Mathematical Society organized three days (27th Ashad 2081 to 29th Ashad 2081) undergraduate conference cum workshop on project work for mathematics to support the B.Sc./ B.A. fourth-year students whose major subject is mathematics(with project work) via zoom platform. The program was inaugurated by the chief guest Prof. Dr. Binil Aryal, Dean, IOST, TU, and the chairperson was Prof. Dr. Chet Raj Bhatta, Head, CDM, TU and the special guest was Prof. Dr. Narayan Prasad Pahari, Professor of CDM and President of Nepal Mathematical Society. The program was coordinated by Dr. Jhavi Lal Ghimire. The best three students were awarded based on their presentation in the evaluation committee's recommendation. 56 students from different TU constituent campuses participated in the workshop cum conference. Students and Mathematics faculties from different campuses attended this event enthusiastically. Assoc. Prof. Dr. Durga Jang KC, Assoc. Prof. Dr. Parmeswari Kattel and Assoc. Prof. Dr. Santosh Ghimire delivered their talks on different aspects of project writing , structure of project work, presentation skills and mathematical language and opportunities, research, and the applications of mathematics.



Guru Purnima Celebration



Students of first and third-semester of the Central Department of Mathematics, Tribhuvan University organized a Guru Purnima celebration

on 6th Shrawan, 2081. Students expressed their gratitude through various cultural performances, including devotional songs, dances, and speeches. CDM extends our heartfelt thanks to our students and the organizing team for their exceptional efforts in making this Guru Purnima celebration a grand success. Your enthusiasm and dedication truly made the occasion special and memorable.

Founder Committee of CDM Council



This CDM -Student council (2080-2081) is the first student council of master students at Central Department of Mathematics, IoST, TU, which consisted of eight students, viz. Sandesh Thakuri, Biddha Pokharel, Ranjan Kumar Chaudhary, Jayanti Saud, Mahesh Nepali & Karuna Rajbanshi, Manoj K.C., Dhakaram Regmi

The QAA accreditation requires a committee of students and soon after the department proceeded for the accreditation, the council was formed under the presidency of Sandesh Thakuri. In one- year period of time the council worked vigorously to make the department a vibrant place, conducting a cultural and environmental programs, organizing interdepartmental workshops and talks and assisting the department running its program.

New Executive Committee of CDM Student Council

Following new executive committee of CDM Student Council consisting of 9 members headed by Mr. Karan Upadhyay was formed on 6th Shrawan, 2081 after Guru Purnima celebration.

1. President: Mr. Karan Upadhyay
2. Vice-President: Mr. Dinesh Kumar Yadav
3. Secretary: Rajesh Joshi
4. Treasurer: Rajeena Parajuli

Members

5. Mr. Sandeep BK
6. Mr. Naveen Paudel
7. Ms. Sangita Magar
8. Mr. Roshan Koirala
9. Mr. Santosh Khanal



Interaction with Mathematics Faculties at Butwal

Department of Mathematics, Butwal Multiple Campus successfully organized an interaction program among mathematics faculties with Tribhuvan University Mathematics Subject Committee Representative regarding the existing curriculum of BA and BSc Mathematics, course contents and its implementation, opportunities and challenges on 9th Shrawan, 2081.



Interaction with Mathematics Faculties at PN Campus

An enriching interaction was held on 16th Shrawan, 2081 between PN Campus Mathematics faculties and NMS Gandaki Chapter with Tribhuvan University Mathematics Subject Committee representatives and NMS Central Committee sharing insights and experiences regarding the present course structure, curriculum of BA /BSc Mathematics, Teaching Methodology / and examination system, their opportunities and Challenges.



Successfully Concluded the Hand over Program of SSR Report

Central Department of Mathematics, Tribhuvan University organized a formal handover program of Self Study Report (SSR) on 22nd Shrawan 2081 to Tribhuvan University Authority. On the Program,

CDM received the gracious presence of the Coordinator of the QAA Evaluation Committee Prof. Dr. Bal Mukunda Bhandari, and QAA Evaluation Expert Prof Dr. Krishna Das Manandhar as the guests of the Program. On the handover ceremony, the guest was the director of Center for Quality Assurance and Accreditation (QAA) TU, Dr. Prem Bahadur Thapa. The Program was conducted under the Chairmanship of Head of the Department Prof. Dr. Chet Raj Bhatta. Prof. Narayan Prasad Pahari welcome the guests and highlighted the key points on the SSR. Assoc. Prof. Shree Ram Khadka was the MC of the program.



Interaction with Mathematics Faculties at Tri-Chandra Campus

An interaction program was held on 27th Shrawan, 2081 between the TU Mathematics subject committee and department



of the mathematics Tri-Chandra Multiple Campus regarding the improvement and popularization of the existing curriculum of BA/ BSc. Mathematics Curriculum. CDM thanks and special acknowledges all faculties for their active participation and for making this event successful.

Interaction with Mathematics Faculties at PK Campus

An interaction between mathematics faculty members of PK campus, RR campus and Saraswati Campus on 32th shrawan 2081 with Mathematics Subject Committee regarding the curriculum, Course Contents and its implementation, opportunities, and challenges of the existing curriculum of BA and BSc Mathematics chaired by the head of department of Mathematics and Statistics Padma Kanya Campus, Bagbazar.



Interaction with Mathematics Faculties @ Patan Campus

Department of Mathematics Patan Multiple Campus organized an interaction program among Mathematics faculties and Tribhuvan University Mathematics Subject Standing Committee regarding the curriculum, course contents and its implementation, opportunities, and challenges of the existing curriculum of BA and BSc Mathematics on Bhadra 09, 2081.



Interaction with Mathematics Faculties @ Amrit Campus

Department of Mathematics Amrit Campus organized an interaction program among Mathematics faculties and Tribhuvan University Mathematics Subject Standing Committee in the various issues regarding the curriculum, course contents and its implementation of the existing curriculum of BSc Mathematics on 15th Bhadra, 2081.



Workshop on “Evaluation system on Mathematics

A workshop entitled “Evaluation System on Mathematics” was organized by Nepal Mathematical Society in collaboration with Central Department of Mathematics during Bhadra 24-29, 2081. The objective was to uplift/ improve the current situation of evaluation/ Examination systems in Mathematics at the Bachelor Level. The Chief Guest of the Program was Prof. Dr. Binod Prasad Dhakal, Vice- Chancellor of Lumbini Technical University and program chaired by Prof. Narayan Prasad Pahari, President of Nepal Mathematical Society. HoD of Central Department of Mathematics put their remarks on various aspects of Evaluation system. Dr. Jeevan Kafle coordinated this program.

A workshop on
Evaluation System in Mathematics
Organized by: Nepal Mathematical Society
In Collaboration with: Central Department of Mathematics, TU

Registration deadline: Bhadra 10, 2081
Programme Date: Bhadra 24 - 29, 2081 (Online)

Registration Fee: Rs. 500
For registration: Dr. Pawan Neupane (Tel: 9846201132)
Email: pawan.neupane@cdm.edu.np
Dr. Phunessa Bhadani (Tel: 9841498202)
Email: phunessa.bhadani@cdm.edu.np

Coordinated by:
Dr. Jeevan Kafle
+9779851114577
jeevan.kafle@cdmth.edu.np

Payment to be made by the participant through bank draft or transfer
Bank: Nepal Bank Limited, Kirtipur Branch, Kathmandu
Account Holder: Nepal Mathematical Society
Current Account Number: 543303 23020 89423 00001

Prof. Dhup Ratna Bajracharya Life Time Achievement Award



The fund of Rs. 2,000,00 (Rs two lakhs only) for Prof. Dhup Ratna Bajracharya Life Time Achievements Award established by former head Prof. Dr. Gajendra Bahadur Thapa has been added of Rs 8,00,000 by himself to make total Rs. 10,00,000 (Rs ten lakhs (One million)). This amount has been deposited in a fixed account at Nepal Bank Limited Kirtipur branch. Department welcomed his decision and also decided by department meeting to contribute the amount equivalent to one day's salary (per year) from interested faculties. The amount of Rs. 1,50, 000 also deposited in the same account that is received from AESIM School organized by Central Department of Mathematics & coordinated by Dr. Jeevan Kafle. Departmental meeting of dated 2081/04/21 decided that the annual interest obtained from this amount, a senior retired Professor of CDM will be felicitated by an amount of Rs. 51,000, and rest of amount will be allocated for the fellowship/ scholarship to the students.

Book Donation by Prof. Dr. Hom Nath Bhattarai



Talk Series

CDM has been arranging different academic and scientific talk programs as per the calendar in collaboration with Nepal Mathematical Society, CDM-Alumni Association, and CDM student council.

CDM-NMS Talk Series

This year, CDM is continually conducting the CDM-NMS talk series in the Central Department of Mathematics (CDM) Tribhuvan University premises jointly organized by the CDM and NMS.

Talk Series-7

Prof. Dr. Arjun Kumar Rathi from Rajasthan Technical University, India delivered a talk on the topic Hypergeometric series and its applications on Asoj 3, 2080.



Talk Series-8

Prof. Dr. Shiva Prasad Pudasaini, Technical University of Munich, Germany delivered a talk on Innovative Mechanical Solutions to Multiphase Mass flows on Falgun 29, 2080.



Talk Series-9

Prof. Dr. Ajay Singh, Central Department of Mathematics, Tribhuvan University, Kirtipur delivered a talk on the topic entitled Some Aspects of Pie on Falgun 30, 2080 on the occasion of International Mathematics Day.



Talk Series-10

Dr. Hemen Dutta, Department of Mathematics, Gauhati University, Guwahati, India delivered a talk (via online) on the topic entitled Enhancing Research Paper Writing, Proposal Formulation, and Publishing Skill in Mathematics on Baisakh 15, 2081



Talk Series-11

Dr.-Ing. Ingrid Rügge, Managing Director of International Graduate School (IGS), University of Bremen delivered a talk on Internationalization and Doctoral Training on Chaitra 15, 2080



Talk Series-12

Dr. Sung Rak Choi, Associate Professor, Department of Mathematics, Yonsei University, Seoul, Korea delivered a talk on Birational Algebraic Geometry: toward the minimal model on Baisakh 29, 2081



Talk Series-13

Dr. Bishnu Lamichhane, Associate Professor, Department of Mathematics, University of Newcastle, Australia delivered a talk on Research in Mathematics: Tools, Research Proposal, Methodology on Bhadra 1, 2081



Talk Series-14

Prof. Dr. Bed Raj Acharya, Director of Graduate School of Education, Tribhuvan



University delivered a talk on Enhancing Teaching Strategies in Mathematics: Exploring Diverse Pedagogical Methods on Bhadra 15, 2081

CDM Alumni Talk Series

This year, CDM Alumni has started to conduct the CDM Alumni talk series in the Central Department of Mathematics (CDM) Tribhuvan University premises.

CDM-Alumni Talk Series-1

Diego Antonio Robayo Bargans, PhD scholar in Mathematics at Rheinland-Pfalzische Technische Universität Kaiserslautern, Germany delivered a talk (via online) on the topic entitled “Bernstein- Khovanskii- Kushnirenko Theorem” on Magh 15, 2080.



CDM-Alumni Talk Series-2

Prof. Kedar Nath Uprety, former HoD of CDM delivered a talk on the topic entitled “Research in Mathematics and Its Exposure” on 23rd Chaitra, 2080.



CDM-Alumni Talk-3

Dr. Sudarshan Tiwari, Senior Researcher at Technical University of Kaiserslautern, Germany on the topic entitled “Solving Multiscale Problem by a Particle Method” on 9th Ashad, 2081



CDM-Alumni Talk Series-4

Mr. Santosh Gnawali, PhD scholar in Mathematics at University of Kaiserslautern, Germany, and Faculty member of CDM delivered a talk (via online) on the topic entitled “Massively Parallel Computation in Computer Algebra” on Ashad 3, 2081.



MPhil Awarded from CDM during a year

1. Amrit Sharma
2. Nirmal Gurung
3. Samjhana Koirala
4. Ranjit Kumar Jha
5. Uddhab Raj Nyaupane
6. Kedar Nath Chhatkuli
7. Dwarika Prasad Gautam
8. Gyanendra Acharya
9. Nar Bahadur Chand

PhD Awarded from CDM during a year

1. Durga Prasad Khanal from Saraswoti Multiple Campus Kathmandu on the topic entitled “Multi-Commodity

Dynamic Flow Problems with Intermediate Storage and Varying Transit Times” under the supervision of Prof. Dr. Urmila Pyakurel, Prof. Dr. Tanka Nath Dhamala and Prof. Dr. Stephan Dempe on 21 February 2024.

2. Khagendra Adhikari from Amrit Campus Kathmandu on the topic entitled “Transmission Dynamics of Covid-19 Mathematical Models for Effective Controls “ under the supervision of Prof. Kedar Nath Uprety and Prof. Naveen Vaidya on 2080/12/22.
3. Pitambar Tiwari from Bhairahawa Multiple Campus, Rupendehi on the topic entitled “Quantum Calculus: New Development and Applications”, under the supervision of Prof. Dr. Chet Raj Bhatta & Co-Supervisor Prof. Dr. Pankaj Jain on 2081/02/31.
4. Gyan Prasad Paudel from Mid-West University Surkhet on the topic entitled “A Study of Fuzzy Sequence with their Applications to the Real World” under the supervision of Prof. Narayan Prasad Pahari and Prof. Sanjiv Kumar on 2081/02/32.
5. Anjana Pokhrel from Padma Kanya Campus Kathmandu on the topic entitled “Dynamics of Transmission and Control of Measles” under the supervision of Prof. Kedar Nath Uprety and Prof. Naveen Vaidya on 2081/05/09.
6. Ramesh Gautam from Ratna Rajyalaxmi Campus Kathmandu on the topic entitled “Modeling and Analysis of Dynamics of Malaria Transmission with Measures: Imported Cases” under the supervision of Prof. Kedar Nath Uprety and Prof. Naveen Vaidya on 2081/05/14.

Activities of CDM Faculties

Chet Raj Bhatta

1. Appointed as the Head of the Department on Magh 24, 2081.
2. Chair of Upcoming International Conference in Mathematics and Its Application (ICMA-2024)
3. Nominated as Standing Committee members of IoST, Dean’s office from Ashadh 7, 2081
4. Nominated as member of the Mathematics subject committee of Nepal Sanskrit University from Jestha 13, 2081

Publications:

1. Ajaya Kumar Chaudhary, Chet Raj Bhatta & Dilip Kumar Sah, (2024), Menger Space and Some Contraction Mappings, *Communications on Applied Nonlinear Analysis*, 31(7): 641-648.
2. Ajaya Kumar Chaudhary, Chet Raj Bhatta & Uday Kumar Karn, Extension and Generalization of Banach Contraction in Metric and in Menger Space, *Communications on Applied Nonlinear Analysis* (Accepted)
3. Tiwari,P.& Bhatta,C.R.(2023). HH-inequality for Harmonically Convex Function via Riemann-Liouville Fractional integrals, *Journal of Fractional*

Differential Calculus (Croatia) , 13(2): 163-169.

4. Tiwari,P. & Bhatta, C.R.(2024). q- Hermite-Hadamard inequalities for the Products on Extended Geometric Convex Functions, *Bulletin of the Allahabad Mathematical Society*, 39(1): 1-22.
5. Tiwari,P. & Bhatta, C.R. (2023).Hermite - Hadamard Inequality whose First Order q-derivative are m-convex Functions, *Advances and Applications in Mathematical Sciences* , 22(9):2171-2188.
6. Bhatta,R.B., Shrestha,S.,Panthi,D.& Bhatta, C.R.(2023). Impact of Yoga Awareness on Transmission Dynamics of Communicable Diseases: SIR Model Analysis, *Communications on Applied Nonlinear Analysis*, 31(2).

Tank Nath Dhamala

1. Nominated for the post of the Chairman of the University Service Commission and Vice-Chancellor of Tribhuvan University as the finalist.
2. Established a Research Group Linkage Program of the Alexander von Humboldt Foundation between Tribhuvan University, Central Department of Mathematics, Nepal and IOR, Discrete Mathematics and Logistics at Karlsruhe Institute of Technology (KIT), Germany, and his responsibility as the Principal Resource Person from Nepal side.

Publications:.

1. Pangen, B.P. & Dhamala, T.N. (2024), Maximum flow in hybrid network with intermediate storage, *OPSERACH*.
2. Pangen, B.P. & Dhamala, T.N.(2024), Non-Conservative Maximum Flow Minimum Cost Solution in Uncertain Network, *Journal of Jilin University* (Engineering and Technology Edition), 43(5): 76-92.
3. Pangen, B.P.&Dhamala, T.N.(2024). Order Guided Non-Conservative Maximum Flow in Uncertain Network Interdiction Problem with Budget Constraint, *Journal of Uncertain Systems*.
4. Dhamala, T.N., Adhikari, M.P., Khanal,D.P. and Pyakurel,U.(2023), Generalized Maximum Flow over Time with Intermediate Storage, *Annals of Operations Research*.
5. Gupta, S.P., Pyakurel,U., Dhamala, T.N.(2023), Optimal Reconfiguration of Network with Variant Transmission Times on Arcs, *The Nepali Mathematical Sciences Report*, 40(1-2): 11-33
6. Dhamala, T.N., Wagle,S. and Pyakurel,U. (2023), FlowLoc Problem with Maximum Excess Flow, *Journal of Management and Optimization* (JIMO), 19(12): 8851-8870.

Narayan Prasad Pahari

1. Chair of Upcoming International Conference in Mathematics and Its Application.
2. Nominated as Mathematics Standing Committee members of Mathematics Subject Committee from Ashadh 7, 2081
3. Nominated as Subject Committee Member of Mathematics from Ashadh 7, 2081

Publications:

1. Paudel G.P. , Pahari N.P.& Kumar S.(2023). Topological Properties of Difference Sequence Space Through Orlicz Paranorm Function, *Advances and Applications in Mathematical Sciences*, 22 (8): 1689-1703.
2. Poudel, M.P., Pahari N.P., Dongkyu Lim & Rathie ,A.K. (2024). A Note on Evaluation of a New Class of Integrals Involving Generalized Hypergeometric Function; *Australian Journal of Mathematical Analysis and Applications*, 21(2),: 1-11,
3. Poudel,M.P., Pahari N.P., Dongkyu Lim & Rathie ,A.K. (2024). On an Integral Involving Product of Two Generalized Hypergeometric Function; *Journal of Harbin Engineering University*, 31 (1): 52-61
4. Paudel, G. P., Kumar, S., & Pahari, N. P. (2024). Fuzzy model for the validation and authenticity of a void fraud at the time of the claim process. *Mathematical Sciences and Applications* (pp. 45-56). CRC Press. (Taylor and Francis Group)
5. Pokharel, J.K. , Pahari N.P. , & Basnet,G.B. (2024). Generalized Cesàro Summable Vector Valued Sequence Space of Bounded Type, *The Nepali Mathematical Sciences Report*, 41(1):36-4
6. 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

Ajaya Singh

1. Tamang, B.B. & Singh, A. (2024). For Different Prime Numbers D and an odd Integer N in the Quadratic Diophantine Equation $X^2 - DY^2 = N$, *Indian Journal of Mathematics*, 66 (2): 53-80.
2. Tamang, B.B. & Singh, A. (2024). Efficient Approaches to Solve Quadratic Diophantine Equations and their Time Complexity, *Journal of Nepal Mathematical Society*, 6 (2): 1-6.
3. Tamang, B.B. & Singh, A. (2023). Identification of Algebraic and Transcendental Numbers Using Some Elementary Functions, *Research Journal*, 8(1): 12-21.
4. Tamang, B.B. & Singh, A. (2023). Some Characteristics of the Farey Sequences with Ford Circles, *Nepal Journal of Mathematical Sciences*, 4 (1): 69-76.

Shree Ram Khadka

1. Keynote Speaker on “Maximum Flow Transshipment over Networks” APORS Optimization Forum, 7 July 2023
2. Appointed as member of standing committee of Mathematics Subject Committee.
3. Completed Small Research Development and Innovation Grant (SRDIG) of UGC award no [SRDIG-FRG-79/80-S&T-06] on Evacuation plan for potential victims of Jyotinagar Landslide

at Butwal”

Publications:

1. Bhandari P.P. and Khadka S.R. Evacuation Planning Problems on Uniform Path Length Network with Prioritized Destinations, *Journal of Applied and Engineering Mathematics*, (Accepted.)
2. Khadka S.R., Ghimire S. and KC D.J. (2023). Some Fundamental Research Tools in Mathematical Sciences, *Journal of Nepal Mathematical Society*, 6(1): 70-73.

Bishnu Hari Subedi

Research Report

1. B. H. Subedi (Principal Investigator) , UGC Small RDI Grants (1 Year), Award No. SRDIG- 077/78 S and T-12 on Escaping and Fast Escaping Sets of Holomorphic Semigroup and Some Attempts of Proving Eremenko's Conjecture in Semi group Settings.

Publications:

1. Gurung ,N. &Subedi, B. H. (2023) Escaping set and bounded orbit set of holomorphic semigroup on C. *The Nepali Mathematical Sciences Report*, 40(1-2):34-42.
2. Subedi, B. H. (2023). Dynamics of almost abelian holomorphic semigroups, *Journal of Nepal Mathematical Society (JNMS)*, 6(1): 11-15.
3. Subedi, B. H. (2023). Completely invariant Fatou, Julia, and escaping sets of transcendental semigroups, *Thai Journal of Mathematics*, 21(2): 289-298.

Pawan Shrestha

1. Completed short-term visit to SISSA, Italy for 3 months supported by TWAS
2. Ph. D. completion in Mathematics from Institute of Science and Technology, Tribhuvan University on the topic entitled” Regularity of 2 D Surface Quasi Geostrophic Equations”under the supervision of Dr. Durga Jang KC and Dr. Ramji Sharma.

Publications

1. Shrestha, P., KC, D.J. and Sharma, R.(2023).On the construction of traveling water waves with constant vorticity and infinite boundary, *International Journal of Mathematics and Mathematical Sciences*, Hindawi, Article ID 6317674, 6 pages
2. Shrestha, P., KC, D.J. and Sharma, R.(2023). Generalized kdv and Burger equations and various vanishing limits, *Journal of Institute of Science and Technology*, 28(2): 91-99
3. Shrestha,P., KC, D.J. and Sharma, R.(2023).2D Surface Quasi Geostrophic Equations and its Regularity, A Numerical Study, *The Nepali Math. Sc. Report*, 40(2): 71- 80

Jhavi Lal Ghimire

1. Completion of three months research visit at SISSA, Italy, under a TWAS-SISSA- Lincei re-search

Cooperation Visits Programme, from September to November 2023.

2. Received Research Grant:UGC Small RDI Grant, 2024 (Award no. SRDIG-80/81-ST-11)
3. Completion of PhD in Mathematics from Central Department of Mathematics, IOST, Tribhuvan University in 2023 under the supervision of Prof. Dr. Narayan Prasad Pahari on the title "A Study of Topological Structures of Linear Spaces of Generalized Sequences".

Publications

1. 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.
2. Pokharel, J.K., Pahari, N.P.&Ghimire, J.L. (2023). On new space of vector-valued generalized bounded sequences defined on product normed space, *Nepal Journal of Mathematical Sciences*, 4(2): 41-48.
3. Ghimire, J. L., Kohli, T., & Pahari, N.P.: A note on frames in non-locally convex Banach spaces, *Poincare Journal of Analysis and Applications*, 10(1), 2023, 55-60

Ganga Ram D C

1. Participated as an oral presenter on the international conference "International Conference and Workshop on Applied Nonlinear Analysis" held in Chonburi, Thailand from August 6-8, 2024.
2. Participated a workshop "Mathematical Modeling and Machine Learning for Epidemic Control and Prevention" jointly organized by Mathematical Biology Research Center, Nepal (MBRC, Nepal) and Central Department of Mathematics, TU held on Thapathali, Kathmandu, July 8-10, 2024.
3. Participated and worked as a member of organizing committee of the workshop "Scientific Computing in Python" jointly organized by MBRC, Nepal and Central Department of Mathematics, TU held on June 4-8, 2024 at CDM, Kirtipur.

Jeevan Kafle

Research Report

1. Jeevan Kafle [Principal Investigator], Pushpa Nidhi Gautam [Co-Investigator] (2023) Mathematical Modeling of the Two-layer Blood Flow through a Curved Artery with Multiple Stenosis. UGC Award No.: FRG-79/80-S&T-08. Date of Award: 2080-01-06 (April 19, 2023)
2. Jeevan Kafle [Principal Investigator] (2024) Dynamics of Multiple Landslides Generated Fluid Waves in Multi-Lakes and Reservoirs at High Mountains. Individual Research. Individual Research Grant, Young Scientist Grant, NAST.

Publications:

1. 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*.

2. Kattel, P., Tiwari, C.N., Dangol, B.R. and Kafle, J.(2024) "Modeling multiphase debris Floods Down Straight and Meandering Channels.*Journal of Applied Fluid Mechanics*, 17(1): 284-296,
3. Kafle, J., Bayalkoti, P., &Phaijoo, G. R. (2023). "Mathematical study of effect of Temperature on Transmission Dynamics of Dengue Disease. *Journal of Nepal Mathematical Society*, 6(1): 34-47.
4. 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.
5. 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.
6. Gautam, P.N., Pokharel, C., Phaijoo, G.R., Kattel P, Kafle J (2023) "Effect of increasing stenosis over time on hemodynamics, *BIOMATH*, 12
7. Pokharel, C., Gautam, P.N., Bhatta, C.R., Kafle, J.(2024) "Analysis of blood flow through stenosed artery with Einstein viscosity, *Journal of Tianjin University Science and Technology*, 57:36-52

Nabaraj Adhikari

1. Recently completed a PhD in Mathematics from the Department of Mathematics and Statistics, Faculty of Science, Thammasat University, Thailand.

Publications:

1. Adhikari, N., & Sintunavarat, W. (2024). Exploring the Julia and Mandelbrot sets of $zp + \log t$ using a four-step iteration scheme extended with s-convexity, *Mathematics and Computers in Simulation*, 220: 357-381
2. Adhikari, N., &Sintunavarat, W. (2024). The Julia and Mandelbrot sets for the complex-valued function $z^p - qz^2 + rz + \text{sinc} w$ exhibit Mann and Picard-Mann orbits along with s-convexity, *Chaos, Solitons & Fractals*, 181: 1-20.

Santosh Gnawali

Presentation in /Seminars/Workshops

1. "Massively Parallel Methods in Algebraic Geometry" at MIC meeting RPTU, Germany on 01/10/2024)
2. "Massively Parallel Methods for Free Resolutions" at ICMS, Durham on July 2024.Conferences/Workshop Attended
3. Summer School on "Tropical Linear Space", Tuebingen, Germany on September 09 -13, 2024.
4. ICMS Durham, UK on July 21- 25, 2024.
5. Singularities and Algorithms, Kaiserslautern on 09-10/10/2023.
6. Third Annual Meeting 2023 of SFB-TRR 195,Saarbrücken on 25-28.09.2023.

Publications

1. Gnawali, S. (2024). Massively Parallel Methods for Free Resolutions in Buzzard, K., Dickenstein, A.,

Eick, B., Leykin, A., Ren, Y. (eds) Mathematical Software – ICMS 2024. ICMS 2024. Lecture Notes in Computer Science, vol 14749. Springer, Cham.

Sabina Shrestha

CDM Account Officer Mrs.Sabina Srestha has received

1. An Award Letter on the occasion of 65th anniversary of Central Department of Mathematics
2. A letter of Appreciation for maintaining zero beruju in the Campus/ Department on the 63rd anniversary of Tribhuvan University

Sangita Adhikari

CDM office assistant Mrs. Sangita Office has received a letter of appreciation from CDM on the occasion of the 64th anniversary of Central Department of Mathematics for her dedication and hard work in her professional work.

Pabitra Bhusal

Ms. Pabitra Bhusal has participated in three days Admin Level Training of “Integrated Website” from 3rd September 2023 to 5th September 2023 organized by TU Information Technology Innovation Center, Kirtipur, Kathmandu.

Bir Man Mali

1. Mr. Bir Man Mali has participated in three days Admin Level Training of “Integrated Website” from 3rd September 2023 to 5th September 2023 organized by TU Information Technology Innovation Center, Kirtipur, Kathmandu.
2. Mr. Bir Man Mali has completed the training on “Data Analysis, Journal Search, Preparing Interactive Presentations and Brochures from May 5-10, 2024 AD organized by Central Department of Library and Information Science, Tribhuvan University, with support of UGC, Nepal.

Students at CDM

A.First Year /First Semester (Batch- 2080)

3. Bhuwan Devkota
4. Santosh Khanal
5. Dinesh Raj Awasthi
6. Anjana Upadhya
7. Kamal Chaudhary
8. Ram Prasad Kurmi Chaudhary
9. Rajesh Joshi
10. Khadga Bahadur Poudel
11. Bimla Chettri
12. Rishan Sharma
13. SangitaThapa
14. Shree Krishana Poudel
15. Indira Thapa
16. Anjali Chaudhary
17. Prabas Parajuli
18. Hari Sharan Giri
19. Roshan Koirala

B.Second Year/Third Semester (Batch- 2079)

1. Dhakaram Regmi
2. Dinesh Kumar Yadav
3. Karuna Rajbanshi
4. Roshan Sharma
5. Sandesh B.K
6. Bhuwan Bahadur Khadka
7. Aditya Adhikari
8. Upendra Kumar Sahani
9. Karan Upadhyay
10. Dipendra Kumar Rana
11. Jitendra Khanal
12. Bishal Bikram Kunwar
13. Shobhit Sharma
14. Rajeena Parajuli
15. Niraj Sah
16. Santosh Lamichhane
17. Biddha Pokhrel
18. Debendra Saud
19. Naveen Poudel
20. Mamata Chaudhary Tharu
21. Bikas Tamang
22. Ganga Ram Joshi
23. Mahesh Nepali
24. Rajan Bhattarai
25. Dharmendra Chaudhary Tharu
26. Laxman Bahadur Saud
27. Tara Prasad Bhattarai
28. Saraswota Bhandari
29. Prashant Chand
30. Santa Kumar Chaudhary
31. Sandip G.C
32. Sarita Khadka
33. Naresh Kumar Rajbanshi
34. Dilip Thapa
35. Sujan Lal Shrestha
36. Gopal Devkota
37. Sujan Prasad Acharya
38. Nabin Kumar K.C.
39. Ranjeet Thakur
40. Bhavish Chaudhary
41. Rishi Parajuli

C. Master of Philosophy (M.Phil.- Batch 2080)

1. Diwas Panta
2. Prabin Gyawali
3. ShantaTamang
4. Sunil Duwadi
5. Raj Kumar Khatri
6. Prajjwal Thokar
7. Bikram Paudel
8. Narayan Pandey

D.PhD scholars

Currently, 29 PhD scholars are conducting their research as follows:

1. Jagat Krishna Pokhrel ; Supervisor: Prof. Narayan Prasad Pahari
2. Badri Prasad Pangeni;Supervisor: Prof. Tanka

- Nath Dhamala
3. Mohan Chandra Adhikari; Supervisor: Prof. Tanka Nath Dhamala
 4. Bekha Ratna Dangol ,Supervisor: Dr. Jeevan Kafle; Co-supervisor: Dr. Parameshwari Kattel
 5. Chet Nath Tiwari; Supervisor: Dr. Parameswari Kattel; Co-supervisor: Dr. Jeevan Kafle
 6. Tek Bahadur Budhathoki; Supervisor: Dr. Pushkar Raj Pokhrel.
 7. Chudamani Pokharel; Supervisor: Prof. Chet Raj Bhatta; Co-supervisor: Dr. Jeevan Kafle
 8. Bishwa Adhikari; Supervisor: Prof. Tanka Nath Dhamala
 9. Dipak Babu Amgain; Supervisor: Prof. Tanka Nath Dhamala; Co-supervisor: Dr. Urmila Pyakurel
 10. Sachin Wagle; Supervisor: Prof. Tanka Nath Dhamala
 11. Pushpa Nidhi Gautam; Supervisor: Dr. Jeevan Kafle; Co-supervisor: Dr. Ganga Ram Phaijoo
 12. Jaydev Nath; Supervisor: Prof. Chet Raj Bhatta; Co-supervisor: Dr. Ishwari Jang Kunwar
 13. Bal Bahadur Tamang; Supervisor: Dr. Ajay Singh
 14. Shankar Pariyar; Supervisor: Dr. Jeevan Kafle; Co-supervisor: Dr. Bishnu Lamichhane
 15. Dilip Kumar Shah; Supervisor: Dr. Ajay Kumar Chaudhary; Co-supervisor: Prof. Dr. Chet Raj Bhatta
 16. Uday Kumar Karna; Supervisor: Prof. Dr. Chet Raj Bhatta; Co-supervisor: Dr. Ajay Kumar Chaudhary
 17. Ganga Ram D.C.: Supervisor: Prof. Dr. Jivandhar Jnawali; Co-supervisors: Prof. Dr. Kedar Nath Uprety; Prof. Dr. Naveen Vaidya
 18. Prajwal Bir Kansakar; Supervisor: Dr. Bishnu Hari Subedi; Co-supervisor: Prof. Dr. Ajay Singh
 19. Dal Bahadur Saud; Supervisor: Dr. Bishnu Hari Subedi; Co-supervisor: Prof. Dr. Ajay Singh
 20. Giri Raj Paneru; Supervisor: Dr. Hari Nandan Nath; Co-supervisor: Prof. Dr. Tanka Nath Dhamala
 21. Eeshwar Prasad Poudel; Supervisor: Dr. Shree Ram Khadaka; Co-supervisor: Dr. Jeevan Kafle
 22. Ananta Upreti; Supervisor: Prof. Dr. Jivandhar Jnawali; Co-supervisors: Prof. Dr. Kedar Nath Uprety; Prof. Dr. Naveen Vaidya
 23. Anup Tuladhar; Supervisor: Prof. Dr. Jivandhar Jnawali; Co-supervisors: Prof. Dr. Kedar Nath Uprety; Prof. Dr. Naveen Vaidya
 24. Resham Prasad Poudel; Supervisor: Prof. Dr. Narayan Prasad Pahari Co-supervisor: Prof. Dr. Arjun Kumar Rathi;
 25. Ganesh Bahadur Basnet; Supervisor: Prof. Dr. Narayan Prasad Pahari; Co-supervisor: Prof. Dr. Arjun Kumar Rathi

Upcoming Workshop by MPhil Students

MPhil batches 2079/080 and 2080/081, Central Department of Mathematics, Tribhuvan University has organized two days program on “Seminar Cum Workshop on Mathematics and its Applications” 3rd & 4th Ashoj, 2081. Master thesis students, MPhil and PhD Scholar were participated and presented their outcomes.



Upcoming Events ICMA-2024 @ Kathmandu

Central Department of Mathematics at Tribhuvan University, Nepal Mathematical Society (NMS), and the Department of Mathematics at Kathmandu University are jointly organizing the Second International Conference on Mathematics and Applications (ICMA-2024), in Kathmandu, Nepal, on December 13-15, 2024. Nepal Sanskrit University (NSU), Nepal, South Asian University (SAU), India, and East China University of Technology, China are conference collaborators. The conference provides a forum for a diverse group of scientists in applications of mathematics to natural and health sciences, engineering, and finance. Specific areas include but are not limited to, differential equations, mathematical biology, computational mathematics, statistics and big data, analysis, topology, geometry, algebra, number theory, mathematics education, optimization, operations research, quantitative finance, biomedical science, biophysics, and public health. The conference aims to bring together research scholars from a variety of disciplines around the globe that have ample application in mathematics.

Link of the conference: <https://icma2024.nms.org.np/>

