National Conference on Mathematics and Its Applications







Organized by



Nepal Mathematical Society (NMS)

in collaboration with

Central Department of Mathematics, TU; Kathmandu University (KU)

Nepal Sanskrit University (NSU); Lumbini Buddhist University (LBU)









Poush 28 - Magh 1, 2075 (January 12-15, 2019)

Venue: Butwal Multiple Campus, Butwal

Introduction

Mathematics plays an elementary role in society and it has tremendous applications in varieties disciplines, from natural to social sciences, and science and technology. The conference provides a platform to a various group of scientists not only in pure mathematics but also in its applications to natural and health sciences, engineering, management and finance. The conference intends to bring together researchers from pure and applied mathematics and from a variety of many other disciplines, where mathematics find its numerous applications. The primary objective of the conference is to offer mathematicians, researchers and students around the globe in one platform to interact with each other, to share their knowledge and experiences as well as to exchange their innovative ideas views and discuss the topics of mutual interests in this challenging and widely applied area of mathematical sciences. The conference also offers the participants an opportunity to be familiar with the contemporary developments in the subject and acquaint the young participants with the research and other mathematical activities.

Butwal (Nepali: বুবেল) is a big city in southern Nepal in Rupandehi District, which is the capital of Province-5 located at the longitude 83° 27' E and the latitude 27° 42' N. Geographically, Butwal is at the intersection of Nepal's two different National Highways, namely, Mahendra Highway and Siddhartha Highway. It connects Western Nepal with the capital Kathmandu through highway and air links (via airport at Siddharthanagar). It is one of the fastest growing cities in Nepal for education, infrastructure, highway, marketing, health and safety, communication, trade and banking sectors. Butwal can be the gateway to Pokhara and Chitwan, the two other main touristic places in Nepal. Butwal is also a connecting city between nearby tourist towns of Tansen, Kapilvastu, and Lumbini. Lumbini, the holy place for Buddhists and Hindus, and is the birthplace of Lord Buddha, the founder of Buddhism and the preacher of peace to the world, is about 40 km south of Butwal. Likewise, Devdaha, the place famous as the home of the maternal family of the Buddha, with ruins of ancient Buddha era palaces and artefacts, is 15 km to the east of the city. Similarly, Tansen, a very beautiful Newar hill station city is only about 30 km to the north. Taulihawa, the ancient kingdom of Buddha's dynasty, with its Buddha era palace ruins, is 50 km west of Butwal. The nearby temple Siddhababa, similarly and ostrich farm house are the famous touristic and attractive places.





Nepal Mathematical Society (NMS) [www.nms.org.np], a non-profit organization was established in 1979 in Nepal with the purpose to create a network of mathematicians throughout Nepal and abroad, for promoting mathematical research and education. NMS also promotes the professional ethics, creates opportunities for mathematicians, and advocates for their welfare. NMS has affiliations with various national and international networks such as AMS, IMU, SEAMS, Silkroad Mathematics Center, Beijing, China, and has recently become a member society of The Mathematics Consortium (TIMC), India. NMS has been conducting national and international conferences. From last year, it has its own peer reviewed journal, the Journal of Nepal Mathematical Society (JNMS).

Central Department of Mathematics (CDM), TU [www.cdmathtu.edu.np], the oldest department in the history of science education at Tribhuvan University (TU) in Nepal, established on September 20, 1959. CDM mainly conducts graduate (MSc) and post-graduate (MPhil and PhD) programs and engaged itself into academics and research activities.

Kathmandu University (KU) [www.ku.edu.np], established by an Act of Parliament on December 1991, is an autonomous, not-for-profit, non-government institution dedicated to maintain high standards of academic excellence. At present, KU offers various undergraduate, graduate and postgraduate programs in science, engineering, medicine, management, education, arts, pharmacy, environment, music, human & natural resources, law, information technology and biotechnology, through School of Science, School of Management, School of Engineering, School of Medical Sciences, School of Education, School of Arts and School of Law. KU has well-strength mathematics faculties almost all with PhD's, and the faculties are dedicated on various research activities. MPhil and PhD in Mathematics at KU are well-established programs. With the objective for Computational knowledge in Mathematics, which is now globally getting popularity, Department of Natural Sciences under the School of Science has launched Computational Mathematics Program in 2017.

Nepal Sanskrit University (NSU) [www.nsu.edu.np] aims at producing qualified scholars to safeguard national culture and produce competent man power in Ayurveda, Jyotisha, Yogic Sciences, and naturopathy along with Sanskrit Scholars to meet the national and international needs. Research Center a separate wing, is to carry research works, which runs PhD programs along with mini researches in various disciplines of Sanskrit related subjects including mathematical sciences and vedic mathematics. NSU runs various classes from Shastri level to Acharya level of Sanskrit literature with some modern subjects including mathematics and statistics. There are some subjects like Siddhanta Jyotisham which is full of geometry and mathematics.

Scope

The participants of NCMA-2019 will get an opportunity to be familiar with basic concepts and developments of classical as well as modern mathematics through conference papers and workshop. They can get a platform to interact with each other, share knowledge, exchange views and discuss the topics of these thrust areas of mathematics.

This conference aims at

- 1) training a group of young scientists/ faculties in the above mentioned areas.
- 2) acquainting the participants in the recent developments in these areas.
- 3) bringing several experts together to interact.
- 4) promoting research interest and teaching pedagogy, especially for the local participants.

Program and Schedule

Program: Day-1	Poush 28, 2075 (January 12, 2019) [Saturday]				
11.30 am - 01.00 am	Workshop-1				
01:00 am - 01:30 pm	Tea Break				
01:30 pm - 03:00 pm	Workshop-2				
03:00 pm - 03:30 pm	Tea Break				
03:30 pm onward	Conference Registration				
05:00 pm - 06:30 pm	Press Meet and Interaction in Local Issue of Mathematics				
Program: Day-2	Poush 29, 2075 (January 13, 2019) [Sunday]				
06:30 am - 08:00 am	Visit to Siddhababa Temple				
08:00 am - 09:00 am	Breakfast				
09:00 am - 10:40 am	Inaugural Session				
10:40 am - 11:00 pm	Group Photo Session				
11:00 pm - 12:00 pm	Lunch				
12:00 am - 02:30 pm	Scientific Session-1 Scientific Session-2				
02:30 am - 02:45 pm	Tea Break				
02:45 pm - 05:00 pm	Scientific Session-3 Scientific Session-4				
Program: Day-3	Poush 30, 2075 (January 14, 2019) [Monday]				
07:00 am - 08.00 am	Breakfast Poster Session				
08:00 am - 09:35 am	Scientific Session-5 Scientific Session-6				
09 : 35am - 09:50 am	Tea Break Poster Session				
09:60 am - 11:35 pm	Scientific Session-7 Scientific Session-8				
11:35 pm - 12:30 pm	Lunch Poster Session				
12:30 pm - 05:00 pm	Excursion to Lumbini and Ostrich Farm House				
05:30 pm - 08:00 pm	Conference Dinner				
Program: Day-4	Magha 1, 2075 (January 15, 2019) [Tuesday]				
07:00 am - 08:00 am	Breakfast				
08:00 am - 09:35 am	Scientific Session-9				
09:35 am - 09:50 am	Tea Break				
09:50 am - 11:35 pm	Scientific Session-10				
11:35 pm -12:35 pm	Closing Ceremony				
12:35 pm - 01:35 pm	Lunch				

Call for Papers and Abstracts

The conference will try to cover all important aspects of the mathematical sciences and their applications. Papers related to research, expository articles to introduce recent mathematical advancements, and applications of mathematics are invited. Specific areas include analysis, topology, mathematics education, statistics, big data, optimization, operations research, quantitative finance, mathematical biology, biomedical science, biophysics, geophysics and public health. Interested participants are invited to submit their abstracts (**not exceeding 250 words**) to the **Member Secretary** of the scientific committee:

Dr. Dinesh Panthi (email: panthid06@gmail.com; +977-9841288132).

Participants can choose the oral or poster presentation. However, the scientific committee may decide the category once the abstract is accepted. The time for oral presentation and the size of the posters are informed later via e-mails. The invited speakers are some leading experts in their respective fields.

Presented papers can be submitted in conference proceeding of NCMA-2019 to **Member Secretary of** Scientific Committee:

Dr. Dinesh Panthi (email: panthid06@gmail.com **Ph:** 00977-9841288132)

Accommodation

The registered delegates who needs accommodation, has to inform us during registration. One can also request to Mr. Jagdish Gnawali (jggnawali@gmail.com; +977-9851085489, NMS EC Representative) or Mr. Gopal Prasad Acharya (email: acharyagopal28@gmail.com; +977-9857033496, coordinator of Management Subcommittee of the local organizing committee) for the management of the accommodation. The accommodation is managed in Hotel Avenue in Butwal. The Hotel Avenue is one of the biggest and three star Hotel in Butwal.

For details, one can visit hotel webpage: http://hotelavenue.com.np







Registration Fees

The registration fee covers lunch, snacks, conference kits, Breakfast, a conference dinner, and accommodation only (but does not include transportation and any other local costs).

Participant	Until Poush 13, 2075 (December 28, 2018)			Until Poush 22, 2075 (January 6, 2019)			
	Faculty	student*	Organizational	Faculty	student*		
			Sponsorship				
Nepali	NRs 4000.00	NRs 3000.00	NRs 5000.00	NRs 5000.00	NRs 4000.00		
SAARC Countries	US \$ 60.00	US \$ 50.00	US \$ 70.00	US \$ 60.00	US \$ 50.00		
Foreign, other	US \$ 200.00	US \$ 150.00	US \$ 300.	US \$ 250.00	US \$ 200.00		
than SAARC							
*	*Scanned copy of valid student ID must be shown along with the registration form.						
	For each accompanying person, the cost is NRs 2000.00 (or US \$ 30)						

Mode of Payment

Payment is to be made by the participant through **bank draft**:

Bank: Nepal Bank Limited, Kirtipur Branch, Kathmandu

Account Holder: Nepal Mathematical Society

Current Account Number: 04500100098942000001.

Swift Code: NEBLNPKA

For further query, please contact the

NMS Treasurer, Mr. Ajay Kumar Chaudhary (**email:** <u>akcsaurya81@gmail.com</u>; +977-9851072304).

Important Dates

Deadline to submit abstract: Poush 8, 2075 (December 23, 2018) [Sunday]

Notification of abstract status: Poush 10, 2075 (December 25, 2018)

Registration open: Ashwin 14, 2075 (September 30, 2018)

Registration deadline: Poush 13, 2075 (December 28, 2018) (Early)

Poush 22, 2075 (January 6, 2019) (Late)

Sponsorship

The sponsorship is solicited from

- University Grants Commission (UGC), Nepal
- Nepal Academy of Science and Technology (NAST)
- Mathematical Sciences Trust, Nepal
- Sukunda Pustak Bhavan (Publishers & Distributors)

Organizing Committee

Chair:

Prof. Dr. Chet Raj Bhatta, President, NMS; Central Department of Mathematics, Tribhuwan University (**email:** chetbhatta0@gmail.com; **phone:** 9851133363 \ 01-4333036)

Members:

Dr. Raju Ram Thapa

Dr. Khageswor Mandal

Dr. Jivandhar Jnawali

Dr. Sushil Karna

Dr. Prem Sagar Bhandari

Dr. Manoj Raut

Mr. Parameshwari Kattel

Mr. Ajay Kumar Chaudhary

Mr. Man Bahadur Bhujel

Mr. Ramesh Gautam

Ms. Ritu Basnet Thapa

Dr. Sarswati Acharya

Mr. Parishwar Acharya

Mr. Binod Pant

Mr. Uday Kumar Karn

Mr. Ganga D C

Mr. Hari Prapanna Kandel

Mr. Jagdish Gnawali

Mr. Khagendra Adhikari

Member Secretary: Mr. Jeevan Kafle, Joint Secretary, NMS; Central Department of Mathematics, Tribhuwan University (email: kafle jeevan@cdmathtu.edu.np; phone: 9851114577)

Scientific Committee

Chair: Prof. Dr. Dil Bahadur Gurung, Vice President, NMS; School of Science KU (email: db_gurung@ku.edu.np; phone: 9841247825)

Members: Prof. Dr. Binod Dhakal

Prof. Dr. Shiva P Pudasaini Prof. Dr. Ram Parsad Ghimire Prof. Dr. Bal Chadra Luitel Prof. Dr. Chinta Mani Pokhrel

Dr. Ajaya Singh

Dr. Shree Ram Khadka Dr. Durga Jung KC

Dr. Gyan Bahadur Thapa

Dr. Santosh Ghimire

Dr. Samir Shrestha Dr. Gokul KC

Member Secretary: Dr. Dinesh Panthi, Secretary, NMS; Valmeeki Campus, NSU

(email: panthid06@gmail.com_Ph: 00977-9841288132)

Technical Committee

Coordinator: Dr. K. B. Manandhar **Members:** Mr. Niraj Sharma

Dr. Ganga Ram Phaijoo Mr. Ram Chandra Dhungana

Mr. Chet Nath Tiwari Mr. Nabaraj Adhikari Mr. Hem Raj Panday Mr. Prem Gurung Ms. Sharmila Shrestha Mr. Hari Parsad Gnawali

Mr. Parmeshor Rijal Mr. Chhabi Dhungana Mr. Ganesh Sapkota

Mr. Harish Chandra Bhandari Mr. Santi Ram Adhikari

Advisory Committee

Prof. Dr. Bhadra Man Tuladhar

Prof. Dr. Bishnu Prasad Dhugana

Prof. Dr. Choodamani Joshi

Prof. Dr. Dal Bahadur Adhikari

Prof. Daya Ram Poudel

Prof. Dr. Dharanidhar Regmi

Prof. Dr. Gajendra Bahadhur Thapa

Prof. Dr. Hira Bahadur Maharjan

Prof. Dr. Hom Nath Bhattarai

Prof. Dr. Kanhaiya Jha

Prof. Dr. Kedar Nath Uprety

Prof..Dr. Keshar Singh Rana

Prof. Kumbha Bahadur Chand

Prof. Dr. Narayan Prasad Pahari

Prof. Parkash Rantna Shakya

Prof. Dr. Puspa Raj Adhikary

Prof. Dr. Prakash Muni Bajracharya

Prof. Dr. Raj Narayan Yadav

Prof. Dr. Ram Man Shrestha

Prof. Dr. Ramji Pandit

Prof. Dr. Santosh Man Maskey

Prof. Dr. Sailendra Kumar Mishra

Prof. Dr. Shankar Raj Panta

Prof. Dr. Shanti Bajracharya

Prof. Dr. Siddhi Koirala

Prof. Dr. Tanka Nath Dhamala

Prof. Dr. Vinod Parajuli

Prof. Yadav Prasad Koirala

Local Organizing Committee

Coordinator: Mr. Amrendra Kumar Singh, Associate Professor, Butwal Multiple Campus

(**email:** amarkari864@gmail.com; **phone:** 9847293695)

Members: Mr. Lil Bahadur K. C

Mr. Gopal Prasad Acharya, [Coordinator, Management Subcommittee]

(email: acharyagopal28@gmail.com; phone: 9857033496)

Mr. Pitambar Tiwari [Coordinator, Financial Subcommittee]

(email: pitambertiwari40@gmail.com; phone: 9847036501)

Mr. Shesraj Kumar Sharma [Member Secretary]

(email: shesrajbhattarai@gmail.com; phone: 9847049325)

Mr. Tulsi Prasad Sapkota [Coordinator, Promotional Activities and Media Subcommittee]

(email: tpsapkota2025@gmail.com; phone: 9857033341)

Mr. Thaneswor Bhandar

Mrs. Samjhana Koirala

Mr. Nabaraj Tiwari

Mr. Krishna Prasad Timalsina

Mr. Deviram Paudel

Mr. Basanta Basnet

Mr. Milan Manandhar

Local Advisory Committee

Prof. Dr. Bhrigu Nath Singh

Prof. Dr. Sachchidananda Pathak

Asst. Prof. Dhirendra Lal Das

Asst. Prof. Mukhi Lal Chaudhari

Asst. Prof. Chhedi Prasad Yadav

Asst. Prof. Sunil Kumar Yadav

Asst. Prof. Bishu Prasad Upadhayaya

Asst. Prof. Anil Kumar Jha

Asst. Prof. Bishnu Prasad Gyanwali

Asst. Prof. Ati Ullah Khan