

NATIONAL SYMPOSIUM 2026
From Fundamentals to Frontiers
Relevance of Basic Sciences in the Age of Emerging Technologies
F2F 2026

20-21 November 2026 | Dolphin (PG) Institute of Biomedical & Natural Sciences, Dehradun

Organised by the School of Physical and Chemical Sciences

Background of the Symposium

Scientific progress begins with a deeper understanding of the principles that govern nature. From the behaviour of matter and energy to the patterns described through mathematical models, fundamental inquiry provides the knowledge on which new technologies are built. Semiconductors, lasers, advanced materials, quantum technologies, cleaner energy systems and artificial intelligence all reflect the enduring influence of basic science.

The ideas and methods of Physics, Chemistry and Mathematics are closely connected in this progress. Physics explains the principles behind materials and energy; Chemistry applies knowledge of matter and molecular interactions to areas such as medicines, new materials and sustainable processes; and Mathematics enables modelling, computation, data analysis and algorithm development. Together, these disciplines help researchers investigate complex questions and develop practical solutions.

The National Symposium on **“From Fundamentals to Frontiers: Relevance of Basic Sciences in the Age of Emerging Technologies” (F2F 2026)** will bring together faculty members, researchers and students to examine how these disciplines contribute to frontier research and emerging technologies. Through plenary talks, oral presentations, poster flash talks and interdisciplinary discussion, the symposium will support the exchange of ideas and provide young researchers with opportunities to present their work and engage with experts.

About the Institute

Dolphin (PG) Institute of Biomedical & Natural Sciences (DIBNS) is situated in the foothills of the Himalayas in Dehradun, Uttarakhand, India. Since its establishment in 2002, DIBNS, has grown into a multidisciplinary institution dedicated to teaching, research, innovation and skill development. Its academic programmes span the basic, biomedical, life, agricultural and allied sciences, bringing students into an environment that values scientific inquiry and learning beyond the classroom. The Institute has continued to renew its academic framework in response to the changing needs of higher education. In 2024, DIBNS received autonomous status from the University Grants Commission (UGC), subsequently notified by its parent university, Hemvati Nandan Bahuguna Garhwal University (HNBGU). It has also fully implemented the National Education Policy 2020 and holds an A+ Grade accreditation from NAAC in its second cycle. These milestones support the Institute's efforts to provide relevant academic and vocational opportunities for its students. The DIBNS seeks to nurture an intellectually active community in which students and scholars can pursue knowledge, develop practical skills and contribute to research and society

Theme of the Symposium

Strengthening Fundamental Sciences for an Emerging Technology-Driven Future

The symposium will examine how the principles and discoveries of Physics, Chemistry and Mathematics provide the foundations for emerging technologies. It will encourage dialogue across these disciplines and create opportunities for researchers, faculty members and students to share ideas, present their work and explore new areas of collaboration.

Objectives

- Highlight the continuing role of Physics, Chemistry and Mathematics in the development of emerging technologies.
- Provide a platform for teachers, faculty members and research scholars to exchange ideas and research findings.
- Encourage interdisciplinary interaction among the major branches of basic sciences.
- Inspire young researchers to pursue fundamental and frontier research.
- Strengthen scientific inquiry, innovation and research culture in academic institutions.
- Support networking and future academic and research collaborations among participating institutions.

Thematic Areas

Theme I - Physics at the Frontiers: Quantum Science, Materials and Energy

Quantum and photonic technologies; condensed matter and advanced materials; energy and sustainability; computational physics; astronomy, space science and instrumentation.

Theme II - Chemistry for Sustainable Materials, Health and Clean Energy

Green and sustainable chemistry; catalysis; functional and nanomaterials; chemical sensors; molecular science; energy, environment and health applications.

Theme III - Mathematics for Modelling, Data and Emerging Technologies

Mathematical modelling; statistics and data science; computational mathematics; optimisation; AI foundations; mathematical methods in physical and chemical sciences.

Theme IV - Human-Technology Interaction through Fundamental Sciences

This theme examines how discoveries in Physics, Chemistry and Mathematics shape technology and influence learning, decision-making and everyday life

Who Can Apply?

The symposium welcomes:

- Young faculty members from UG & PG colleges
- Research scholars working in Physics, Chemistry, Mathematics and interdisciplinary sciences,
- Final-year postgraduate students in these disciplines

Steps for Registration

1. Complete the with all required details by 10 November 2026.
2. The Organising Committee will screen the applications and notify selected candidates.
3. Only candidates who receive confirmation should pay the registration fee, by 15 November 2026:
 - Academicians / Faculty: Rs. 1,000
 - Students: Rs. 500

Late applications will not be considered, and payment should be made only after receiving confirmation from the Organising Committee.

The fee includes the symposium kit, meals and tea refreshments. Outstation participants should make their own travel and accommodation arrangements in Dehradun.

Call for Abstracts

Original research, review studies and conceptually strong academic contributions related to the symposium themes are invited from eligible participants. Submissions may address Physics, Chemistry, Mathematics or interdisciplinary aspects of fundamental sciences and emerging technologies. Authors may indicate their preference for an oral or poster presentation. All abstracts will be screened by the Organising Committee.

Abstract Format

Please include the following information:

- **Title** of the research work
- **Author name(s)** and institutional affiliation(s)
- **Corresponding author's email address**
- **Abstract:** 250–300 words
- **Keywords:** 3–5

The abstract should briefly describe the background, objective, methodology or approach, key findings or expected scientific contribution, and conclusion. The presenting author should indicate a preference for an **Oral Presentation** or **Poster Presentation**. Selected abstracts will be published in the symposium abstract booklet.

Organising Team

Patrons

CA Arvind Gupta, Chairman, DIBNS

Prof. Shailja Pant, Principal, DIBNS

Chair, Local Organising Committee

Prof. Versha Parcha

Organising Secretary

Dr. Aasheesh Raturi

Local Organising Committee Members

Dr. Aasheesh Raturi

Dr. Abhilasha

Dr. Raju Chandra

Dr. Deepak Kumar

Dr. Jagdish Purohit

Dr. Nitesh Kumar, UPES, Dehradun

Proposed Scientific Programme
F2F 2026 | National Symposium

From Fundamentals to Frontiers: Relevance of Basic Sciences in the Age of Emerging Technologies

20–21 November 2026 | Dolphin (PG) Institute of Biomedical & Natural Sciences, Dehradun

Presentation format: Plenary talk in each thematic area; 5 oral presentations × 10 minutes; 7 poster flash talks × 5 minutes.

Day 1 — Saturday, 21 November 2026

Thematic Area I: Physics at the Frontiers

Thematic Area II: Chemistry for Sustainable Materials, Health and Clean Energy

TIME	PROGRAMME
10:00–10:15 AM	Registration and welcome
10:15–10:45 AM	Inaugural Session: Welcome address; symposium introduction; addresses by the Head of Department and Principal/Director; guest-of-honour address; inaugural address; presidential remarks
10:45–11:00 AM	High tea
11:00–11:40 AM	Plenary Talk — Thematic Area I: Physics
11:40 AM–12:30 PM	Oral Presentations — Thematic Area I: Physics (5 presentations × 10 minutes)
12:30–1:15 PM	Lunch Break
1:15–1:55 PM	Plenary Talk — Thematic Area II: Chemistry
1:55–2:45 PM	Oral Presentations — Thematic Area II: Chemistry (5 presentations × 10 minutes)
2:45–3:00 PM	Tea Break
3:00–3:35 PM	Poster Flash Talks — Thematic Area I: Physics (7 flash talks × 5 minutes)
3:35–4:10 PM	Poster Flash Talks — Thematic Area II: Chemistry (7 flash talks × 5 minutes)
4:10–4:30 PM	Day 1 summary and announcements

Session team for each thematic area: Chair, Coordinator and Rapporteur — To be announced.

Day 2 — Sunday, 22 November 2026

Thematic Area III: Mathematics for Modelling, Data and Emerging Technologies

Thematic Area IV: Human–Technology Interaction through Fundamental Sciences

TIME	PROGRAMME
10:00–10:15 AM	Welcome and overview of the day
10:15–11:00 AM	Plenary Talk — Thematic Area III: Mathematics
11:00–11:15 AM	Morning tea
11:15 AM–12:05 PM	Oral Presentations — Thematic Area III: Mathematics (5 presentations × 10 minutes)
12:05–12:45 PM	Plenary Talk — Thematic Area IV: Human–Technology Interaction
12:45–1:30 PM	Lunch
1:30–2:20 PM	Oral Presentations — Thematic Area IV: Human–Technology Interaction (5 presentations × 10 minutes)
2:20–2:35 PM	Evening tea
2:35–3:10 PM	Poster Flash Talks — Thematic Area III: Mathematics (7 flash talks × 5 minutes)
3:10–3:45 PM	Poster Flash Talks — Thematic Area IV: Human–Technology Interaction (7 flash talks × 5 minutes)
3:45–4:30 PM	Valedictory Session: Rapporteur’s report; symposium highlights; acknowledgements; valedictory address

Session team for each thematic area: Chair, Coordinator and Rapporteur — To be announced.

Note: The number and allocation of presentations are subject to the abstracts selected by the Organizing Committee.