



NEC SPONSORED

INTERNATIONAL SEMINAR

on

Convergence of Nanotechnology, Biotechnology, and Artificial Intelligence (Nano-Bio-AI): Innovations for Environmental Sustainability and Smart Societal Solutions

(HYBRID MODE)

29th & 30th January, 2026

Organized by

Science & Technology Forum (STF)
Jorhat Kendriya Mahavidyalaya, Jorhat

In Collaboration with

IQAC, IIC

Jorhat Kendriya Mahavidyalaya, Jorhat
Department of Biosciences and Bioengineering
Indian Institute of Technology, Guwahati
CSIR-NEIST, Jorhat
ICFRE-RFRI-Jorhat



About Jorhat Kendriya Mahavidyalaya

Jorhat Kendriya Mahavidyalaya, established in 1981, is a premier co-educational institution in North-East India, located in Kenduguri, 3 km east of Jorhat city. The college was founded with the aim of providing higher education to a large rural and economically disadvantaged population. Affiliated with Dibrugarh University, it has evolved into a key educational hub in the region, offering both Arts and Science courses at the undergraduate level.

The College is committed to academic excellence, focusing on research, innovation, and holistic development. With a dedicated faculty and state-of-the-art infrastructure, it offers a dynamic learning environment. The college also provides vocational courses and skill development programs to equip students with relevant skills for the modern world.

Overall, the college's vision is to nurture intellectual and professional growth, shaping students to meet the challenges of today's rapidly evolving society. It continues to serve as a vital resource for higher education in the region, fostering academic achievement and personal development.

Rationale of the Seminar

In the face of global challenges such as climate change, energy crises, and environmental degradation, the convergence of Nanotechnology, Biotechnology, and Artificial Intelligence (AI) offers transformative, interdisciplinary solutions for a sustainable future. Nanotechnology drives innovations like high-efficiency solar cells, advanced energy storage systems, and nanomaterials for water purification, enhancing resource efficiency and minimizing environmental impacts. Biotechnology leverages biological processes to create biofuels, biodegradable materials, and climate-resilient crops, addressing critical challenges in energy, agriculture, and waste management. AI amplifies these advancements through predictive analytics, smart energy systems, and precision agriculture, ensuring optimal resource utilization and cost-effectiveness. The synergy among these fields accelerates nanomaterial discovery, enhances biotechnological delivery, and revolutionizes energy systems and environmental monitoring. Aligned with the United Nations Sustainable Development Goals (SDGs), this seminar aims to unite researchers, educators, industry leaders, and policymakers to drive actionable solutions for sustainable energy and climate resilience.

Invitation letter

We are pleased to inform you that Jorhat Kendriya Mahavidyalaya, in collaboration with IIT, Guwahati, Rain Forest Research Institute (RFRI) & North East Institute of Science and Technology (NEIST), Jorhat will be organizing a two-day International Seminar on the theme "**Convergence of Nanotechnology, Biotechnology, and Artificial Intelligence (Nano-Bio-AI): Innovations for Environmental Sustainability and Smart Societal Solutions**" on 29th and 30th January 2026.

In this regard, the organizing committee cordially invites research papers from scholars, faculty members and students of your esteemed institution. We look forward to your institution's valuable participation in this seminar, which promises to be an enriching platform for sharing knowledge and fostering discussions on cutting-edge technologies for sustainable development and climate solutions.

We eagerly await your contributions and look forward to your participation in making this seminar a success.

With Regards

Dr. Dulen Saikia
Principal & Chair-person

Dr. Rajen Borah
Mr. Rajib Bordoloi
Mrs. Pinaki Hazarika
Organizing Secretary

Dr. Panchali Karmakar
Mrs. Khusboo Agarwal
Joint Convenors

Dr. Shewali Saikia
Mrs. Leena Saikia
Joint Co-ordinators

Mrs. Arpona Saikia
Mr. Bonjit Bondon Buragohain
Assistant Joint Co-ordinators

SUB-THEMES FOR THE SEMINAR

A. Nanotechnology and Biotechnology for Sustainability

- Nanotechnology for Sustainable Energy, Environment, and Agriculture
- Mathematical and Computational Approaches in Nanotechnology
- Role of Nanotechnology in Environmental Protection
- Biotechnology for a Sustainable Future
- Biotechnology in Maternal, Infant, and Public Health
- Healthcare Innovations and Indigenous Bio-formulations
- Biotechnology in Pollution Control and Sustainable Agriculture
- Development of sustainable materials

B. Environmental Challenges and Pollution Mitigation

- Heavy Metal Contamination in Aquatic Systems: Risks and Remediation
- Pollution Control in Aquaculture: Traditional vs. Modern Approaches
- Natural Pesticides and Eco-Friendly Alternatives
- Chemical Pollutants and Food Safety in Fisheries
- Micro plastic Pollution and Health Impacts
- Sustainable Fisheries Management in Polluted Waters

C. Climate Resilience, Energy, and Sustainability

- Integrative and Mathematical Models for Climate Resilience
- Climate Change and Extreme Weather: Prediction and Mitigation
- Renewable Energy and Agri-Photovoltaics
- Carbon Capture, Storage, and Clean Energy Technologies

D. Artificial Intelligence and Smart Technologies

- AI in Environmental Monitoring and Sustainability
- AI for Smart Farming, Fisheries, and Pollution Control
- Photonics, AI, and Algorithmic Tools for Climate Solutions
- AI and Smart Technologies in Mathematics
- Data-Driven Smart Decision Making for Resource Management

E. Indigenous Knowledge and Traditional Practices

- Indigenous Technical Knowledge (ITK) in Pest and Disease Management
- Bio-Formulations Using Entomopathogenic Nematodes
- Reviving Traditional Agricultural Systems through Science

F. Policy, Community, and Interdisciplinary Perspectives

- Environmental Policy, Law, and Governance for Sustainability
- Citizen Science in Environmental Research and Action
- Environmental Science Trends in Northeast India
- Art, Design, and Creative Communication for Climate Awareness

TOPICS FOR POSTER COMPETITION :

1. Environmental Biotechnology for a greener planet.
2. Nano-Bio-Technology: The Future of Medicine.
3. Biotechnology and AI for Sustainable Agriculture.
4. Nanotechnology in Biosensors and Bioimaging.
5. Bioplastics: Bio-based alternatives for a plastic-free world.

Important dates-

- Seminar dates: 29th and 30th January, 2026.
- Registration deadline: 20th January, 2026
- Abstract submission date: 15th January, 2026
- Abstract acceptance date: 20th January, 2026

Resource Persons and Guests for the Seminar



Prof. Jiten Hazarika
Vice-Chancellor,
Dibrugarh University
Dibrugarh, Assam



Prof. Manabendra Dutta Choudhury
Vice Chancellor,
Rabindranath Tagore University
Hojai, Assam



Prof. Ranadhir Chakraborty
Senior Professor,
Department of Biotechnology,
North Bengal University



Dr. Hemanta Doloi
Associate Professor and
Lead Investigator
(Assam Project) Director and
Project Leader (Smart Villages Lab)
Construction Management & Techno
Architecture, Building and Planning
Melbourne School of Design



Dr. Anand Kant Das
Researcher (Scientist)
New York University
Abu Dhabi



Dr. Bharat Baruah
Director of International Programs
College of Science and Mathematics
Professor of Chemistry
Department of Chemistry and
Biochemistry
Kennesaw State University, Georgia.

Prof Vijaya Srinivasu Vallabhapurapu,
Physics Department,
UNISA, South Africa

Prof. Sreedevi Vallabhapurapu
University of South Africa, College of
Science, Engineering and technology,
School of Computing



Dr. Debajeet K Bora
Assistant Professor HDR Green
Mohammed VI Polytechnic
University, BenGuerir Morocco



Dr Biplob Bose
Centre for Nanotechnology
Associate Professor
Biosciences and Bioengineering
Indian Institute of Technology
Guwahati, Assam, India.



Dr. Utpal Bora,
Professor & Head
Department of Biosciences and
Bioengineering
Indian Institute of Technology
Guwahati
Guwahati-781039, Assam. India



Prof. Pranab Kishore Dutta
Department of Electronics and
Communication Engineering
North Eastern Institute of Science
and Technology, Arunachal Pradesh,
India



Prof. Ghanashyam Bez
Department: Chemistry
North-Eastern Hill University
Shillong , Meghalaya, India



Dr. Amrit Puzari
Associate Professor in Chemistry
Department Science and
Humanities
National Institute of Technology,
Nagaland, India



Prof Anupam Saikia
Department of Mathematics
Indian Institute of Technology,
Guwahati



Dr. K. C. Mohite
Dean faculty of Science,
University of Pune



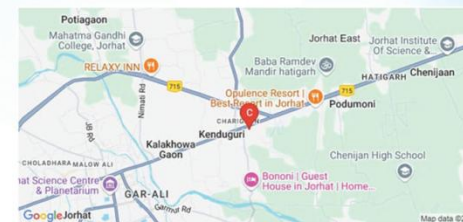
Prof. Rakesh Vaid
Professor of Electronics
Poonch Campus, University of
Jammu.



Dr. K K Mishra
Pro Vice-Chancellor(Quality
Assurance)
Chitkara University, Chandigarh, India

Registration fee:

Industrialist (National) 3000/-
Industrialist (International) USD80
Academician/Scientist (National) 1500/-
Academician/Scientist (International) USD30
Research Scholar (National) 1200/-
Research Scholar (International) USD30
Students (UG/PG) (National) 300/-
Students (UG/PG) (International) USD10



How to reach Jorhat Kendriya Mahavidyalaya...

The College is located at Kenduguri, 3 km. east of Jorhat city centre and is well linked by NH-37 as well as by the Assam Trunk Road.

By road-

Approximately 300 km from Guwahati, the capital of Assam through NH-37 towards East.

By railway-

Nearest railway station is Mariani Junction, approximately 25 km away from Jorhat Kendriya Mahavidyalaya.

By air-

Nearest airport is Rowriah Airport, approximately 15 km from Jorhat Kendriya Mahavidyalaya.

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	Mrs Pinaki Hazarika	+918638771927
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Assistant Co-ordinators	Mrs Arpona Saikia	+916003313108
	Mr. Bonjit Bondon Buragohain	+916000517263

College Website : <https://www.jorhatkendriyamahavidyalaya.in/>

Email address : isba2026@gmail.com

Payment details

Account Name : SCIENCE AND TECHNOLOGY FORUM JKM

Account Number : 95340100011327

IFSC Code : BARB0JORHAT (Fifth character is zero)

BANK OF BARODA, JORHAT BRANCH



Scan QR Code

Registration link:

<https://docs.google.com/forms/d/1b5CFx18hDUVDPJtXqHtx7-P3yswf5o2wRukZWcJ76E/edit>

Abstract submission link:

https://docs.google.com/forms/d/1_i9IH02A6--XJwLgAwM5-G1W1DwDfcYdgcFiP_DO9E/edit

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