INTERNATIONAL CONFERENCE ON ADVANCED BIOMATERIALS FOR TISSUE ENGINEERING AND MEDICAL DEVICES (ICABTEMD 2025)

Date: 28–30 November 2025 (Hybrid mode)

Organised by

Center of Excellence in Tissue Engineering

Department of Biotechnology and Medical Engineering

National Institute of Technology Rourkela, Odisha, India

About the Institute

The National Institute of Technology Rourkela (NIT Rourkela), formerly known as the Regional Engineering College until its renaming on 26th June 2002, is a premier government funded institution dedicated to excellence in Engineering, Science, and Technology. Located in the steel city of Rourkela, Odisha, India, it is one of the 31 National Institutes of Technology in the country and has been recognized as an Institute of National Importance under the National Institutes of Technology Act, 2007. NIT Rourkela holds prestigious rankings, including 19th in the NIRF Rankings 2024 for Indian Engineering Universities, 317th in the QS Asia University Rankings 2025, 167th in the QS World University Sustainable Rankings 2025 (Asia region), and within the 601–800 band in the Times Higher Education World University Rankings (Engineering) for 2024–25. The institute's mission is to become an internationally acclaimed center of learning, serving as a beacon of knowledge and expertise for society while establishing itself as a preferred destination for udergraduate and postgraduate studies.

About the Center

The Center of Excellence in Tissue Engineering (CoE) was established in 2013 under the Ministry of Human Resource Development, now known as the Ministry of Education, Government of India. Located within the Department of Biotechnology and Medical Engineering at NIT Rourkela, the center addresses the multidisciplinary challenges of Tissue Engineering, including Biomaterials, Scaffold Fabrication, Biomechanics, Stem Cell Technology, and Cryopreservation. The center focuses on developing biomaterials, fabricating scaffolds, engineered constructs and tissue grafts for bone, cartilage, skin, and corneal tissue regeneration. Other areas of research of the Center include developing biomaterials from biowaste, surface modification for implant improvement, and development of medical devices. The Center has well equipped laboratories having major facilities like Electrospinning Machine, ESEM, Flow Cytometer, Fluoroscence Microscope, Confocal Microscope and 3D printer.

About the Department

The Department of Biotechnology and Medical Engineering, established in 2007 at NIT Rourkela, serves as a multidisciplinary hub for cutting-edge research and education at the interface of biological systems, engineering, and healthcare innovation. Over the years, the department has built a thriving ecosystem of translational research and technology development, committed to transforming scientific insights into real-world healthcare and environmental solutions. With over 1,600 peer-reviewed publications, more than 100 sponsored projects funded by leading agencies such as DBT, DST, SERB, and ICMR, and five patents filed or granted, the department exemplifies excellence in high-impact research. The department is home to a highly qualified faculty, active research groups, and modern laboratories that support cutting-edge work in both fundamental and translational science. The faculty members have diverse research interests and they conduct both basic and applied research in diverse areas such as Cell & Molecular Engineering, Biomaterials & Tissue Engineering, Bioprocess Engineering, Environmental & Plant Biotechnology, Biomechanics & Biotransport Engineering, and Medical Electronics & Instrumentation.

About the Conference

Tissue and organ failure due to injury or other type of damage, are the most critical health issues. The loss or malfunction of these tissues has profound impacts on health and quality of life. Tissue Engineering is considered as a promising future technique that can offer integrated solutions for tissue and organ failure. There is substantial interest in Tissue Engineering and Regenerative Medicine from both academic and corporate sectors due to their potential to revolutionize healthcare by providing effective treatments for tissue and organ damage. Biomaterials play an essential role in tissue repair by providing structural support and promoting tissue regeneration. Advanced biomaterials can facilitate the regeneration of complex tissues by mimicking the natural extracellular matrix, thereby supporting cell adhesion and proliferation upon which the success of the tissue regeneration depends. Advanced biomaterials impart essential qualities to medical devices, allowing them to effectively treat diseased or injured tissue. In load-bearing applications like artificial hip joints, metal alloys and ceramics are typically used due to their strength in supporting surrounding tissue and their durability in resisting wear from repetitive motion. By addressing various facets of tissue repair, biomaterials are paving the way for more effective and personalized therapeutic approaches in regenerative medicine. After the success of International and National conferences under the Center of Excellence in Tissue Engineering (CoE), NIT Rourkela has planned to organize International Conference on Advanced Biomaterials for Tissue Engineering and Medical device. The conference will provide an excellent platform for students, faculties, engineers, doctors, entrepreneurs, and industry persons with multidisciplinary backgrounds to come together and share their latest advancements in this field. It is hoped that the International Conference on Advanced Biomaterials for Tissue Engineering and Medical Device (ICABTEMD 2025) will make a meaningful contribution towards the existing knowledge domain and motivate new generation of bioengineers to pave an extra mileage and come up with novel, translatable ideas to meet the needs of the national and international community

Topics

The conference will focus on the following themes but not limited to:

- **Advanced Biomaterials and Nanomaterials**
  -Dental Application
  -Orthopaedic application
  -Wound healing and skin tissue repair
  -Cardiovascular applications
  -Ophthalmic application
  -Neural applications
  -Cancer treatment

- **Advanced techniques for manufacturing tissue Scaffold**
  -Electrospinning
  -3D printing
  -Bioprinting

- **Medical Devices**
  -Diagnostic and Imaging Technologies
  -Health monitoring Devices

- **Antimicrobial/antioxidant/anti-inflammatory strategy for developing Biomaterials and Engineered Tissue Products**

- **Advanced Coatings and Surface Treatments for Biomaterial**

- **Computational approach for biomaterial design**
  -AI / ML Application

- **Translational Strategy for innovative R & D and application of Biomaterials/engineered tissue Products/Medical Device**

- **Safety, Ethics, and Regulation**

- **IPR and start-up**

- **Drug Delivery Systems**

KEYNOTE ADDRESS/ INVITED LECTURES

A series of Keynote speeches and Invited lectures will be delivered by eminent Scientists, Academicians and Industrialists from USA, UK, Japan, Romania, Singapore, and India.

TECHNICAL EXHIBITION

Technical exhibitions shall be organized during the conference to highlight the advances made in process technologies, products, instruments, equipments etc. from companies related to this field.

STUDENT SESSION

An exclusive discussion forum bringing together students from around the world to exchange ideas and explore emerging research topics.

PARTICIPANTS

Engineers, Medical Professionals, Scientists, Research scholars & students from Academic institutions, Research Organizations and Industries across the globe.

CALL FOR ABSTRACTS/ FULL PAPERS

Abstract of research/ technical papers followed by the full paper are invited based on the themes of the conference. After scrutiny by the technical committee, all accepted abstracts will be published in the proceeding. All the abstracts will be arranged for oral or poster presentation. Abstracts and Full papers must be submitted in soft copies. The acceptance of the paper will be communicated to the participants by email. Selected papers will be published in Scopus/SCIE indexed journal. The presenting author must have registered before the deadline, for their abstracts to be included in the conference proceedings.

GUIDELINES FOR SUBMISSION

The abstract of the paper must be within 250 words in MS WORD format (Download Word Template). The guidelines for full paper will be available on the website. The abstract & full paper should be submitted by e-mail to icabtemd2025@gmail.com.

ACCOMODATION

Accommodation of the Delegates and Participants will be arranged in the Institute Guest House on payment basis based on the availability and first cum first serve basis. For student delegates, hostel accommodation within the campus will be arranged on request and on payment basis.

IMPORTANT DATES

Abstract Submission Deadline	**September 15, 2025**
Acceptance of Abstract	September 22, 2025
Payment of registration fee	November 10, 2025
Full Paper Submission Deadline	November 3, 2025

REGISTRATION FEES

Participants	**Registration fees**			
	Indian		Foreign	
	Offline	Online	Offline	Online
Student	INR 4000	INR 2000	USD 150	USD 100
Academic delegates	INR 5000	INR 3000	USD 250	USD 150
Research organizations	INR 6000	INR 4000	USD 300	USD 200
Industry delegates	INR 7000	INR 5000	USD 350	USD 250
Accompanying person	INR 1500		USD 150	

****Registration Fees is inclusive of GST.**
***Registration to conference includes participation to all conference sessions, conference kit, proceedings and food**

MODE OF PAYMENT & REGISTRATION

Payment may be made using QR code (see below) or using online transfer in favor of "Conference, NIT Rourkela" payable at SBI, NIT Branch to Account No.: 36734418111 , IFSC: SBIN0002109, MICR: 769002007, SWIFT: SBININBB137

UPI ID: 2804180418@sbi; Merchant Name: Conference NIT Rourkela

Registration form: https://forms.gle/PhY572TxGeKepC6s9

INTERNATIONAL ADVISORY COMMITTEE

Name	Affiliation	Location
Prof. Siva Subramanium	Nothingham Trent University	UK
Prof. Hassane Oudadesse	Rennes Institute of Chemical Sciences University of Rennes	France
Kamal Jonnalagadda	Saint Joseph's University	Philadelphia, United States
Prof. Luminita Simion	St. Spiridon University Hospital	Romania
Prof. Esmaiel Jabbari	University of South Carolina	Columbia, United States
Prof. Bo su	University of Bristol	Bristol, UK
Prof. Seeram Ramakrishna	National University of Singapore	Singapore
Dr. Chaozong Liu	University College London	London
Prof. Masamichi Kamihira	Kyushu University	Japan
Prof. Ketul Popat	George Mason University	Fairfax, Virginia United States

NATIONAL ADVISORY COMMITTEE

Name	Affiliation	Location
Prof. Utpal Bora	Indian Institute of Technology, Guwahati	Assam, India
Prof. S Kanagaraj	Indian Institute of Technology, Guwahati	Assam, India
Prof. Sourabh Ghosh	Indian Institute of Technology, Delhi	India
Prof. Partha Roy	Indian Institute of Technology, Roorkee	Uttarkhand, India
Prof. Mahitosh Mondal	Indian Institute of Technology, Kharagpur	West Bengal, India
Dr. Baiju G Nair	National Institute of Technology Calicut	Kerala, India
Prof. Phalguni Pati	Indian Institute of Technology, Hyderabad	Telangana, India
Prof. Rama Raju Baadhe	National Institute of Technology, Warangal	Telangana, India
Prof. Ashok kumar	Indian Institute of Technology, Kanpur	Uttar Pradesh, India
Prof. Dhirendra S Katti	Indian Institute of Technology, Goa	Goa, India
Prof. Santanu Dhara	Indian Institute of Technology, Kharagpur	West Bengal, India
Dr. Amulya Panda	NII New Delhi	India
Dr. TS Sampath Kumar	Indian Institute of Technology, Madras	Tamil Nadu, India
Dr. Deepak Mishra	Tata Medical Centre, Kolkata	West Bengal, India
Dr. D. R. Mishra	IGH, Rourkela	Odisha, India
Dr. R. K. Patra	CWS, Rourkela	Odisha, India

LOCAL ORGANIZING COMMITTEE

Prof. K. Umamaheshwar Rao	**Patron, Director, NIT, Rourkela**
Prof. Krishna Pramanik	NIT Rourkela (Conference Chair)
Prof. A Thirugnanam	NIT Rourkela (BM)
Prof. Amit Biswas	NIT Rourkela (BM)
Prof. Sujit Kumar Bhutia	NIT Rourkela (BM)
Prof. Sudip Dasgupta	NIT Rourkela (BM)
Prof. Subrata Kumar Panda	NIT Rourkela (BM)
Prof. Subhankar Paul	NIT Rourkela (BM)
Prof. Kunal Pal	NIT Rourkela (BM)
Prof. Devendra Verma	NIT Rourkela (BM)
Prof. Nandini Sarkar	NIT Rourkela (BM)
Prof. Angana Sarkar	NIT Rourkela (BM)
Prof. Kasturi Dutta	NIT Rourkela (BM)
Prof. Nivedita Patra	NIT Rourkela (BM)
Prof. Balasubramanian P	NIT Rourkela (BM)
Prof. B. P. Nayak	NIT Rourkela (BM)
Prof. Anju R. Babu	NIT Rourkela (BM)
Prof. Earu Banoth	NIT Rourkela (BM)
Prof. Sivaraman J	NIT Rourkela (BM)
Prof. Bala Chakravarthy Neelapu	NIT Rourkela (BM)
Prof. Prasoon Kumar	NIT Rourkela (BM)
Prof. Ravi Kant Avvari	NIT Rourkela (BM)
Prof. Mirza Khalid Baig	NIT Rourkela (BM)
Prof. Amrita Singh	NIT Rourkela (BM)
Prof. Anamika Singh	NIT Rourkela (BM)
Prof. Lohit Kumar Srinivas Gujjala	NIT Rourkela (BM)
Prof. Bikash Chandra Maharaj	NIT Rourkela (BM)
Prof. Gaurav Kumar	NIT Rourkela (ME)
Prof. Ashirbad Jana	NIT Rourkela (ME)
Prof. Srinivas Behera	NIT Rourkela (ME)
Prof. Anupam Mishra	NIT Rourkela (CR)
Prof. Preekshya Nath	NIT Rourkela (MM)
Prof. Nataraj Yedla	NIT Rourkela (MM)
Prof. Santosh Kumar Sahoo	NIT Rourkela (MM)
Prof. Anup Nandy	NIT Rourkela (CS)

SPONSORSHIP

Sponsor Category	Amount (INR)	USD
Diamond	500,000	5814
Platinum	350,000	4070
Gold	250,000	2907
Silver	150,000	1744
Bronze	100,000	1162
Gala Dinner	125,000	1453
Cultural Programme	100,000	1162
Lunch or Dinner	75,000	872

***Details of the sponsorship will be available in the conference website.**

ADVERTISEMENT TARIFF

Advertisement	Amount (INR)	USD
Back cover (Colour)	30,000	348
Inside cover front or back (Colour)	20,000	232
Full page (Colour)	15,000	174
Full Page (B & W)	12,500	145
Half Page (B & W)	10,000	116
Stall and Banners	25,000	290

CONFERENCE CHAIR

Prof. Krishna Pramanik
Center of Excellence in Tissue Engineering
Department of Biotechnology & Medical Engineering
National Institute of Technology Rourkela-769008, Odisha, India
Phone No.: 9348815661

CONVENER

Prof. A. Thirugnanam (BM)
Prof. Amit Biswas (BM)

CO-CONVENER

Prof. Sujit Kumar Bhutia (LS)
Prof. Sudip Dasgupta (CR)

SUPPORTED BY

CoE in Tissue Engineering (MHRD)