RESOURCE PERSON

Faculty members from IITs, NITs, CSIR labs & foreign institutes will be providing insightful lectures.

TARGET AUDIENCE

Research scholars and PG students from any **engineering background** working in the area encompassing biomedical signals and image processing are eligible to attend the program.

REGISTRATION

There is **NO REGISTRATION FEE** for this program. Last date for registration is **20th November 2022**. Link for online registration is https://www.workshop-bme.com/registration. **Selected candidates** will be intimated through E-mail by **21st November 2022**. **Certificates** will be provided to the registered participants with full attendance in all sessions.

VENUE

The workshop will be conducted in **NIT Rourkela**. Travel fare for **3rd AC train will be reimbursed**. Accommodation with breakfast, lunch and dinner will be provided for the participants.

HOW TO REACH

Nearest railway station to the venue is Rourkela junction. The station is approx. 6 km distant from the campus and auto/taxi will be available near railway station. Selected participants are advised to be well prepared with the winter clothes.



ABOUT THE PROGRAM

Significant **advancement in the realm of biomedical engineering** comes in the form of **Artificial Intelligence (AI) and virtual reality**. The advances that are taking place in the world of biomedical engineering are impressive. Many of them are set to have a direct impact on our lives whether that is through the benefits of minimally invasive surgery, improved X-ray technology, or simply by having a point of care diagnosis, using smart watches. The **main aim** of this program is to **impart and disseminate the basic knowledge and recent advances** in the field of **biosignals and image processing using AI** and to address the research students about the **current scope and research gaps** in the field. This program will help the attendees to familiarize with the theoretical and practical knowledge of biomedical signal & image processing. This program will also help the attendees to advance their knowledge and **widen their horizons** in the field encompassing biomedical and its applications.

LEARNING OBJECTIVES

The objectives of this program are:

- To bring together a network of researchers primarily working on AI in **Biomedical Applications (BMA)**.
- This program will give young researchers an opportunity to **interact with experts** and clarify their quires in AI for BMA.
- To witness the **recent advances in AI** for biomedical signals and medical imaging.
- To develop awareness about the advances in **deep convolutional neural networks** for biomedical signals and imaging.
- To demonstrate the **hands-on Python & MATLAB programing** for biomedical applications.

"KARYASHALA"

High-End Workshop on

Recent Advances in Artificial Intelligence for Biomedical Applications [RAAIBA-2022]

01st – 07th December 2022

Sponsored by:
Science and Engineering Research Board

Patron:
Prof. K. Umamaheshwar Rao
Director, NIT Rourkela

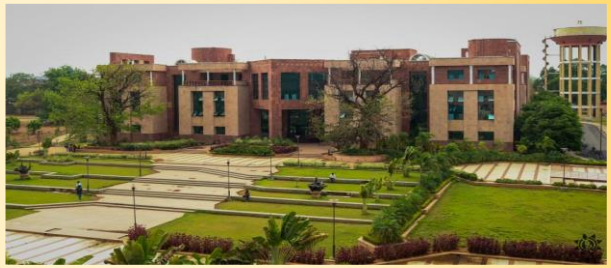
Coordinators:
Dr. Kunal Pal [HOD & Chairman]
Dr. Bala Chakravarthy Neelapu
Dr. J. Sivaraman
Dr. Earu Banoth

Organized by:
Department of Biotechnology & Medical Engineering
National Institute of Technology Rourkela, Odisha 769008, India

ABOUT THE INSTITUTION

National Institute of Technology Rourkela (NIT Rourkela) is an Institute of National Importance created under the Act of Parliament. NIT Rourkela provides quality education in a diverse and multi-cultural environment. The vision of the institute is to become an internationally acclaimed institution of higher learning that will serve as a source of knowledge and expertise for the society and be a preferred destination for undergraduate and graduate studies. The institute offers Ph.D., M.Tech., B.Tech., MBA and M.Sc. programmes in **21 branches** of Engineering, Management and Science. The institute research centers are engaged in consultancy, research and developmental activities and have received funding from several bodies such as BARC, BRNS, CSIR, DST, DBT, DAE, DRDO, ISRO, ICMR and other private industries. **NIRF Engineering ranking 2022** has figured NIT Rourkela at **15th position in engineering** category and **39th** position in **overall category**. **NIRF Research** ranking 2022 of NIT Rourkela is **24th**. **QS World University- ASIA Rankings 2023** is **281-290** & 59th in Southern – Asia ranking 2023 list. **601-800** for The **World University Rankings by subject (Engineering) 2023** category. BRICS 2019 has figured NIT Rourkela in the place of 121st among top universities in Brazil, Russia, India, China and South Africa. Times Higher Education World University Ranking 2023 has placed NIT Rourkela at 1000-1200

ABOUT THE DEPARTMENT



Department of Biotechnology and Medical Engineering (BM) was started in August 2007 and currently has 21 faculty members having Ph.D. degree from reputed institutions in India and Abroad. Faculty members are actively engaged in research activities and have **sponsored research projects** from different governmental agencies such as DST, DBT, CSIR, ICMR, SERB, etc. The department is successful in receiving research assistance from DBT Program Supports (~3.4 Cr.), MHRD-FIST (~2.5 Cr.) and MHRD-TEQIP (~5.0 Cr.). These financial supports from different governmental agencies have strengthened the research infrastructure of the department. The department has **well-developed laboratories** for Medical Electronics and Instrumentation, Bio signals, Cell and Molecular Engineering, Gene Manipulation, Protein Engineering, Structural Biology and Nanomedicine, Computational Biology, Bioinformatics, Smart Agricultural & Environmental Biotechnology, Anatomy and Physiology, Bioprocess Engineering, Rehabilitation and Regenerative Medicine, Stem Cell Culture, Smart Materials, Scaffold Fabrication, Biomaterials and Tissue Engineering, Biomechanics and Bio transport.

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- Prof. Subhankar Paul, Professor
- Prof. Mukesh Kumar Gupta, Professor
- Dr. A. Thirugnanam, Associate Professor
- Dr. Amit Biswas, Assistant Professor
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