

## Keynote Speakers

Eminent Professors from IITs, IEST-Shibpur, IIT Allahabad, IISER-Kolkata, NBRC, ISI Kolkata, and NITs.

## Organizing Committee

**Chairman: Prof. A. K. Turuk**, CSE Dept.

**Convener: Dr. Anup Nandy**, CSE Dept.

Contact No: 6370066981 (M)

Email: [nandya@nitrkl.ac.in](mailto:nandya@nitrkl.ac.in)

## Registration Fee and Accommodation

Industry/Research Organization :Rs. 5000/

Faculty (Academics Institute) :Rs. 3000/

Students and Research Scholars :Rs. 2000/

Limited shared accommodations are available at Institute's guest house on payment basis.

All payments shall be made through Demand draft/ Cheque drawn in favor of "CONFERENCE, NIT Rourkela" payable at SBI, NIT Branch, Rourkela (Code: 2109). DDs and Registration form must reach to **Convener, Dr. Anup Nandy**, Assistant Professor, Department of Computer Science & Engg., National Institute of Technology Rourkela, Rourkela-769008, Odisha by **November 30, 2020**.

## Registration Form

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Organization: \_\_\_\_\_

Qualification: \_\_\_\_\_

Address for Correspondence:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Mobile No: \_\_\_\_\_

Email Id: \_\_\_\_\_

Gender: \_\_\_\_\_

Accommodation Required: (Y/N?) \_\_\_\_\_

Registration Fee: \_\_\_\_\_

DD No. and Date: \_\_\_\_\_

Bank: \_\_\_\_\_

City: \_\_\_\_\_

Date: \_\_\_\_\_ Signature of Applicant

Place: \_\_\_\_\_

**SERB Sponsored  
High End Workshop**

**On**

**Role of Artificial Intelligence in  
Medical Applications**

**RAIMA-2020**

**December 17 to December 23, 2020**



**Organized by**

**Machine Intelligence & Bio-Motion  
Research Lab (<https://mibmnit.in/>)  
Department of Computer Science and  
Engineering**

**National Institute of Technology  
Rourkela [www.nitrkl.ac.in](http://www.nitrkl.ac.in)**

## About the Workshop

This workshop will focus on modern AI and machine learning techniques for understanding human cognitive behaviour and motion signature for detection of neurological diseases. The purpose of this workshop is to discuss human cognitive psychology with perception and action in the light of advanced computational cognitive science. A strong relationship will be visualized between brain and motion signal for estimation of human cognitive states in healthcare applications. The scientists, engineers, and researchers who are working in this area, will be benefited to know about computational methods for early diagnosis of neurological diseases. The scope of the workshop is listed below:

- Understanding human cognitive behaviour using AI techniques. .
- Analysis of EEG signal, Kinect-based motion pattern and IMU sensor-based biological signal.
- Deep Learning techniques for computational brain modelling and human motion classification.
- Clinical Diagnosis for prediction of neurological diseases using machine-learning algorithms.
- Modelling Correlation between brain and motion signal.

## Who Can Attend

Students (including post graduate and research scholars), Faculties from different disciplines such as computer science, biomechanics, Medicine, biomedical engineering and additionally from industry and healthcare to come out with recent advances in human motion understanding and their applications to healthcare.

## Course Contents

This workshop is aimed to cover the following topics:

- Understanding Cognitive Psychology: Theoretical Perspectives to Medical Applications.
- Cognitive Modelling: Modern AI Techniques for analyzing cognitive behaviour.
- Introduction to Computational Cognitive Science.
- Cognitive State Estimation using Deep Learning Techniques.
- Advances in EEG Data Analysis methods.
- Brain Computer Interface Applications and Neurosimulations.
- Machine Learning Techniques for human motion modelling and Feature Engineering.
- Clinical Impact on understanding different types of neurological diseases such as
  - a) Abnormality Detection Methods for **Autistic** Children and **Cerebral Palsy** Children
  - b) Diagnosis of **Alzheimer's disease**.

## About NIT-Rourkela



NIT Rourkela is one of the premier national level institutions for technical education in the country and is funded by the Government of India. The main objective of the Institute is to produce quality Engineers and Scientists in Graduate and Post-Graduate levels in various

branches of Engineering and Science. According to the Times Higher Education (THE) ranking of the World's best Universities 2017, it is ranked in top 800 institutes of world, and it is only NIT to feature in the list. According to the QS University ranking: BRICS 2016 has figured NIT Rourkela in the list of 111-120 top universities in Brazil, Russia, India, China and South Africa.

## About Department



The Department of Computer Science and Engineering was established in the year 1983 with the recent technological advancements in Computer Science. The department has currently 19 faculty members with different research and teaching expertise in the field of Computer Science. The Department offers B.Tech and B.Tech Dual degree in CSE. The department also offers M.Tech in four specializations (CSE, Information Security, Software Engineering, and Data Analytics). The department offers Ph.D in CSE with full time research scholars. The department runs several sponsored projects from government organizations like DST, SERB, BRNS, etc.

## About Location

NIT-Rourkela is well connected by Rail. This institute is located at a distance of about 7 KMs from Rourkela Railway Station in Odisha State. Rourkela station is well connected by Kolkata, Chennai and Mumbai and Bhubaneswar.