

**Special Session on**  
**Brain Computer Interface: Recent developments (BCI)**  
**in conjunction with**  
**23rd International Conference on Hybrid Intelligence Systems (HIS)**  
**December 12-14, 2023**

**Website:** <http://www.mirlabs.org/his23/cfss.php>

**Hybrid Mode – Online & Offline**

**Onsite Venues:** <http://mirlabs.org/his23/venue2.php>

**Objectives and Scope:**

In the current era, recent developments in the fields of intelligent systems using different emerging applications like AI, ML, DL etc and communication have paved the way for the handling of current and upcoming problems and brought about significant technological advancements.

Brain-Computer Interface (BCI) has become an effective neurotechnology in real-world applications over this decade. BCI is a communication or control system allowing for direct brain-machine/computer interfacing. Electroencephalography (EEG) is neuroimaging technique allowing for the direct brain and computer, or external device control, communication, detection of mental states, diagnosis, disease treatment and brain state monitoring. BCI signal processing and machine learning units analyze the EEG signals acquired from a head surface, and translate them into commands that are relayed to output devices in order to carry-out desired actions.

This special Session is aiming to gather information from scientists, engineers, and researchers with interest in research and application to solve the problematic statements in advanced sectors. As we know the population is increasing day to day and the problem in different sectors also increasing in rapid manner like health issues is going beyond our control. So, the solution can be achieved, if the problem and solution can be found in its initial stage. In each and every field now, researchers are developing new technologies to get the optimal solution with different roadmaps.

This special session is dedicated to recent advances, methods and applications in BCI research field. Topics of interest include, the following but not limited to:

- Machine Learning and its applications in healthcare
- Recent advances in brain-computer and machine interfaces (BCI)
- Neuroscience findings applied to BCI
- Clinical applications of BCI
- EEG based Brain Computer Interface
- BCI and neurogaming
- BCI for neuro-robotics
- BCI-based neurorehabilitation

## Paper publications

- Proceedings will be published in Lecture Notes in Networks and Systems, Springer (<https://www.springer.com/series/15179>)
- Indexed by SCOPUS, INSPEC, WTI Frankfurt eG, zbMATH, SCImago
- Paper maximum length is 10 pages
- Papers must be formatted according to Springer format (Latex/word) available at: <https://www.springer.com/de/authors-editors/book-authors-editors/manuscript-preparation/5636#c3324>
- Submission Link: <http://www.mirlabs.org/his23/submission.php>

## Important Dates

Paper submission due: **September 30, 2023**

Notification of paper acceptance: **October 31, 2023**

Registration and Final manuscript due: **November 10, 2023**

Conference Date: **December 12-14, 2023**

## Special Session Chair(s)

- **Dr. Nanda Dulal Jana**, National Institute of Technology, Durgapur, India
- **Rabel Guharoy**, Bharati Vidyapeeth Deemed University, DET, Navi Mumbai, India

**Information Contact:** Rabel Guharoy <[rabelrock@gmail.com](mailto:rabelrock@gmail.com)>