12TH ANNUAL IEEE Engineering Medicine and Biology Society

International Conference on Neural Engineering

11-14 NOV 2025

SAN DIEGO

IEEE EMBS

IEEE Engineering Medicine & Biology Society

IMPORTANT DATES

May 27, 2025
6- page paper submission deadline

July 18, 2025
6-page acceptance notification

July 28, 2025
1-page abstract submission deadline

August 4, 2025
Final 6-page paper submission deadline

August 15, 2025
1-page abstract acceptance notification

THE 12TH INTERNATIONAL IEEE EMBS CONFERENCE ON NEURAL ENGINEERING WILL BE HELD ON 11-14 NOV 2025 | SAN DIEGO, CA USA

The Neural Engineering Community welcomes researchers, members of academia, clinicians, representatives of patient associations, industry, government agencies, funders, and other interested parties to attend the premier conference for this highly interdisciplinary field. NER is the world's gathering place for biomedical engineers, neuroscientists, and clinicians to share research and to exchange ideas and breakthrough advances in novel engineering tools for elucidating brain function and neurotechnologies for the restoration and enhancement of impaired sensory, motor, and cognitive functions.

The program will feature invited keynote speakers, contributed talks and poster presentations, and interactive panels, live demonstrations of emerging neurotechnologies, and hands-on industry workshops. All contributions will be peer reviewed. Accepted contributed six-page papers and late-breaking one-page abstracts will be selected for oral or poster presentation in the Conference Program. Additionally, accepted six-page papers will be published appearing online in the IEEE XPlore® peer-reviewed conference proceedings.

ORGANIZING COMMITTEE

GENERAL CHAIR
Gert Cauwenberghs
UC San Diego, USA
Bruce Wheeler
UC San Diego, USA

STEERING COMMITTEE
Metin Akay
University of Houston, USA
Helen Huang
North Carolina State Univ., USA
Pedro Irazoqui
DARPA
Jack Judy
University of Floriday, USA
Erika Ross
ONWARD
Paul Sajda
Columbia University, USA
Jim Weiland
University of Michigan, USA

TECHNICAL PROGRAM CHAIRS
Natalie Mrachacz-Kersting
Albert-Ludwigs University Freiburg, Germany
Mario Romero-Ortega
The University of Arizona, USA
Yiwen Wang
Hong Kong University of Science and Technology, China

TECHNICAL PROGRAM COMMITTEE
Leanne Chan
City University of Hong Kong, China
Michela Chiappalone
University of Genova, Italy
José del R. Millán
University of Texas at Austin, USA
Mahsa Shoaran
EPFL, Switzerland
Nitish Thakor
Johns Hopkins University, USA

SPECIAL SESSION CHAIRS
Jacob Robinson
Rice University, USA
Maryam Shanechi
University of Southern California, USA

FINANCE CHAIR
Qi Wang
Columbia University, USA

EXECUTIVE OFFICE
Tara Wysocki
IEEE EMBS Conference Portfolio Manager

PROFESSIONAL CONGRESS ORGANIZER
CMS Worldwide

Contributions are invited in the NER 2025 General Theme of **Human-Centered Neural Engineering and AI**, including but not limited to the following five areas:

Bridging Neuroscience and AI for Personalized Therapies
Advancing human-centered AI by integrating real-time neural decoding and adaptive machine learning to develop personalized therapies.

Neural Computing and the Engineering of Adaptive Neural Systems
Developing technologies that emulate and modulate human brain dynamics, with applications in embedded computing and neuroprosthetic control.

Translational Neuromodulation: Moving AI-Enabled Therapies from Lab to Clinic
Leveraging artificial intelligence to optimize non-invasive and invasive neuromodulation techniques, for targeted therapeutic interventions in neurological and psychiatric disorders.

Human-Centered Neuroengineering: Design, Ethical, and Societal Considerations of AI-Augmented Neural Technologies
Addressing the ethical, social, and accessibility challenges of integrating AI-driven neural engineering solutions into healthcare and daily life, ensuring equitable and responsible neurotechnology development.

Advanced Neural Interfacing Technologies and Applications
Novel designs, materials, capabilities, translation, and clinical applications enabled by new technologies.

FOR MORE INFORMATION, PLEASE VISIT US AT
neuro.embs.org/2025/