



# IEEE/EMBS NER 2023

11<sup>th</sup> International IEEE EMBS Conference on Neural Engineering  
April 25-28, 2023 | Baltimore, MD, USA

## CALL FOR PAPERS

### IMPORTANT DATES

#### November 4, 2022

4-page paper submission deadline

#### December 19, 2022

4-page acceptance announcement

#### January 27, 2023

1-page abstract submission deadline

#### February 3, 2023

Final 4-page paper submission deadline

#### February 13, 2023

1-page abstract acceptance announcement

#### March 10, 2023

Final 1-page abstract submission deadline

### ORGANIZING COMMITTEE

#### GENERAL CHAIR

Pedro Irazoqui

#### CONFERENCE CO-CHAIR

Najim Dehak

#### PROGRAM CHAIRS

David Blodgett

Erika Ross

Craig Scott

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#### EXECUTIVE OFFICE

Janice Sandler

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The 11<sup>th</sup> International IEEE EMBS Conference on Neural Engineering will be held on April 25-28, 2023.

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 conference program will feature keynote speakers, invited talks, and poster sessions. All papers will be peer reviewed. All accepted one page and four page papers will appear in the Conference Program. Only four page papers will have the opportunity to be published in *IEEE Xplore*®.

### CONTRIBUTIONS ARE INVITED IN THE FOLLOWING FOUR THEMES, AND ASSOCIATED AREAS

#### Responsive Neuroengineering

- » Closing the loop in neural prostheses
- » Reinforcement learning in NER
- » Neural modeling
- » Decoding and encoding algorithms
- » Neurorehabilitation

#### Innovation in High-Resolution Neuroimaging

- » Speckle and coherent optical imaging
- » Novel information extraction from traditional imaging modalities
- » High-sensitivity, small magnetometers
- » AI for image reconstruction, synthesis, and biomarker extraction
- » Multimodal imaging and analysis

AI in  
NER

#### The Brain as a Part of a Complex Environment

- » External inputs to the NS
- » Internal inputs to the NS
- » Peripheral nerve inputs to the central NS

#### Impact in Neuroengineering

- » Pre-clinical work to clinical
- » Clinical trial to HDE
- » IP
- » Neuroethics

For more information please visit us at [2023.ieee-ner.org](https://2023.ieee-ner.org)