Neuro-Inspired Computational Elements
NICE'2024
https://niceworkshop.org
April 23-26, 2024
La Jolla, CA

The [2024 Neuro-Inspired Computing Elements (NICE) Conference](#) is the 11th annual meeting of researchers in the neural computing field. Like previous editions, NICE 2024 will focus on the interplay between neural theory, neural algorithms, neuromorphic architectures and hardware, and applications for neural computing technology.

NICE aims to involve diverse participation from all over the world and bring together research communities with universities, government, and industry.

NICE 2024 will be held **April 23-26, 2024,** in **La Jolla, California, USA**. [Registration is open!](#) Early bird registration ends on March 25th, 2024!

We are still welcoming Abstracts (1-2 pages) for 'Work in Progress' or 'Late Breaking News' – Last Day to submit is **March 25th.** These submissions will be considered for poster presentations, lightning talks, or demonstrations when applicable. These submissions will not be considered for the proceedings.

Important Dates

Late Breaking News Abstracts Due: **March 25th, 2024 12 pm GMT**

Late Breaking News Abstracts Decision Notification: **March 31st, 2024**

Camera Ready Papers Due: **March 31st, 2024 AoE**

List of Topics

Listed below are the topics for the conference, together with a non-exhaustive list of relevant sub-topics. During submission, please indicate which of the following topics your paper impacts:

- **Architectures and Hardware**
  - Neuromorphic Hardware
  - Analog/Mixed-Signal and Beyond-CMOS Hardware
  - Compute-In-Memory Architectures
  - Next-Generation Architectures
- **Computational and Systems Neuroscience**
  - Neural circuits: Theory and Experimental Support
  - Local learning and Plasticity
  - Connectomics
- **Neural Algorithms and Machine Learning**
  - Neuroscience-Inspired Algorithms
  - Resource-Constrained and/or Hardware-Aware Artificial Neural Networks
  - Spiking Neural Networks
- **Neuromorphic Computing Applications**
  - Emerging Applications
  - Robotics and Automation
  - High-Performance Computing
  - Edge Computing
  - Biosignal Processing and Brain-Computer Interfaces
- **Bio-Inspired Sensing**
  - Event-Driven Sensing
  - Novel Neuromorphic Sensors
  - Efficient Spike-Based Information Coding and Processing
- **Algorithms and Software Frameworks for Neuromorphic Computing**
  - Tools and Programming/Mapping Frameworks
  - Benchmarks, Neuromorphic Datasets
  - Theoretical Frameworks and Models for Neuromorphic Engineering
  - Memory-efficient Spike-Based Simulators

This year there will be multi-track tutorials on neuromorphic platforms on **Friday, April 26th.** Additional information will be available during the registration period.

Committees

Organizing Committee

- Murat Okandan (NICE Workshop Foundation)
- Brad Aimone (Sandia National Laboratories)

- Steve Furber (University of Manchester)
- Johannes Schemmel (University of Heidelberg)
- Dhireesha Kudithipudi (UT San Antonio)
- Bjorn Kindler (University of Heidelberg)
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Local Chairs

- Gert Cauwenberghs (UCSD)
- Duygu Kuzum (UCSD)
- Tajana Rosing (UCSD)

Program Chairs

- Suma G. Cardwell (Sandia National Laboratories)
- Charlotte Frenkel (TU Delft)
- Organizing Committee

Venue

NICE 2024 will be held at **Scripps Seaside Forum** in **La Jolla, California, USA** on **April 23rd -April 26th, 2024**, with a tutorial day on **April 26th, 2024**

Contact

All questions about submissions should be emailed to Dr. Suma G. Cardwell (sgcardw@sandia.gov) and Dr. Charlotte Frenkel (C.Frenkel@tudelft.nl).

Sponsors

If you are interested in helping sponsor NICE 2024, please contact Dr. Gert Cauwenberghs (gcauwenberghs@ucsd.edu) and Dr. Brad Aimone (jbaimon@sandia.gov).