International Workshop on Reliable and Sustainable Neuromorphic Hardware

Dates: 28–30 May 2025
Location: York, England

Submission Information

- **Abstract length:** 2 pages
- **Submit at:** tinyurl.com/48suh9dd
- **Deadline:** 17th March 2025
- **Presentation:** Oral presentation (selected abstracts) and posters

We are pleased to invite you to **submit abstracts** to the workshop on topics related to neuromorphic hardware.

Abstracts will undergo a **light-touch peer review**, and selected abstracts will be invited for **oral presentations or poster sessions**.

This workshop aims to bring together researchers and professionals from across the neuromorphic computing community and create an environment where **knowledge, experiences, and ideas flow freely to foster innovation at the intersection of neuromorphic hardware, sustainable computing, and reliability!**

Keynote Speakers

- Prof Steve Furber CBE
  University of Manchester
- Prof Robin Hiesinger
  Free University Berlin
- Heba Bevan OBE
  UtterBerry
- Dr Andrew Mallinson
  Intel
- Dr Catherine Schuman
  University of Tennessee
- Dr Emre Özer
  PragmatIC
- Maria Clerico
  IBM
- Prof Martin Trefzer
  University of York

Key themes (but not limited to)

Fundamentals

- Neuromorphic Architectures and Models
- Energy Efficiency and Sustainability
- Materials and Device Innovations
- Theoretical Foundations of Neuromorphic Computing
- Communication and Interconnect in Neuromorphic Systems

Applications

- Neuromorphic Hardware for Edge Computing
- Real-Time Processing for Robotics and Autonomous Systems
- Vision and Audio Processing
- AI and Machine Learning with Neuromorphic Hardware
- Healthcare and Biomedical Applications
- Environmental Sensing and Monitoring
- Security and Cryptography

Fault Tolerance

- Robustness in Neuromorphic Hardware Design
- Error Detection and Correction in Neuromorphic Systems
- Self-Healing and Adaptation/Learning Mechanisms
- Redundancy and Sparsity in Neuromorphic Systems
- Reliability Challenges in Neuromorphic Memory and Interconnects
- Thermal and Environmental Stability

Co-chairs and Contact

Martin Trefzer, University of York, UK
Jim Harkin, Ulster University, UK

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We look forward to your submissions and to an inspiring gathering in York in May 2025!