

ENSsys 2026

at CPS-IoT Week 2026

14th Int'l Workshop on Energy Harvesting &
Energy-Neutral Sensing Systems

May 11, 2026

CALL FOR PAPERS

Complementing the topics of CPS-IoT Week 2026, this workshop will bring together researchers and practitioners to explore advances in sustainable, energy-harvesting, and energy-neutral sensing systems for the IoT and cyber-physical infrastructures. These technologies enable applications in smart energy, intelligent transportation, environmental monitoring, and digital sustainability. Recent progress in energy harvesting, intermittent computing, and sustainable hardware-software co-design is driving the transition from battery-powered nodes to self-powered and environmentally responsible devices. ENSsys 2026 welcomes contributions that bridge disciplines — from low-power and energy-aware software design to battery-free architectures, efficient energy conversion, and edge intelligence through TinyML and embedded AI. Topics include materials and circuit design, power and resource management, distributed intelligence, and sustainable architectures, as well as demonstrators and real-world deployments showcasing advances in zero-energy and long-lived sensing systems.

IMPORTANT DATES

Submission: February 21 (23:59 AoE)

Notification: March 19, 2026

Camera Ready: March 31, 2026

Workshop: May 11, 2026

ORGANIZING COMMITTEE

General Chair: Matteo Nardello, Uni. of Trento, IT

Program Chairs: Davide Brunelli, Uni. of Bologna, IT

Kasim Sinan Yildirim, Uni. of Trento, IT

STEERING COMMITTEE

Geoff Merrett, University of Southampton, UK

Bernd-Christian Renner, TUHH, DE

Jacob Sorber, Clemson University, US

Brandon Lucia, Carnegie Mellon University, US

Przemyslaw Pawelczak, TU Delft, NL

Josiah Hester, Georgia Institute of Technology, US

Alex Weddell, University of Southampton, UK

TECHNICAL PROGRAM COMMITTEE

Aldo Romani, University of Bologna, IT

Ambuj Varshney, National University of Singapore, SG

Carlo Alberto Boano, Graz University of Technology, AT

Charis Kouzinopoulos, Maastricht University, NL

Domenico Balsamo, Newcastle University, UK

Eren Yildiz, Georgia Institute of Technology, US

Hashan Roshantha Mendis, Academia Sinica, TW

Henry Duwe, Iowa State University, US

Jeremy Gummesson, University of Massachusetts Amherst, US

Laura Harms, Kiel University, DE

Luca Mottola, Politecnico di Milano, IT

Magnus Jahre, Norwegian University of Science and Technology, NO

Mahbub Hassan, University of New South Wales, AU

Mario Costanza, Tyndall National Institute, IE

Matthew Hicks, Virginia Tech, US

Michele Magno, ETH Zurich, CH

Nikolaos Tsiongas, KU Leuven, BE

Sebastian Bader, Mid Sweden University, SE

Tommaso Polonelli, ETH Zurich, CH

Ulf Kulau, Hamburg University of Technology, DE

Xiaofan Yu, University of California, Merced, US

WORKSHOP SCOPE

Topics of interest include, but are not limited to:

- Power management concepts, algorithms, circuits, and energy conversion techniques for energy-harvesting and energy-neutral sensing systems
- Hardware and software concepts for intermittent computing, including resource management and operating system support
- Hardware-software co-design, cross-layer optimization, and resilient architectures for sustainable embedded platforms
- Middleware and services supporting interoperability between zero-energy networks
- On-device and federated TinyML for low-power and adaptive intelligence at the edge
- AI-enabled and Industrial IoT (AIoT and IIoT) applications leveraging energy-harvesting and battery-free technologies
- Passive communication and backscatter networking for battery-free systems
- Wake-up radios and energy-adaptive communication mechanisms
- Energy-aware networking and network-wide distributed management
- Ambient IoT and integration within next-generation communication networks
- Modelling, simulation, and design tools for the effective development of future energy-harvesting and intermittent systems
- Internet of (battery-less) Things
- Circular design, sustainability metrics, and life-cycle assessment of sensor systems
- Demonstrators, prototypes, and real-world deployments showcasing sustainable intelligent sensing

SUBMISSION GUIDELINES

We are soliciting four types of submission: technical papers (up to 6 pages, plus references), position papers (up to 3 pages), poster papers (up to 2 pages), and demo papers (up to 2 pages). Papers should be submitted for consideration via the workshop website prior to the submission deadline. Papers must adhere to the formatting guidelines (templates are available from the workshop website) and will undergo a double-blind review. They will be reviewed for novelty, relevance, and quality. Accepted submissions will be available on the IEEE xplore Digital Library.