ENSsys 2024

in conjunction with ACM SenSys

12th Int'l Workshop on Energy Harvesting & Energy-Neutral Sensing Systems

November 4, 2024

Call for Papers

Complementing the topics of ACM SenSys 2024, this workshop will bring researchers together to explore the challenges, issues, and opportunities in the research, design, and engineering of energy-harvesting, energy-neutral and intermittent sensing systems for the IoT. These are enabling technologies for future sustainable applications in smart energy, transportation, environmental monitoring, and smart cities. Innovative solutions in hardware and software for energy scavenging, adaptive algorithms, and power management policies are needed to enable either uninterrupted or intermittent operation, promoting environmental sustainability alongside widespread use of sensing technology. High-quality technical articles are solicited, describing advances in sensing systems powered by energy harvesting, as well as those which describe practical deployments and implementation experiences. ENSsys also offers a platform for innovative future directions by soliciting position papers.

Important Dates

Submission:	September 4, 2024 (23:59 AoE)
Notification:	September 25, 2024
Camera Ready:	October 7, 2024
Workshop:	November 4, 2024

Organizing Committee

General Chair: Jingtong Hu, University of Pittsburgh, USA
Program Chair: Pi-Cheng Hsiu, Academia Sinica, Taiwan

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Kasim Sinan Yildirim, University of Trento, Italy
Sai Swaminath, University of Tennessee, USA
Jason Xue, MBZAI, United Arab Emirates
Matteo Zella, Niederrhein University of Applied Sciences, Germany
Mengying Zhao, Shandong University, China

Workshop Scope

Topics of interest include, but are not limited to:

- Power management concepts, algorithms and circuits for energy-harvesting sensing systems
- Hardware and software concepts, algorithms and circuits for intermittent computing
- Resource management and operating system support for energy-harvesting sensing systems
- Network-wide distributed energy management (e.g. routing, adaptive duty cycling, etc.)
- Artificial intelligence for battery-free systems
- Communication in intermittent-power domain
- Online measurement of energy intake and consumption
- Predicting energy intake and consumption
- Ensuring reliable operation in energy-harvesting sensor systems
- Modelling, simulation and tools for effective design of future energy harvesting sensing systems
- Architectures and standards for energy-neutral, power-neutral or intermittent sensing systems
- Internet of (battery-less) Things
- Hardware/Software codesign for sustainable and intermittent TinyML
- Experience with real-world deployments and innovative applications
- Sustainability, circularity, and life-cycle assessment of sensor systems

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 ACM Digital Library at least one week before the conference.

www.enssys.org