

# ENSsys 2021

in conjunction with ACM SenSys



November 2021 — Coimbra, Portugal

## 9<sup>th</sup> Int'l Workshop on Energy Harvesting & Energy-Neutral Sensing Systems

### CALL FOR TUTORIALS, DEMOS, & PITCHES

Complementing the topics of SenSys 2021, 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. ENSsys@SenSys will be a highly interactive workshop. First, we invite demos from new or established energy harvesting systems – we aim to open ENSsys with a showcase of impressive work to set a baseline of what is possible today and spark ideas for what can be built in the future. Demos previously presented in other venues are explicitly welcome. For new work, we invite short papers on technical issues in energy harvesting systems that remain underserved or more radical positions that invite rethinking of current system design. We will use these short papers to organize several smaller, highly interactive workgroups. Accepted short papers will be invited for fast-track submission as full papers at ENSsys@ASPLOS.

#### IMPORTANT DATES

Submission: September 20, 2021 (AoE)  
Notification: October 11, 2021  
Camera Ready: [TBA]  
Workshop: November, 2021

#### ORGANIZING COMMITTEE

General Chair: Pat Pannuto; University of California, San Diego; USA  
Program Chair: Sebastian Bader; Mid Sweden University; Sweden  
Village Co-Chair: Colleen Josephson; VMware Research; USA  
Village Co-Chair: Michele Magno; ETH Zurich; Switzerland  
Web Chair: Geoff V. Merrett; University of Southampton; UK

#### STEERING COMMITTEE

Geoff Merrett; University of Southampton; UK  
Bernd-Christian Renner; University Koblenz-Landau; Germany  
Jacob Sorber; Clemson University; USA  
Brandon Lucia, Carnegie Mellon University, USA  
Przemysław Pawełczak; TU Delft; The Netherlands  
Josiah Hester; Northwestern University; USA  
Alex Weddell; University of Southampton; UK

#### TECHNICAL PROGRAM COMMITTEE

Mo Alloulah, Nokia Bell Labs, USA  
Brad Campbell, University of Virginia, USA  
Henry Duwe, Iowa State University, USA  
Maria Gorlatova, Duke University, USA  
Jeremy Gummeson, University of Massachusetts Amherst, USA  
Matthew Hicks, Virginia Tech, USA  
Anand Savanth, Arm Research, UK  
Olivier Sentieys, University of Rennes, France  
Kasım Sinan Yıldırım; University of Trento, Italy  
Matthias Wählisch, Freie Universität Berlin, Germany  
Lars Wolf, TU Braunschweig, Germany  
Matteo Zella, University Duisburg-Essen, Germany

#### 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
- Middleware and services supporting interoperability between zero-energy networks
- Resource management and operating system support for energy-harvesting sensing systems
- Network-wide distributed energy management (e.g. routing, adaptive duty cycling, etc.)
- 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
- Experience with real-world deployments and innovative applications

#### SUBMISSION GUIDELINES

ENSsys@SenSys solicits short paper submissions. We welcome both technical concept short papers and position short papers (target 2 pages, hard limit 3 pages including references). Short papers will receive feedback and guidance from the TPC. Short papers that continue on to be full submissions for ENSsys@ASPLOS will receive special consideration and the same set of reviewers (where possible).

ENSsys will also feature an “energy harvesting village.” This is an opportunity to showcase prior, established work (or new work!) to a new audience as well as to provide mini-lessons on key concepts in energy harvesting design or introductions to platforms and tooling that aim to facilitate and support energy harvesting systems. Demos should submit a short (1 page, 2 if needed) abstract describing their proposed demo as well as any support resources from the venue which may be needed. Demo abstracts will be included in the ENSsys proceedings (if desired).

[www.enssys.org](http://www.enssys.org)