

## Call for Contributions for

### Submission:

1. **Inform the Chair:** with the Title of your Contribution

2. **Submission URL:**

<https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=CENICS+2019+Special>

Please select Track Preference as **ESD**

Special track

## ESD: Energy-efficient System Design

### Chair and Coordinator

Payman Behnam, University of Utah, USA

[payman.behnam@utah.edu](mailto:payman.behnam@utah.edu)

along with

**CENICS 2019**, The Twelfth International Conference on Advances in Circuits, Electronics and Micro-electronics

<http://www.iaria.org/conferences2019/CENICS19.html>

October 27, 2019 to October 31, 2019 - Nice, France

The ever-growing usage of embedded devices such as cell phones, smart watches, navigation systems, virtual and augmented reality systems makes the need of energy-efficient design a critical factor. Hardly, we can imagine the extensive usage of these devices if they need to be charged frequently. The energy efficiency is also critical for high performance designs. The special track on the Energy-Efficient System Design (ESD) focuses on exploring different techniques to make hardware design energy efficient. We welcome novel submissions from both academia and industry that manifest hardware, software, or hardware-software co-design solutions in different abstraction levels (from transistor to high level) to ameliorate energy efficiency of a design.

Especially, we are interested to see submission focusing on Internet of Things (IoT), accelerators (Near Data Processing, FPGA, GPU), approximate computing, data centers, quantum architectures, automata processor, compiler techniques, signal processing circuits, and emerging memory technologies.

ESD is soliciting state-of-the-art research papers from both academia, industry including, but not limited to, the following topics:

- Hardware Accelerator (In-Memory/Near-Memory Computing, FPGA, GPU)
- Low Energy Deep Learning and Convolutional Neural Network Designs
- Brain-inspired computing
- Approximate Computing
- 3D Architectures
- Low-power Wearable Devices
- Memory Optimizations
- Emerging Memory Technologies (e.g., Memristor, STT-RAM, PCMs, SOT-RAM)
- Non-traditional Architectures (e.g., Automata Processor, Quantum Architectures)

- Benchmark Characterization
- OS and Compiler Optimizations
- Software/Hardware Load balancing
- Near-threshold and Subthreshold Design
- Low-power Analog/Mixed-signal Circuits, ADC/DAC Converters, I/O,
- Variability-aware Designs
- Thermal-aware Software Design
- Energy-Efficient Device Solutions
- Device Technologies for Low-power design

### **Important Datelines**

Inform the Chair: As soon as you decide to contribute

Submission: August 31

Notification: September 20

Registration: September 30

Camera-ready: September 30

### **Contribution Types**

- Regular papers [in the proceedings, digital library]
- Short papers (work in progress) [in the proceedings, digital library]
- Posters: two pages [in the proceedings, digital library]
- Posters: slide only [slide-deck posted on [www.iaria.org](http://www.iaria.org)]
- Presentations: slide only [slide-deck posted on [www.iaria.org](http://www.iaria.org)]
- Demos: two pages [posted on [www.iaria.org](http://www.iaria.org)]

### **Paper Format**

- See: <http://www.iaria.org/format.html> [both LaTeX and .doc templates]
- Before submission, please check and comply with the editorial rules: <http://www.iaria.org/editorialrules.html>
- More information on camera ready preparations will be posted after the paper notifications are sent out.

### **Publications**

- Extended versions of selected papers will be published in IARIA Journals: <http://www.iariajournals.org>
- Print proceedings will be available via Curran Associates, Inc.: <http://www.proceedings.com/9769.html>
- Articles will be archived in the free access ThinkMind Digital Library: <http://www.thinkmind.org>

### **Paper Submission**

<https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=CENICS+2019+Special>

Please select Track Preference as **ESD**

### **Registration**

- Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.
- Registration fees are available at <http://www.iaria.org/registration.html>

### **Contacts**

**Payman Behnam:** [payman.behnam@utah.edu](mailto:payman.behnam@utah.edu)

CENICS Logistics: [steve@iaria.org](mailto:steve@iaria.org)

-----