

Conference Report

ISLPED 2021: The 25th Anniversary!

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■ **THE ISLPED 2021 CONFERENCE** was again held online on July 26–28, 2021, due to the COVID-19 pandemic. The program of the conference was arranged between 10 A.M. and 1 P.M., which is the most friendly time period to the attendants from America, Asia, and Europe. The length of each talk was limited to 10 min so that all the works can be presented in three days. The conference also includes two keynote talks, one embedded tutorial, one design contest session, and one poster session.

Conference report

The deadlines for abstracts and full papers for ISLPED were March 22 and 29, respectively. Due to the adverse impact of COVID-19, ISLPED observes the decline in the number of submissions: a total of 101 abstract submissions and 88 full paper submissions were received eventually. This is 28.5% less than that last year. These submissions came from 15 countries/regions.

The top five contributing countries/regions of the ISLPED submissions are United States, China, South Korea, Taiwan, and Singapore. In particular, the United States contributed more than 60 submissions.

Track 2.2: Systems and Platforms received the most submissions (22) among all the tracks, while Track 1.1: Technologies received the least submissions (6).

Technical Program Committee consisted of 76 experts from all over the world who wrote a total of 448 reviews, or 5.1 reviewers per submission. The review meetings of each track were held in early May and each track had its own Zoom meeting hosted by the track chair/co-chair. The committee accepted 23 regular papers (~26.4% acceptance rate) and ten poster papers (~11.3% acceptance rate). The overall acceptance rate is 37.5%.

The registration fee of ISLPED 2021 varies between \$50 and \$150 for early bird registration, ACM/IEEE members, non-ACM/IEEE members, and speakers. The student registration fee was \$25. A total of 93 attendees registered the conference from 11 countries/regions, representing a 3:1 ratio between the attendees and accepted papers. The conference program had only a single track each day and two student volunteers were assisting the session chairs to run the session and helping solve the technical issues. Table 1 shows the program of the ISLPED 2021 (not including the design contest session in Day 1).

Day 1: July 26, 2021	Day 2: July 27, 2021	Day 3: July 28, 2021
Welcome by General and Program Co-Chairs	Keynote Talk 2: Prof. Diana Marculescu (UT Austin): "When Climate Meets Machine Learning: Edge to Cloud ML Energy Efficiency"	Best Paper Announcement

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Table 1. ISLPED 2021 Program.

Keynote 1: Matt Mattina (ARM) “Co-Designing Hardware and Models for Efficient Neural Network Inference”	Session 2A: Optimizations for SRAMs and SSDs	Session 3A: Low-Power Healthbased Implantable and Wearable Devices
Session 1A: Low-Power Neural Networks	ISLPED 25th Anniversary Panel	Session 3B: Low-Power Circuit Optimizations
Session 1B: Optimizations for Edge, IoT and Wearable Devices	Poster Session	Embedded Tutorial: UPM/IEEE 2416 Power Modeling Standard: A Practitioner’s Perspective
Session 1C: Low Power Challenges in Emerging Technologies: 3D and Optical	Session 2B: Energy-Efficient Emerging Memory Technologies	Session 3C: Efficient In-Memory Computing

We kept the tradition of ISLPED to include a poster session and a design contest session this year. Each poster presenter gave a 2-min short presentation in the poster session, and four designs were presented in the design contest session. The conference also arranged two keynote talks from industry and academia, given by Matthew Mattina from ARM and Diana Marculescu from UT Austin, respectively.

As a special event, ISLPED 2021 organized an ISLPED 25th anniversary panel, moderated by ISLPED Executive Committee Chair, Massoud Pedram from USC. Six panelists, Vivek De, Diana Marculescu, Renu Mehra, Luca Benini, Jan Rabaey, and Kaushik Roy, served on the panel. The panelists gave their retrospect of the past 25 years of ISLPED and provided their prospect of the next successful 25 years! ■

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Leveraging the Next-Generation Networks (Athena) and the NSF Industry–University Cooperative Research Center (IUCRC) for Alternative Sustainable and Intelligent Computing (ASIC), and the Co-Director of the Duke Center for Computational Evolutionary Intelligence (CEI). His group focuses on the research of new memory and storage systems, machine learning and neuromorphic computing, and mobile computing systems. He is a Fellow of ACM and IEEE and currently serves as the Chair of ACM SIGDA.

Sherief Reda is a Full Professor at the School of Engineering, Brown University, Providence, RI, USA. His research interests are in the area of hardware systems, with focus on energy-efficient computing, design automation of integrated circuits, and embedded systems. He is a Senior Member of IEEE.

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