

# The First International Workshop on Domain Specific System Architecture (DOSSA-1)

## The main theme of this year: Autonomous driving/agent

Fukuoka City, Japan, Oct 21, 2018  
<http://prism.sejong.ac.kr/dossa-1>

In conjunction with the 51<sup>st</sup> International Symposium on Microarchitecture (MICRO-51)

### CALL FOR PAPERS

Domain specific systems are an increasingly important computing environment for many people and businesses. As the information technologies emerges into various real world applications such as autonomous driving, IoT (Internet of Things), CPS (Cyber physical systems) and health care applications in the 4<sup>th</sup> industrial revolution era, interest in the specialized domain specific computing systems are increasing significantly. In addition to the conventional computing platforms, domain specific computing systems have a lot of design challenges including specialized hardware components like hardware accelerator, optimized library and domain specific languages. This workshop focuses on domain specific system design in both hardware and software aspects and their interaction in order to improve the availability and efficiency in the emerging real world applications. The main theme of this workshop in this year is the autonomous driving. Topics of particular interest include, but are not limited to:

- Application analysis and workload characterization to design domain specific system for emerging applications, such as autonomous driving, IoT and health care applications.
- Domain specific processor/system architectures and hardware features for domain specific systems;
- Hardware accelerators for domain specific systems;
- Storage architectures for domain specific systems;
- Experiences in domain specific system development;
- Novel techniques to improve responsiveness by exploiting domain specific systems;
- Novel techniques to improve performance/energy for domain specific systems;
- Domain specific systems performance evaluation methodologies;
- Application benchmarks for domain specific systems;
- Enabling technologies for domain specific systems (smart edge devices, smart sensors, energy harvesting, sensor networks, sensor fusion etc.);

The workshop aims at providing a forum for researchers, engineers and students from academia and industry to discuss their latest research in designing domain specific system for various emerging application areas in 4<sup>th</sup> industrial revolution era to bring their ideas and research problems to the attention of others, and to obtain valuable and instant feedback from fellow researchers. One of the goals of the workshop is to facilitate lively and rigorous–yet friendly–discussion about the research problems in the architecture, implementation, networking, and programming and thus pave the way to novel solutions that improve both hardware and software of future domain specific systems

### Organizers

Hyesoon Kim, Georgia Tech.  
Giho Park, Sejong Univ.

### Program Committee

Abhijit Chatterjee, Georgia Tech.  
Hsien-Hsin Lee, TSMC  
Sungjoo Yoo, Seoul National Univ.

### Web Chair

Minkwan Kee, Sejong Univ.

### SUBMISSION GUIDELINE

Submit a 2-page presentation abstract to a web-based submission system (TBA) by August 27, 2018. Notification of acceptance will be sent out by September 1, 2018. Final paper and presentation material (to be posted on the workshop web site) due Oct 8, 2018. For additional information regarding paper submissions, please contact the organizers.

### IMPORTANT DATES

- Abstract submission **August 27, 2018**
- Author notification **September 1, 2018**
- Final camera-ready paper **October 8, 2018**
- Workshop **October 21, 2018**