



# DSD 2019

## 22<sup>nd</sup> Euromicro Conference on Digital System Design Kallithea, Chalkidiki, Greece, Aug. 28<sup>th</sup> - Aug. 30<sup>th</sup>, 2019



### SPECIAL SESSION on ARCHITECTURES & SYSTEMS FOR AUTOMOTIVE, AERONAUTIC, SPACE & INTELLIGENT TRANSPORTATIONS (ASAASIT)

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#### SPECIAL SESSION SCOPE

Digital systems in intelligent transportation systems (ITS) are becoming increasingly complex. New applications for these ITS have emerged to cope with societal needs and to ensure driver and passenger safety. Applications such as Autonomous cars, Vehicle-to-X (V2X) communications, in-vehicle infotainment, and assistance for elderly and disabled drivers require powerful processing and communication capabilities. Moreover, modern transport tools play a leading role in strategically worldwide projects such as green and sustainable mobility in future smart cities and smart roads. To fulfill these tasks, high performance, low energy consumption and high reliability and security are significantly required.

In addition to ITS, Digital systems became an ever more important in Aeronautics and Space applications. The roadmap for research institutes and space-based industrial partners strongly determine the need for new generations of high-performance space proven digital signal processing accelerators.

The purpose of this special session is to look deeper into all these issues, and bring researchers and practitioners from industry and academia to explore and discuss recent progress, and stimulate the interaction between them through exchange of ideas and experience sharing.

Topics of interest include, but are not limited to:

- System architecture & software design for ITS: Multicore, FPGA, GP-GPU and heterogeneous system challenges.
- Safety, Security and Reliability. Assessment and detection of security threats and vulnerabilities.
- Standards (AUTOSAR, ISO, EN, etc.) deployments.
- Development methods for advanced driver assistance systems.
- Design methods and tool-chains for embedded systems in autonomous vehicles and active safety.
- Architectural design and optimization for EVs and HEVs.
- Energy-efficient vehicles, connected vehicles and infrastructure design, energy generation and saving.
- Hardware and software solutions for run-time system management, self-diagnostics and repair.
- New architectures, protocols and implementations for communicating vehicles (V2X) and infrastructures.
- Digital systems and circuits for smart cities and smart roads.
- Digital systems and circuits for aeronautics and space applications.
- Applications in aeronautics area including space mission experiments, navigations, communication, safety, and technology-demonstrations.
- Artificial Intelligence (such as Machine and Deep Learning) systems for transportation and space applications: Hardware accelerators, GPU, Multi-cores, etc.

#### SUBMISSION GUIDELINES

Authors are encouraged to submit their manuscripts via EasyChair web service at web page <https://easychair.org/conferences/?conf=dsd2019>. Should an unexpected web access problem be encountered, please contact the Program Chair by email ([dsd2019@easychair.org](mailto:dsd2019@easychair.org), [nkonofao@csd.auth.gr](mailto:nkonofao@csd.auth.gr)). Each manuscript should include the complete paper text, all illustrations, and references. The manuscript should conform to the IEEE format: single-spaced, double column, US letter page size, 10-point size Times Roman font, up to 8 pages. In order to conduct a blind review, no indication of the authors' names should appear in the manuscript, references included.

CPS, Conference Publishing Services, publishes the (ISI indexed) DSD Proceedings, available worldwide through the IEEE Xplore Digital Library. Extended versions of selected best papers will be published in a special issue of the ISI indexed "Microprocessors and Microsystems: Embedded Hardware Design" Elsevier journal.

#### IMPORTANT DATES

**Deadline for paper submission: April 21st**

**Notification of acceptance: May 31<sup>st</sup>**

**Camera ready papers: June 23<sup>rd</sup>**

#### MORE INFORMATION (WEB PAGES)

• DSD 2019: <http://dsd-seaa2019.csd.auth.gr/>

• Euromicro: [www.euromicro.org](http://www.euromicro.org)