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**DATE 2024 Initiative on Autonomous Systems Design (ASD)**

**Call for Contributions**

**<https://www.date-conference.com/asd>**

**25-27 March 2024**

**Valencia, Spain**  
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Fueled by the progress of artificial intelligence, autonomous systems become more and more integral parts of many Internet-of-Things (IoT) and Cyber-Physical Systems (CPS) applications, such as automated driving, robotics, avionics, industrial automation and smart systems in general. Autonomous systems are self-governed and self-adaptive systems that are designed to operate in an open and evolving environment which is not completely defined at design time. This poses a unique challenge to the design and verification of dependable autonomous systems. Following the successful editions from previous years, DATE is again hosting the Initiative on Autonomous Systems Design. The initiative will include peer-reviewed papers, invited contributions and interactive sessions.

**Areas of Interest**

We welcome your contributions within the scope of the event. The main areas of interest include but are not limited to the following:

- Concepts, Algorithms and Formal Methods for Autonomy
- Platforms for Autonomous Systems
  - Architectures (from Chip Level to System Level) for Autonomous Systems
  - Middleware and Frameworks (e.g., ROS) for Autonomous Systems
  - Models and HW/SW Mechanisms for Self-Awareness and Self-Adaptation
- Design of Autonomous Systems
  - Mastering Emergent and Evolving Behavior (Goals, Constraints, ...)
  - Design, Verification and Test of High-Assurance Learning-Enabled Systems
  - Design Automation and Methodologies for Autonomous Systems
- Dependability and Trustworthy Autonomy
  - Functional Safety and Assurance Cases for Evolving and Learning-Enabled Systems
  - HW/SW Mechanisms for Resilient Systems
  - Autonomous Systems Security
- Applications and Case Studies of Autonomous Systems

**Types of Contributions**

Conference Papers:

The special initiative features regular sessions for presenting novel technical contributions. Submitted papers will undergo a peer-review process and accepted papers will appear in the DATE conference proceedings. All manuscripts should be submitted in pdf format not exceeding 6 pages, following the DATE submission instructions.

Abstract Submission: **04 November 2023 AoE**

Full Paper Submission: **11 November 2023 AoE**

Acceptance Notification: **17 December 2023 AoE**

Special Sessions / Panels / Interactive Sessions:

We additionally solicit proposals for special sessions, panel discussions, interactive sessions and invited talks, targeting emerging challenges in the field of autonomous systems, especially that are of interest to the DATE conference participants. Sessions on industrial perspectives, prototypes and demos are also highly welcome. Proposals must consist of an extended summary of up to 1,500 words in a PDF file, describing the topic, the authors/speakers, and the intended format. Submission deadline is 11 November 2023.

### **Submission Instructions**

All submissions should follow the DATE proceedings submission instructions. Please submit your contribution at [https://softconf.com/date24/special\\_ASD/](https://softconf.com/date24/special_ASD/)

### **Organizing Committee**

Rolf Ernst, Technical University of Braunschweig, Germany

Dirk Ziegenbein, Robert Bosch GmbH, Germany

Selma Saidi, Technical University Dortmund, Germany

Sebastian Steinhorst, Technical University Munich, Germany