Workshop Program

W03

Second DATE Workshop on

Autonomous Systems Design (ASD 2020)

Friday, 13th of March 2020, Alpexpo Grenoble, 08:30-17:30

Room
Chamrousse

Organisers
Sebastian Steinhorst, Technical University of Munich, Germany
Jyotirmoy Deshmukh, University of Southern California, United States

URLs
http://asd.userweb.mwn.de/
https://www.date-conference.com/workshop/w03

ASD 2020 is the 2nd international workshop on Autonomous Systems Design. It is part of a two-day special initiative at DATE on Autonomous Systems Design. The goal of the workshop is to explore recent industrial and academic methods and methodologies in autonomous systems design.

Program

08:30-08:45

ASD-01 **Opening Remarks**

Organisers
Sebastian Steinhorst, Technical University of Munich, Germany
Jyotirmoy Deshmukh, University of Southern California, United States

08:45-09:30

ASD-02 **Keynote: "Autonomy: one step beyond on commercial aviation"**

Keynote Speaker
Pascal Traverse, Airbus, France

09:30-10:00

ASD-03 **Introduction to Demos**

- UNICARagil project
- Mathworks
- Alexandre Donzé (Decyphir): Breach
- Philipp Weiß (Technical University of Munich): Fail-operational Automotive Software
- Christian Laugier (INRIA Grenoble): Autonomous Driving Demonstration: Focus on the Embedded Bayesian Perception component
- Andy Pimentel (University of Amsterdam), Martina Maggio (Lund University), Juan Valverde (United Technology Research Center): Autonomous Adaption and Morphing of Embedded Systems

10:00-10:30

ASD-04 **Coffee Break**

10:30-12:00

ASD-05 **Session: Autonomy in Automotive**

10:30-11:00

ASD-05.1 **Fusion: A Safe and Secure Software Platform for Autonomous Driving**

Speaker/Authors: Philipp Mundhenk (1), Enrique Parodi (1), Roland Schabenberger (1)

Affiliation: (1) Autonomous Intelligent Driving GmbH, Germany

11:00-11:30

ASD-05.2 **Towards a Reliable and Context-Based System Architecture for Autonomous Vehicles**

Speaker/Authors: Tobias Kain (1), Julian-Steffen Müller (1), Philipp Mundhenk (2), Hans Tompits (3), Maximilian Wesche (1) and Hendrik Decke (1)

Affiliations: (1) Volkswagen AG, Germany; (2) Autonomous Intelligent Driving GmbH, Germany; (3) Technische Universität Wien, Austria

11:30-12:00

ASD-05.3 **Embedded Bayesian Perception and Decision-making system for Autonomous Vehicles**

Speaker: Christian Laugier (1)

Affiliation: (1) INRIA Grenoble, France

12:00-13:00

ASD-06 **Lunch Break**

13:00-14:00

ASD-07 **Keynote "VoloCity: Considerations for a Safe Transitions from Manned to Unmanned"**

Keynote Speaker
Florian Michael Adolf, Volocopter, Germany

14:00-14:30

ASD-08 **Safety-Critical Heterogeneous Computing for Aerospace**

Speaker: Juan Valverde (1)

Affiliation: (1) United Technologies Research Centre Ireland (UTRC)

14:30-15:00

ASD-09 **Coffee Break**

15:00-16:30

ASD-10 **Session: Engineering of Autonomous Systems**

15:00-15:30

ASD-10.1 **BreachFlows: Systematic Simulation-Based Testing with Formal Requirements For CPS**

Speaker: Alexandre Donze (1)

Affiliation: (1) Decyphir, USA

15:30-16:00

ASD-10.2 **Agile Requirement Engineering for a Cloud System for Automated and Networked Vehicles**

Speaker/Authors: Armin Mokhtarian (1), Alexandru Kampmann (1), Bassam Alrifaee (1), Bastian Lampe (1), Lutz Eckstein (1) and Stefan Kowalewski (1)

Affiliation: (1) RWTH Aachen University, Germany

16:00-16:30

ASD-10.3 **Systematic Physical-World Testing of Autonomous Driving Systems**

Speaker: Cong Liu (1)

Affiliation: (1) University of Texas at Dallas, USA

16:30-17:30

ASD-11 **Open Floor Panel: Autonomy in Avionics and Automotive: Happy Marriage or Consensual Divorce?**

Workshop Steering Committee

- Rolf Ernst, Technical University of Braunschweig, Germany
- Selma Saidi, Hamburg University of Technology, Germany
- Dirk Ziegenbein, Robert Bosch GmbH, Germany

Workshop Technical Program Committee

- Bart Besselink, University of Groningen, Netherlands
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- Shreejith Shanker, TUM CREATE
- Sebastian Steinhorst, Technical University of Munich, Germany
- Andrei Terechko, NXP Semiconductors