RoSE 2018

First International Workshop on Robotics Software Engineering

Co-located with the International Conference on Software Engineering (ICSE 2018)
May 27 – June 3, 2018 — Gothenburg, Sweden
http://tinyurl.com/RoSE2018

Workshop organizers

Federico Ciccozzi
Mälardalen University, Sweden

Davide Di Ruscio
University of L'Aquila, Italy

Ivano Malavolta
Vrije Universiteit Amsterdam, The Netherlands

Patrizio Pelliccione
Chalmers University of Technology | University of Gothenburg, Sweden

Andreas Wortmann
RWTH Aachen University, Germany

Program Committee

- *Leif Ahlman, Drones Networking, Sweden*
- *Karl-Erik Årzén, University of Lund, Sweden*
- *Mauro Birattari, Université Libre de Bruxelles, Brussels, Belgium*
- *Darko Bozhinoski, Universite Libre de Bruxelles, Belgium*
- *Davide Brugali, University of Bergamo, Italy*
- *Mathias Buerger, Bosch, Germany*
- *Javier Camara Moreno, CMU, USA*
- *Alessandro di Fava, Pal Robotics, Spainn*
- *Juergen Dingel, Queen's School of Computing, Canada*
- *Francesco Ferro, Pal Robotics, Spain*
- *David Garlan, CMU, USA*
- *Holger Giese, Hasso-Plattner-Institut, Germany*
- *Sebastian Götz, University of Dresden, Germany*
- *Peter Gorm Larsen, Aarhus University, Denmark*
- *Fredrik Heintz, Linköping University, Sweden*
- *Rogardt Heldal, Høgskulen på Vestlandet, Norway*
- *Nico Hochgeschwender, Bonn-Rhine-Sieg University of Applied Sciences, Germany*
- *Rajeev Joshi, JPL, USA*
- *Danica Kragic, KTH, Sweden*
- *Martina Maggio, University of Lund, Sweden*
- *Claudio Menghi, University of Gothenburg, Sweden*
- *Arne Nordmann, Bosch, Germany*
- *Ivan Ruchkin, CMU, USA*
- *Andrey Rusakov, ETH, Switzerland*
- *Christian Schlegel, University of Applied Sciences Ulm, Germany*
- *Ulrik Schultz, University of Southern Denmark, Denmark*
- *Serge Stinckwich, University of Caen-Lower Normandy, France*
- *Jana Tumova, KTH, Sweden*
- *Andrzej Wasowski, ITUniversity of Copenhagen, Denmark*
- *Sebastian Wrede, University of Bielefeld, Germany*

Robotics is one of the most challenging domains for software engineering. Deploying even simple applications requires integrating solutions from experts of various domains, including navigation, path planning, localization, human-robot interaction, etc. As robots often operate in dynamic, partially observable environments additional challenges include adaptability, robustness, safety, and security.

The goal of RoSE 2018 is to bring together researchers with practitioners to identify new frontiers in robotics software engineering, discuss challenges raised by real-world applications, and transfer latest insights from research to industry. RoSE 2018 will solicit contributions from both academic and industrial participants, thus fostering active synergy between the two communities.

RoSE 2018 seeks contributions including the following topics:

- Analysis of challenges in robotic software engineering
- Architectures that lead to reusable robotic software
- Challenges for defining and integrating domain-specific languages for the design of robotic systems
- Continuous integration and deployment in robotics
- Identification and analysis of design principles promoting quality of service (e.g., performance, energy efficiency)
- Engineering the collaboration of multiple (heterogeneous) robots
- Lessons learned in the engineering and deployment of large-scale,
- real-world integrated robot software
- Machine learning for safety-critical robotic systems
- Metrics to measure non-functional properties (e.g., robustness,
- availability, etc.) and their application
- State-of-the-art research projects, innovative ideas, and field-based studies
- Software engineering best practices in robotics
- Processes and tools supporting the engineering and development of robotic systems
- Variability, modularity, and reusability in robotics
- Validation and verification of robotic systems

The submission and review process will be done using EasyChair (http://www.easychair.org/?conf=rose2018).

Important Dates

- Submission deadline: 5 February 2018
- Notification of acceptance: 5 March 2018
- Camera-ready version: 19 March 2018