Call for Workshop Papers
LIDARI - 2nd Workshop on Linked Data in Robotics and Industry 4.0
11.9.2017
Co-located with SEMANTiCS 2017 - The Linked Data Conference
https://2017.semantics.cc/satellite-events/lidari-2nd-workshop-linked-data-robotics-and-industry-40

The annual SEMANTiCS conference is the meeting place for professionals who make semantic computing work, who understand its benefits and encounter its limitations. Every year, SEMANTiCS attracts information managers, IT-architects, software engineers and researchers from organizations ranging from SMEs, through non-profit organizations, public administrations to the largest companies in the world. Attendees learn from industry experts and top researchers about emerging trends and topics in the fields of semantic software, enterprise data, linked data & open data strategies, methodologies in knowledge modelling and text & data analytics.

The overall goal of the LIDARI workshop is to identify challenges and limitations in Robotics and Industry 4.0 and discuss with experts from the linked data community how linked data can be effectively applied addressing the synergies and solution approaches. Industry 4.0 is a collective term (created in Germany) for the technological concepts of cyber-physical systems, the Internet of Things and the Internet of Services, leading to the vision of the Smart Factory. Within a modular structured Smart Factory, cyber-physical systems monitor physical processes, and make decentralized decisions. Over the Internet of Things, cyber-physical systems communicate and cooperate with each other and humans in real time. As identified in both academia and industry, there are several design principles in Industry 4.0, which support companies in identifying and implementing Industry 4.0 scenarios:

- Interoperability: the ability of cyber-physical systems (i.e. workpiece carriers or assembly stations) and humans to connect and communicate via the Internet of Things
- Virtualization: linking sensor data (from monitoring physical processes) with virtual plant models and simulation models
- Decentralization: the ability of cyber-physical systems within Smart Factories to make decisions on their own
- Real-Time Capability: the capability to collect and analyze data and provide the derived insights immediately
- Service Orientation: offering of services (cyber-physical systems, humans or Smart Factories)
- Modularity: flexible adaptation of Smart Factories to changing requirements by replacing or expanding individual modules

In addition, one of the aims in robotics is to build smarter robots that can communicate, collaborate and operate more naturally and safely. Increasing a robot's knowledge and intelligence is a vital for the successful implementation of Industry 4.0, since traditional approaches are not flexible enough to respond to the rapidly changing demands of new production processes and their growing complexity. Linked data represents a promising approach to overcome limitations of the state-of the- art solutions. The following list of topics is indicative, but other topics are also welcome:

- Knowledge Representation for Robotics
- Data integration
- Motion and task planning
- Manipulation and grasping
- Object and place recognition
- Human-Robot and Robot-Robot Interaction
- Navigation
- Databases for robotics applications
- Multidisciplinary Topics

Workshop Organizers

Thomas Moser, St. Pölten University of Applied Sciences (thomas.moser@fhstp.ac.at)
Munir Merdan, Practical Robotics Institute Austria (merdan@pria.at)

Submissions

The LIDARI workshops at SEMANTiCS 2017 welcomes the submission of papers on scientific research and/or innovations relevant to the topics of the workshop. Submissions must be original and must not have been submitted for publication elsewhere. Papers should follow the latest ACM ICPS guidelines for formatting (http://www.acm.org/sigs/publications/proceedings-templates) and must not exceed 8 pages in length, including references and optional appendices. Papers must be submitted in PDF (Adobe's Portable Document Format) format. Other formats will not be accepted. For the camera-ready version, the source files (Latex, WordPerfect, Word) will also be needed.

Submissions will be reviewed by at least 2 PC members following a double-blind review process. Accepted papers will be given guidelines in preparing and submitting the final manuscript(s) together with the notification of acceptance.

Submission via Easychair using **https://easychair.org/conferences/?conf=lidari2017**

Important Dates

Extended Submission Deadline: ~~3 July 2017~~ **21 July 2017 (11:59 pm, CET time)**
Notification of Acceptance: August 7, 2017
Camera-Ready Paper: August 28, 2017
Workshop day: September 11, 2017

Preliminary Program committee

Wolfgang Aigner (St. Pölten University of Applied Sciences, Austria)
Wilfried Lepuschitz (Practical Robotics Institute, Austria)
Oscar Pastor Lopez (Universidad Politécnica de Valencia, Spain)
Estefania Serral Asensio (Katholieke Universiteit Leuven, Belgium)
Sergio de Cesare (Brunel University, U.K.)
Frederik Gailly (Ghent University, Belgium)
Fajar Juang Ekaputra (Vienna University of Technology, Austria)
Marta Sabou (Vienna University of Technology, Austria)
Martin Melik-Merkumians (Vienna University of Technology, Austria)
Alois Zoitl (fortiss, Germany)