

# Technical Program of SOHOMA'16

## 6th October 2016

08:00 - 09:00	Registration
09:00 - 09:10	Opening Session
09:10 - 10:10	Keynote: Christoph Hanisch, "Agents and humans, a necessary paradigm shift"
10:10 - 10:30	Coffee break
10:30 - 12:30	<b>Technical Session A</b> Cloud and Cyber-Physical Systems for Smart Manufacturing
12:30 - 14:00	Lunch
14:00 - 15:20	<b>Technical Session B</b> Reconfigurable and Self-organized Multi-Agent Systems for Industry and Service
15:20 - 16:40	<b>Technical Session C</b> Sustainability issues in intelligent manufacturing systems
16:40 - 17:00	Coffee break
17:00 - 19:00	<b>Technical Session D</b> Holonc and Multi-agent system Design for Industry and Service
20:00 - 22:00	Banquet

## 7th October 2016

08:00 - 08:30	Registration	
08:30 - 10:10	<b>Technical Session E</b> Should Intelligent Manufacturing Systems be dependable and safe?	<b>Technical Session G</b> Engineering and Human Integration in Flexible and Reconfigurable Industrial Systems
10:10 - 11:10	Keynote: Luciano Gamberini, "Symbiotic Systems - New Challenges for Researching in Human Computer Interactions"	
11:10 - 11:30	Coffee break	
11:30 - 12:50	<b>Technical Session F</b> Service-oriented Management and Control of Manufacturing Systems	<b>Technical Session H</b> Virtualization and Simulation in Computing-oriented Industry and Service
12:50 - 13:00	Closing Session	
13:00 - 14:00	Lunch	

### Session A: Cloud and Cyber-Physical Systems for Smart Manufacturing

Chair:

High availability cloud manufacturing system integrating distributed MES agents	Silviu Raileanu, Florin Anton and Theodor Borangiu
Classification of cyber-physical systems developments: proposition of an analysis framework	Olivier Cardin
Formal Modelling of Distributed Automation CPS with CP-Agnostic Software	Dmitrii Drozdov, Sandeep Patil and Valeriy Vyatkin
Industrial Cyber Physical Systems Supported by Distributed Advanced Data Analytics	Jonas Queiroz, Paulo Leitão and Eugénio Oliveira
Gap analysis on Research and Innovation for Cyber-Physical Systems in Manufacturing	Anna De Carolis, Giacomo Tavola and Marco Taisch
Redundant and Decentralised Directory Facilitator for Resilient Plug and Produce Cyber Physical Production Systems	Pedro Ferreira, Flavio Pascoa, Ivo Pereira and Niels Lhose

### Session B: Reconfigurable and Self-organized Multi-Agent Systems for Industry and Service

Chair:

A Self-Organisation Model for Mobile Robots in Large Structure Assembly using Multi-Agent Systems	Spartak Ljasenko, Niels Lohse, Laura Justham, Ivo Pereira and Michael Jackson
Specifying Self-organising Logistics System: openness, intelligence, and decentralised control	Shenle Pan, Damien Trentesaux and Yves Sallez
A Generic Reconfigurable and Pluggable Material Handling System based on Genetic Algorithm	Andre Dionisio Rocha, Pedro Caetano and Jose Barata
Smart condition based maintenance (S-CBM) for a fleet of mobile entities	Fadil Adoum, Joffrey Clarhaut, Guillaume Branger and Damien Trentesaux

### Session C: Sustainability issues in intelligent manufacturing systems

Chair:

Emerging key requirements for future energy-aware production scheduling systems: a multi-agent and holonic perspective	Damien Trentesaux, Adriana Giret, Flavio Tonelli and Petr Skobelev
Multi-agent framework for Manufacturing Sustainability Analysis and Optimization	Flavio Tonelli, Massimo Paolucci, Cecilia Pasquale and Davide Anghinolfi
Energy Consumption's Data Mining in Manufacturing Environment	Andre Dionisio Rocha, Joao Aires Tapadinhas, Luis Flores and Jose Barata
Cybersecurity and Resilience Modeling for Software-Defined Networks-based Manufacturing Applications	Radu Babiceanu and Remzi Seker

### Session D: Holonic and Multi-agent system Design for Industry and Service

Chair:

Formal Specification of a Self-sustainable Holonic System for Smart Electrical Micro-grids	Adriano Ferreira, Paulo Leitao and José Barata
Erlang-based Holonic Controller for a Modular Conveyor System	Karel Kruger and Anton Basson
On Rescheduling in Holonic Manufacturing Systems	Carlos Pascal and Doru Panescu
Customisation in manufacturing: The use of 3D printing	Rengarajan Srinivasan, Vaggelis Giannikas, Duncan McFarlane and Mudassar Ahmed
Setting the Rescheduling Time in Manufacturing Control	Jose-Fernando Jimenez, Abdelghani Bekrar, Gabriel Zambrano Rey, Damien Trentesaux and Paulo Leitão
Big Data Analysis to Ease Interconnectivity in Industry 4.0 – A Smart Factory Perspective	Pedro Lima-Monteiro, Mafalda Parreira-Rocha, Andre Dionisio Rocha and Jose Barata

### Session E: Should Intelligent Manufacturing Systems be dependable and safe?

Chair:

Application of measurement-based AHP to product-driven system control	William Derigent, Alexandre Voisin, André Thomas, Sylvain Kubler and Jeremy Robert
Product Driven Systems facing unexpected perturbations: how Operational Research models and approaches can be useful?	Alexis Aubry, Hind Bril El-Haouzi, André Thomas and Mireille Jacomino
Holonic Facility Environment Monitoring and Control for Radiopharmaceutical Agent-based Production	Theodor Borangiu, Andrei Silisteanu, Silviu Raileanu and Octavian Morariu
Disruptions Are the Norm: Cyber-Physical Multi-Agent Systems for Autonomous Real Time Resource Management	Petr Skobelev Skobelev and Damien Trentesaux
Exploring the Design Space for Myopia-Avoiding Distributed Control Systems Using a Classification Model	Tianyi Wang, Henning Blunck and Julia C. Bendul

### Session F: Service-oriented Management and Control of Manufacturing Systems

Chair:

Dynamic Service Reconfiguration with Multi-agent systems	Nelson Rodrigues, Paulo Leitao and Eugénio Oliveira
Caregivers routing problem in Home Health Care: literature review	Eric Marcon, Sondes Chaabane, Yves Sallez and Therese Bonte
Semantic Model to Perform Pluggability of Heterogeneous Smart Devices into a Smart City Environment	Andre Dionisio Rocha, Pedro Fernandes, Catele Lima and Jose Barata
Active monitoring of a product: a way to solve the “lack of information” issue in the use phase	Vivien Basselot, Thierry Berger and Yves Sallez

### Session G: Engineering and Human Integration in Flexible and Reconfigurable Industrial Systems

Chairs:

A description and analysis method for reconfigurable production systems	Filippo Boschi, Giacomo Tavola and Marco Taisch
Instantiating the PERFORM System Architecture for Industrial Case Studies	Paulo Leitao, José Barbosa, Matthias Foehr, Ambra Calà, Pietro Perlo, Gregorio Iuzzolino, Pierluigi Petrali, Johan Vallhagen and Armando W. Colombo
A Highly Flexible, Distributed Data Analysis Framework for Industry 4.0 Manufacturing Systems	Ricardo Silva Peres, Andre Dionisio Rocha, Andre Coelho and Jose Barata
Reconfigurable Stochastic Petri Nets for Reconfigurable Manufacturing Systems	Samir Tigane, Kahloul Laïd and Samir Bourekache

### Session H: Virtualization and Simulation in Computing-oriented Industry and Service

Chair:

Simulation Platform for Virtual Manufacturing Systems	Radu Dobrescu and Daniel Merezeanu
Environment to Simulate Distributed Agent Based Manufacturing Systems	Andre Dionisio Rocha, Pedro Barroca and Jose Barata
An Evolvable and Adaptable Agent Based Smart Grid Management – A Simulation Environment	Andre Dionisio Rocha, Miguel Rodrigues and Jose Barata
Validation of a Holonic Controller for a Modular Conveyor System using an Object-oriented Simulation Framework	Karel Kruger and Anton Basson