



# I-ESA2018

## Program

Conference & Workshops



# Content



1. Doctoral Symposium Program [p.3-4](#)
2. Workshops Program [p.5-6](#)
3. Conference Program [p.7-10](#)



# Doctoral Symposium Program

Monday, March 19th

# Monday, March 19th, 2018

Room

1:00 PM	<b>Foyer</b>	Reception
2:00 PM	<b>360</b>	Doctoral Symposium*

\* More information will follow



# Workshops Program

Tuesday, March 20th-

Wednesday, March 21st

## Tuesday, March 20<sup>th</sup>

	Room	
08:00 AM	Foyer	Reception
08:45 AM	001	Opening

	Track A Room 360	Track B Room 307	Track C Room S_105
09:00 AM	A1: From Embedded Intelligence to Directed Manufacturing Decision Support <i>R. Young, G. Bhullar</i>	B1: Industrial big data platforms enabling enterprise interoperability for smart services, (Full day) <i>M. vSinderen, S. Gusmeroli</i>	
10:30-11:00 AM Break Foyer			
1:00 PM	Testing area		
2:00 PM	A2: Business impact of applications of Enterprise Interoperability <i>F-W. Jaekel</i>	B2: Industrial big data platforms enabling enterprise interoperability for smart services, (Full day) <i>M. vSinderen, S. Gusmeroli</i>	C2: Modelling & Simulation to design Advanced Manufacturing System <i>G. Doumeingts et al</i>
4:00-4:30 PM Break Foyer			
End: 6 PM			

## Wednesday, March 21<sup>st</sup>

	Track A Room 360	Track B Room 307	Track C Room S_105
0:00 AM	A3: Virtual Factory Operating System, <i>R. Poler, R. Goncalves</i>	B3: Predictive Maintenance in Industry 4.0: Methodologies, tools and interoperable applications <i>G. Mentzas et al</i>	C3: Method and Tools to support the development of Product Service System <i>G. Doumeingts et al</i>
10:30-11:00 AM Break Foyer			
1:00 PM	Testing area		
2:00 PM	A4 : Corporate standardisation management <i>K. Jakobs, M. Zelm</i>	B4: Industry 4.0 Qualification - Higher Education for the Era of Industry 4.0 <i>M. vStietenron et al</i>	C4: Interoperability for Crisis Management: Increasing Resilience of Smart Cities <i>A. de Nicola, F. Benaben</i>
4:00-4:30 PM Break Foyer			
End: 6 PM			



# Conference Program

Thursday, March 22nd-

Friday, March 23rd



Wednesday, March 21st, 2018

6:00 PM

**Foyer &  
Testing field**

Cocktail Welcome & Reception



8:00 AM	Reception- Foyer	Room: Large Auditorium
9:00 AM	Opening- Large Auditorium	Room: Large Auditorium
9:15 AM	IPK research projects & industry applications for Industrie 4.0	Room: Large Auditorium
9:45 AM	<b>Keynote</b> Nenad Ivezic "Towards Composable Service-Oriented Manufacturing Systems"	Room: Large Auditorium
10:20 AM	Coffee Break	Room: Foyer
10:50 AM	<b>Keynote</b> Dieter Wegener ""Industrie 4.0" – how digitalization revolutionizes the production chain"	Room: Large Auditorium
11:45 AM	<p>Room: 360 Session chair: Ricardo Gonçalves</p> <p><b>Security</b></p> <ul style="list-style-type: none"> <li>Cybersecurity Requirements for Supporting Enterprise Interoperability of Multi-Sided Platforms (V. Damjanovic-Behrendt)</li> <li>Improving the semantic interoperability of IoT Early Warning Systems: the Port of Valencia use case (J. Moreira, M. Van Sinderen, L. Ferreira Pires, R. Wieringa, P. Singh, P. Dockhorn Costa)</li> <li>Software Defined Networking to Improve Cybersecurity in Manufacturing Orientated Interoperability Ecosystems (F. Fraile, R. Poler, J. Luis Flores, E. Saiz)</li> </ul>	<p>Room: S112 Session chair: Gash Bhullar</p> <p><b>I 4.0 and Industrial Automation</b></p> <ul style="list-style-type: none"> <li>Industry 4.0 out of the box (P.Gering, P. Drange)</li> <li>Collaborative Information System Toward A Robotic Process Automation Solution (R. TORKHANI, J. Laval, N. Moalla, H. Malek)</li> <li>Maintenance 4.0 World of Integrated Information (E. Jantunen, G. Di Orio, C. Hegedus, P. Varga, I. Moldovan, F. Larrinaga, M. Becker, M. Albano, P. Malo)</li> </ul>
1:30 PM	Lunch	Room: Testing area
2:30 PM	<p>Room: 360 Session chair: Keith Popplewell</p> <p><b>Platforms and infrastructures for Enterprise Interoperability</b></p> <ul style="list-style-type: none"> <li>Towards Interoperability across Digital Manufacturing Platforms (U. Wajid, G. Bhullar)</li> <li>Cloud Collaborative Manufacturing Platform: An optimisation application in the automotive network (R. Poler, B. Andres, R. Sanchis, J. Mula, M. Díaz-Madroñero)</li> <li>OpennPaaS::NG: A Cloud-based Interoperable Enterprise Platform to support Inter-organizational Collaborations (S. Zribi, J.-P. LORRE)</li> </ul>	<p>Room: S112 Session chair: Karl Hribernik</p> <p><b>Semantic Interoperability</b></p> <ul style="list-style-type: none"> <li>Semantic Modelling of Cascading Risks in Interoperable Sociotechnical Systems (A. De Nicola, A. Coletti, G. Vicoli, M. Luisa Villani)</li> <li>Toward the use of upper level ontologies for semantically interoperable systems: An emergency management use case (L. Elmhadhbi, B. Archimède, M. Hedi Karray)</li> <li>Enabling semantic interoperability for risk and vulnerability analysis of public buildings (L. Shi, B. E. Pettersen, D. Roman)</li> </ul>
4:00 PM	Coffee Break	Room: Foyer
4:30 PM	<p>Room: 360 Session chair: Frank-Walter Jaekel</p> <p><b>Interoperability Testing</b></p> <ul style="list-style-type: none"> <li>IoT-based Automatic Non-conformity Detection: a Metalworking SME use case (M. Marques, R. Goncalves, C. Agostinho, A. Cunha, W. M. Mohammed)</li> <li>Manufacturing Software Units: ISO 16300-3 main Guidelines for Interoperability Verification and Validation (H. Basson, M. Matsuda, M. Bouneffa, A. Ahmad, D. Chung, E. Arai)</li> <li>Interoperability of Test Procedures between Enterprises (M. Franke, K.-D. Thoben, R. Rasche, A. Himmler, V. H.-W. Meyer)</li> </ul>	<p>Room: S112 Session chair: Raul Poler</p> <p><b>Ontology Modeling</b></p> <ul style="list-style-type: none"> <li>Ontology for Continuous Learning and Support (r. elchamaa, N. Moalla, A. Mbaya, Y. Ouzrout, A. Bouras)</li> <li>Enterprise Ontology for Service Interoperability in Socio-Cyber-Physical Systems (T. Levashova, A. Smirnov, A. Kashevnik)</li> <li>Application of Allen's Temporal Logic to Ontological Modeling for Enterprise Interoperability (A. Fedotova, K. Hribernik, K.-D. Thoben)</li> </ul>
7:00 PM	Conference Dinner	Room: Testing area

## Friday , March 23rd, 2018

9:00 AM	Keynote Stefan Zimmerman “Industry 4.0 and the concept of the connected enterprise”	Room: Large Auditorium
9:45 AM	Keynote Gerald Santucci “Digital Transformation: A Call for Revisiting Interoperability”	Room: Large Auditorium
10:30 AM	Coffee Break	Room: Foyer
11:00 AM	<p>Room: 360 Session chair: Nejib Moalla</p> <p><b>Block Chain and Decentralized Approaches</b></p> <ul style="list-style-type: none"> <li>The Development of Smart Contracts for Heterogeneous Blockchains (H. Syahputra, H. Weigand )</li> <li>Blockchain in decentralized local energy markets (S. Junghans, A. Hermann, T. Teich, D. Kretz , T. Neumann, S. Leonhardt, S. Kassel)</li> <li>Towards large-scale logistics interoperability based on analysis of available open standards (W. Hofman)</li> </ul>	<p>Room: S112 Session chair: Thomas Knothe</p> <p><b>Interoperability Application Scenarios</b></p> <ul style="list-style-type: none"> <li>Integrating business process interoperability into an inter-enterprise performance management system. Application to an agri-food supply chain (M.-J. Verdecho, J.-J. Alfaro-Saiz, R. Rodríguez-Rodríguez)</li> <li>Interoperability challenges in Building Information Modeling (BIM) (T. Djuedja, J. Flore, M. Hedi Karray, B. Kamsu Fogueu, C. Magniont, H. Abanda Fonbeyin)</li> <li>An application of managing deviations within a supply chain monitoring framework (Z. Jiang, Jacques Lamothe, J. Lesbegueries, F. Benaben, F. Hauser)</li> </ul>
12:30 PM	Lunch	Room: Testing area
01:30 PM	<p>Room: 360 Session chair: Jörg Reiff-Stephan</p> <p><b>Interoperability in Manufacturing and Repair &amp; Operation (MRO)</b></p> <ul style="list-style-type: none"> <li>Towards information system architecture to support predictive maintenance approach (A. Sarazin , S. Truptil, A. Montarnal , J. Lamothe)</li> <li>A Unified Architecture for Proactive Maintenance in Manufacturing Enterprises (A. Bousdekis, K. Hribernik , K.-D. Thoben, G. Mentzas , M. Lewandowski , M. von Stietencron)</li> <li>Towards predictive maintenance of walls in hard rock underground facilities: IoT-enabled rock bolts (J. Lindström, J. Eliasson , P. Kyösti , U. Andersson)</li> </ul>	<p>Room: S112 Session chair: Guy Doumeingts</p> <p><b>Modelling and Frameworks</b></p> <ul style="list-style-type: none"> <li>A Performance Measurement Extension for BPMN - One Step Further Quantifying Interoperability in Process Model (X. Heguy, Y. Ducq , G. Zacharewicz , S. Tazi , B. Vallespir)</li> <li>An assessment conceptual Framework for the modernization of Legacy Systems (A. M'baya, J. Laval , N. Moalla)</li> <li>The European Union Landscape on Interoperability Standardisation: Status of European and National Interoperability Frameworks (V. Kalogirou, Y. Charalabidis)</li> </ul>
3:00 PM	Coffee Break	Room: Foyer
3:30 PM	<p>Room: 360 Session chair: Carlos Agostinho</p> <p><b>Entities in IoT</b></p> <ul style="list-style-type: none"> <li>A Lightweight IoT Hub for SME Manufacturing Industries (C. Agostinho, F. Lopes, J. Ferreira, S. Ghimire, M. Marques)</li> <li>Towards service orchestration through software capability profile (A. Belfadel , J. Laval , C. Bonner Cherifi, N. Moalla)</li> <li>Empowering product co-creation approaches through Business Interoperability Concepts: The Toy Industry case (A. Michalitsi-Psarrou, S. Koussouris, C. Kontzinos, O.a Markaki, C. Ntanos, D. Panopoulos, J. Psarras)</li> </ul>	<p>Room: S112 Session chair: Martin Zelm</p> <p><b>Interoperability in M2M Interaction</b></p> <ul style="list-style-type: none"> <li>Achieving syntax interoperability of existing traffic controllers and Intelligent Transport Systems (M. Ivanovic , Z. Marjanovic)</li> <li>Smart Process Communication for Small and Medium-sized Enterprises (R. van de Sand, J. Reiff-Stephan)</li> <li>An Ontology Framework for Multisided Platform Interoperability (Q. Deng, K. Hribernik, K.-D. Thoben, S. Gönül, Y. Kabak, N. Gessa, D. Glachs, F. Gigante, V. Damjanovic-Behrendt)</li> </ul>
5:00 PM	Conclusion	Room: Small Auditorium
7:00 PM	Excursion Spy Museum	Meeting Point: Foyer