

	<p align="center"><b>18<sup>th</sup> International Conference on Hybrid Intelligent Systems (HIS'2018)</b></p> <p align="center">Porto, Portugal, 13-15 December, 2018</p> <p align="center"><a href="http://www.mirlabs.org/his18/">http://www.mirlabs.org/his18/</a></p>
<b>Title of Session</b>	<b>Intelligent, Collaborative and Sustainable Models, Methods and Tools for Improving and Supporting Manufacturing Processes in the context of Industry 4.0 (IC&amp;S-DSS I4.0)</b>
<b>Objectives and scope</b>	<p>Nowadays, the knowledge based economy and the continuous development of information and communication technology (ICT) turns the development of intelligent, collaborative and sustainable models, methods and tools for improving and supporting manufacturing processes inevitable. Creating active approaches, mechanisms and information systems, which are characterized by the ability to adapt and learn to rapidly changing conditions in manufacturing environments supports the real needs of manufacturing systems in the context of industry 4.0. The proposed special session aims at putting forward a revolution idea, for supporting intelligent plant characterized by flexibility and efficiency as well as the need to make decisions in real time.</p> <p>Therefore, the aim of this special session is to on IC&amp;S-DSS I4.0.</p> <p>This special session seeks to bring together novel contributions from researchers and practitioners involving the following main subject areas related to intelligent, collaborative and sustainable models, methods and tools for improving and supporting manufacturing processes in the context of Industry 4.0. It provides a forum for researchers and practitioners to review and disseminate quality research work, and to identify critical issues for further developments on all aspects of IC&amp;S-DSS I4.0. Main issues may be related to manufacturing technology and processes, materials, data processing and visualization, predictive engineering, sustainability and resources sharing and networking.</p> <p>Through this special session the organizers intend to promote theoretical and empirical research, and invite researchers to contribute with original research articles as well as surveys and case study articles, for instance in the scope of the following main topics.</p>
<b>Topics of Interest</b>	<p>Topics of interest include but are not limited to the following:</p> <ul style="list-style-type: none"> <li>• Intelligent Manufacturing Systems</li> <li>• Intelligent Models and Control Systems</li> <li>• Smart Manufacturing</li> <li>• Cyber physical systems</li> </ul>

	<ul style="list-style-type: none"> <li>• Integrated and Optimization-based Decision Support Models, Methods and Tools</li> <li>• Sustainable Web-based Decision Support Systems</li> <li>• Data Mining</li> <li>• Soft Modelling in Production Engineering</li> <li>• Grey System Theory</li> <li>• Rough Sets Theory</li> <li>• Intelligent and distributed Production Planning and Scheduling</li> <li>• Collaborative and Sustainable Knowledge Management and Decision Support Systems</li> </ul>
<b>Session Chair / Co-chair</b>	Leonilde Varela Ana Maria Madureira Vijaya Kumar Manupati
<b>Scientific Committee</b>	<b>(To be prepared...)</b>
<b>Contact Information</b>	Leonilde Varela, Minho University, Portugal, <a href="mailto:leonilde@dps.uminho.pt">leonilde@dps.uminho.pt</a> Ana Maria Madureira, ISEP/IPP, Portugal, <a href="mailto:amd@isep.ipp.pt">amd@isep.ipp.pt</a> Vijaya Kumar Manupati, NIT Warangal, India, <a href="mailto:manupativijay@gmail.com">manupativijay@gmail.com</a>
<b>Brief Biography of the session Organizers</b>	<p><b>Name: Maria Leonilde Rocha Varela</b></p> <p><b>Personal Data</b> Nationality: Portuguese</p> <p><b>Academic Titles</b></p> <ul style="list-style-type: none"> <li>• Graduated (Licenciatura) in Production and Systems – University of Minho in 1994.</li> <li>• Master in Computer Integrated Manufacturing in 1999 from University of Minho</li> <li>• Ph.D. in Production and Systems in 2007 from University of Minho.</li> </ul> <p><b>Academic Career</b></p> <ul style="list-style-type: none"> <li>• From 1994 to 2003 - Teaching assistant at the Department of Production and Systems of the School of Engineering of the Minho University.</li> <li>• Since 2003 Assistant Professor at the Department of Production and Systems of the School of Engineering of the Minho University.</li> <li>• She has been responsible for several undergraduate and graduate final projects in the area of Production and Systems.</li> </ul> <p><b>R&amp;D Activities</b></p> <ul style="list-style-type: none"> <li>• Main research interests: Manufacturing Planning and Control, Scheduling, Decision-Support Systems, Web based systems and services, Optimization, Artificial Intelligence and Meta-heuristics.</li> </ul>

- Member of the EWG-DSS – Euro Working Group of Decision Support Systems
- Coordinates R&D projects in the area of Production and Systems Engineering, concerning namely the development of Web-based platforms and decision support systems and methodologies.
  - Published more than 100 scientific papers in international conferences and in international scientific books and journals.

**Name: Ana Maria Dias Madureira Pereira**

**Personal Data**

Nationality: Portuguese

**Academic Titles**

- Graduated (Licenciatura) in Computer Science at Institute of Engineering - Polytechnic of Porto in 1993.
- Master in Electrical and Computer Engineering in 1996 from Porto University
- Ph.D. in Production and Systems in 2003 from Minho University

**Academic Career**

- From 1994 to 2001 - Teaching assistant at the Department of Computer Science Engineering of the Institute of Engineering (ISEP) of the Polytechnic Institute of Porto.
- Since 2001 Professor at the Department of Computer Science Engineering of the School of Engineering (ISEP) of the Polytechnic Institute of Porto.
- She has been responsible for several undergraduate and graduate final projects in the area of computer science and artificial intelligence.

**R&D Activities**

- Main research interests: Artificial Intelligence, Decision-Support Systems, Optimization, Meta-heuristics, Evolutionary Computation, Scheduling, Manufacturing, Multi-Agent Systems, Autonomic Computing, Workflow, BPM.
- Member of GECAD – Knowledge Engineering and Decision-Support Research Group, coordinates the Knowledge-based Systems and the Power Systems Groups
  - Coordinates R&D projects in the area of Artificial Intelligence and Distributed Scheduling, concerning namely the development of Multi-Agent System for Distributed Manufacturing Scheduling with Biologically Inspired Techniques and Autonomic Computing.
  - Published more than 100 scientific papers in international conferences and in international scientific journals and books.

**Name: Vijay Kumar Manupati**

Nationality: Indian

**Academic Titles**

- He received his PhD in Industrial and Systems Engineering from Indian Institute of Technology, Kharagpur.

**Academic Career**

- He is working as Assistant Professor in the Department of Mechanical Engineering in NIT Warangal, India.

**R&D Activities**

- Main research interests: His research interests include intelligent manufacturing, integration of process planning and scheduling in manufacturing, Sustainable Supply Chain and Evolutionary Algorithms.
- He is a member of Institute of Industrial and Systems Engineering and of MirLabs, and a technical committee member of various International conferences.
- Coordinates R&D projects in the area of Industrial Management and Engineering, concerning namely the development of optimization methods and tools.
- Published more than 50 scientific papers in international conferences and in international scientific books and journals, like International Journal of Production Research, Computers and Industrial Engineering, International Journal of Advanced Manufacturing Technology, Journal of Engineering.