

# Symposium Structure

## Plenary Sessions and Keynote Presentation

### Plenary Session 1 INCOM'12

#### Uncertainty and Supply Chain Planning

**Professor Stephen C. Graves**, *Massachusetts Institute of Technology, USA*

Stephen C. Graves is the Abraham J. Siegel Professor of Management Science at MIT. He was the deputy dean at the MIT Sloan School, 1990–1993 and the co-director of the MIT Leaders for Manufacturing (LFM) Program (1989- 1990 and 1994–2001) and the System Design and Management (SDM) Program (1999 – 2001). He served a two-year term as the Chair of the MIT Faculty, 2001 – 2003. He has joint faculty appointments with both the Mechanical Engineering Department and the Engineering Systems Division at MIT. He is a Faculty Fellow of the Singapore-MIT Alliance. He has conducted industry-based research projects with numerous companies, including Amazon.com, AT&T, Boeing, Eastman Kodak, IBM, Intel, General Motors, Mitsubishi, Monsanto, Polaroid, Staples, and Teradyne. As of January 2009 he is the editor-in-chief of *Manufacturing & Services Operations Management*, the *INFORMS* journal for operations management. He has been recognized as an *INFORMS* Fellow, a *MSOM* Fellow and a *POMS* Fellow.

**Chair:** Alexandre Dolgui, Ecole Nationale Supérieure des Mines de Saint-Etienne, France

### Plenary Session 2 INCOM'12

#### Process Modeling, Control, and Condition Monitoring: A Data Mining Perspective

**Professor Andrew Kusiak**, *The University of Iowa, USA*

Andrew Kusiak is Professor and Chair of the Department of Mechanical and Industrial Engineering at the University of Iowa in Iowa City, Iowa. He is interested in applications of data mining and computational intelligence in renewable energy, product development, manufacturing, and healthcare. Dr. Kusiak has published numerous books and technical papers in journals sponsored by professional societies, such as *AAAI*, *ASME*, *IEEE*, *IIE*, *ESOR*, *IFIP*, *IFAC*, *INFORMS*, *ISPE*, and *SME*. He speaks frequently at international meetings, conducts professional seminars, and consults for numerous corporations. Dr. Kusiak has served on editorial boards of over forty journals. He is the *IIE* Fellow and the Editor-in-Chief of the *Journal of Intelligent Manufacturing*.

**Chair:** Radu Băbiceanu, Deptment of Industrial and Systems Engineering, VirginiaTech., USA

### Plenary Session 3 INCOM'12

#### Contributions and Challenges in the Design of Production Systems

**Professor Ronald G. Askin**, *Arizona State University, USA*

Ronald G. Askin, Ph.D., is Professor of Industrial Engineering and Director of the School of Computing, Informatics, and Decision Systems Engineering at Arizona State University. He received his PhD from Georgia Institute of Technology and has 30 years of experience in the development, teaching and application of methods for systems design and analysis with particular emphasis on production and material flow systems. Other interests include quality engineering and decision analysis. He is a Fellow of the Institute of Industrial Engineers (IIE) and a former editor of *IIE Transactions on Design and Manufacturing*. He has served on the IIE Board of Trustees, as President of the IIE Council of Fellows, Chair of the Association of Chairs of Operations Research Departments (ACORD) and is currently Chair of the Industrial Engineering Academic Department Heads (CIEADH). His list of awards includes a National Science Foundation Presidential Young Investigator Award, the Shingo Prize for Excellence in Manufacturing Research, IIE Joint Publishers Book of the Year Award (twice), IIE Transactions on Design and Manufacturing Best Paper Award (twice), the Eugene L. Grant best paper award from *The Engineering Economist*, and the IIE Transactions Development and Applications Award.

**Chair:** Vittaldas Prabhu, Penn. State University, Pennsylvania, USA

### Plenary Session 4 INCOM'12

#### Product Intelligence: Theory and Practice

**Professor Duncan McFarlane**, *University of Cambridge, UK*

Duncan McFarlane is Professor of Industrial Information Engineering at the Cambridge University Engineering Department, and head of the Distributed Information & Automation Laboratory within the Institute for Manufacturing. He

has been involved in the design and operation of industrial automation and information systems for twenty years. His research work is focused in the areas of distributed industrial automation, reconfigurable systems, RFID integration, track and trace systems and valuing industrial information. Most recently he has been examining the role of automation and information solutions in supporting services and infrastructure and in addressing environmental concerns. Between 2000-2003 Professor McFarlane was the European Research Director of the Auto-ID Center and between 2003-2006 head of the Cambridge Auto ID Lab and co-founded a series of programs on information in the aerospace sector including the Aero ID Programme, examining the role of RFID in the aerospace industry. Professor McFarlane is also Co-Founder and Chairman of RedBite Solutions Ltd - an industrial RFID and track & trace solutions company. Between 2006-11 he was Professorship of Service and Support Engineering which was supported by the Royal Academy of Engineering and BAE Systems. In October 2010, he was appointed Professor of Industrial Information Engineering.

Chair: Theodor Borangiu, University Politehnica of Bucharest, Romania

## Plenary Session 5 INCOM'12

### Production Systems Flexibility: Theory and Practice

**Professor George Chryssolouris**, *University of Patras, Greece*

George Chryssolouris is Professor (1993- ) of the Department of Mechanical Engineering and Aeronautics of which he was Chairman between 2003 and 2007. He was, for 2006-2007, the President of CIRP, the Paris based International Academy for Production Engineering. He is the Director of the Laboratory for Manufacturing Systems and Automation (LMS) working on a variety of research subjects including production systems planning and control, software development for industrial networking, innovative manufacturing processes, and virtual reality engineering applications, and quality control and metrology. Professor Chryssolouris worked at MIT (Massachusetts Institute of Technology) in the USA between 1980 and 1993. He led a research group for the development of information systems and automation for industrial applications. He taught at MIT undergraduate and graduate level subjects related to manufacturing, systems, design and automation. Professor Chryssolouris has more than 300 publications in international scientific journals and refereed conferences. He is the author of two books published by Springer Verlag. He was granted the Frederick W. Taylor Research Medal by SME (2001) for his outstanding contributions to manufacturing research. He was also the recipient of SME/s Young Outstanding Manufacturing Engineer Award (1986).

Chair: Shimon Y. Nof, Purdue University, USA

## Plenary Session 6 INCOM'12

### Past, Present and Future of Distributed Intelligent Control in Industrial Applications

**Dr. Pavel Vrba**, *Czech Technical University in Prague, Rockwell Automation Research Center, Czech Republic*

Pavel Vrba is interested in applications of holonic principles, multi-agent systems, simulations, semantic technologies and web-based user interfaces in industrial automation domain. Dr. Vrba has published more than sixty conference papers, journal articles and book chapters related to his research area and seven pending/filed U.S. patents. Dr. Vrba is the Vice-chair of the Technical Committee on Industrial Agents within IEEE Industrial Electronics Society and Vice-chair of HoloMAS 2011 and Incom 2012 conferences. Dr. Vrba is currently working at the Department of Cybernetics to establish a new Smart Systems Group after previously working as a technical lead of the Rockwell Automation Laboratory for Distributed Intelligent Control at the Czech Technical University in Prague.

Chair: Damien Trentesaux, University of Valenciennes, France

## Plenary Session 1 SOHOMA'12

### The Physical Internet: Enabling Efficient and Sustainable Logistics

**Professor Benoit Montreuil**, *Laval University, Québec, Canada*

Benoit Montreuil holds the Canada Research Chair in Enterprise Engineering, focused on the design and management of manufacturing and logistics networks. He is Professor of operations and decisions systems at Laval University (Québec, Canada). Since getting his Ph.D. in Industrial Engineering from the Georgia Institute of Technology in 1982, he has lead numerous scientific projects and has extensive collaborative research experience with industry. His main research interests lie in developing concepts, methodologies and technologies for efficient and sustainable logistics systems. He stands at the crossroads of industrial and systems engineering, operations research, computer science and operations, logistics, supply chain and strategic management. He has published 232 scientific publications. He has pronounced numerous keynote speeches at international scientific and professional conferences. He is a founding member of the CIRRELT Interuniversity Research Centre on Enterprise Networks, Logistics and Transportation, currently serving both on its scientific advisory board and its administration board. He has vast consulting and entrepreneurial experience. He is Immediate Past President of the College Industry Council on Material Handling Education. He is a Fellow of the Institute of Industrial Engineers. In

2011, DC Velocity has named him Rainmaker of the Year. He is the inventor of the Physical Internet and leads the International Physical Internet Initiative.

Chair: André Thomas, University of Lorraine, France

## Plenary Session 2 SOHOMA'12

### Towards loose coupled manufacturing systems

**Cristina Morariu**, *IBM Romania, Bucharest, Romania*

Cristina Morariu works as a project manager for IBM Global Delivery Services in Bucharest for the last four years. She has been involved in process improvement and enterprise governance, areas of expertise that she is currently applying in the manufacturing domain. Cristina is interested in applications of holonic principles and multi-agent systems, researching the impact of new paradigms such as service orientation or enterprise service bus in the manufacturing area. Her work focuses on Enterprise Bus architectures, acting as a smart middleware support for loose coupled, high flexible systems. In this area, Cristina is involved in definition and optimization of the business processes that drive the interactions between suppliers, providers and manufacturing systems, using Business Process Modelling simulation environments.

Chair: Doru Pănescu, Technical University of Iași, Romania

## Keynote Presentation 1 IICS'12

### Service innovation to drive chemical operation efficiency

**Professor Hector Puyosa**, *SABIC, Cartagena, Spain*

Hector Puyosa has more than 25 years of experience on service, oil & gas and plastic industries. He started his career in 1984 as maintenance electronic and automation engineer providing services for companies on food, beverage, paper and metal transformation sectors. He moved to the oil and gas industry in 1991, working for the Venezuela's national oil company, PDVSA, as process automation engineer. He entered in the plastic business in 1996 as senior process engineer for the design and implementation of the control system for the largest polycarbonate plant built in Spain. He currently works as chemical operation plant manager at SABIC Cartagena. Hector led a GE Plastics global initiative on advanced manufacturing system as technical leader setting priorities and direction around MES and control system, identifying focus group activities and developing metrics of success, defining global standards and process/procedure to retain business knowledge. Hector has a Ph.D. degree on Industrial Engineering from the University of Murcia and is partial-time professors at Polytechnic University of Cartagena.

Chair: Nick Ivănescu, University Politehnica of Bucharest, Romania

## Keynote Presentation 2 IICS'12

### Trends and Challenges in Research for Service Robots

**Professor Marco Ceccarelli**, *University of Cassino, Italy*

Marco Ceccarelli is Professor of Mechanics of Machinery and Director of LARM, the Laboratory of Robotics and Mechatronics at the University of Cassino. He is member of Commission for Robotics of IFToMM, the International Federation for the Promotion of Machine and Mechanism Science. He has written the books "Fundamentals of Mechanics of Robotic Manipulation" published by Kluwer in 2004 and "Mecanismos" published by Trillas in Mexico in 2008. He has been President of IFToMM for term 2008-2011. His research interests cover aspects of Mechanics of Mechanisms and Robots, History of TMM, and Mechanism Design. He is author or co-author of more than five hundred papers, which have been presented at Conferences or published in national and international journals, and he has edited 16 books as for conference proceedings and specific topic issues.

Chair: Florin Daniel Anton, University Politehnica of Bucharest, Romania

## Keynote Presentation 3 IICS'12

### Knowledge-based Technologies for Future Factory Engineering and Control

**Christoph Legat**, *Siemens AG, Munich, Germany*

Christoph Legat studied computer science and business administration at the University of Munich, Germany. For more than four years, he is working for the Siemens AG and is currently with the research group for reasoning and distributed intelligence of Siemens Corporate Technology. Furthermore, Christoph Legat is currently working towards his doctoral thesis focusing on fault-tolerant field level automation software by dynamic reconfiguration in a close cooperation with the Institute of Automation and Information Systems of the Technical University of Munich, Germany. He is involved in various public funded research projects addressing monitoring and operational control aspects of production lines, product-driven automation and energy-efficiency in manufacturing automation. During the last three years, he has authored more

than fifteen international conference and journal publications as well as several national and international patents. His research focuses especially on the application of formal methods and knowledge-based techniques to improve the flexibility and changeability of manufacturing control systems.

Chair: Iuliu Stocklosa, East Electric, Romania

#### Keynote Presentation 4 IICS'12

##### Radio Frequency Identification in Supply Chain: Technology, Applications and Trends

**Professor Alexandre Dolgui**, *Ecole Nationale Supérieure des Mines de Saint-Etienne, France, France*

Professor Alexandre Dolgui is Full Professor of Exceptional Class la Ecole Nationale Supérieure des Mines de Saint-Etienne, France, Deputy Director for Research of Institute Henri Fayol / Director of Laboratory for Information Science and Technology. His areas of scientific interests are: Optimal Design of Production and Assembly Lines, Inventory Control and Supply Chain Optimization, Planning and Scheduling, Computer-Aided Process Planning Solutions, Discrete Optimization Methods, Discrete-Event Simulation. He is chair of IFAC Technical Committee "Manufacturing Modelling for Management and Control"; Member of IFAC Technical Committee "Manufacturing Plant Control", chair of working group "Design and control of reconfigurable manufacturing systems". Professor Dolgui has published more than 400 refereed journal and conference papers, book chapters and research reports.

Chair: Monica Drăgoicea, University Politehnica of Bucharest, Romania

## Special Tracks and Sessions

#### Track A: New Developments in Scheduling and Manufacturing

**Organizers/Chairs:** Dirk Briskorn, University of Siegen, Germany  
Erwin Pesch, University of Siegen, Germany  
Frank Werner, Otto-von-Guericke-University Magdeburg, Germany

SS A1: Theoretical Aspects and Graph Theory for Scheduling  
Chairs: Frank Werner (Germany), Laurent Houssin (France)

SS A2: Job Shop Scheduling  
Chairs: Christophe Sauvey (France), Frank Werner (Germany)

SS A3: Single-Machine Scheduling Problems  
Chairs: Alexander Lazarev (Russia), Evgeny Gafarov (Russia)

SS A4: Batch Scheduling in Manufacturing Systems  
Chairs: Janos Somlo (Hungary)

SS A5: Scheduling Heuristics  
Chairs: Omid Gholami (Iran), Stanley Gershwin (USA)

#### Track B: Discrete Event Systems and Hybrid Systems: Modelling and Supervisory Control

**Organizers/Chairs:** Hassane Alla, Grenoble University, France  
Simona Caramihai, University Politehnica of Bucharest, Romania  
Lionel Amodeo, Université de Technologie de Troyes, France  
Farouk Yalaoui, Université de Technologie de Troyes, France

SS B1: Supervisory Control in Discrete Event Systems  
Organizers/Chairs: Hassane Alla (France), Simona Caramihai (Romania)

SS B2: Discrete Controller Synthesis and Manufacturing Execution Systems  
Chairs: Arturo Sanchez (Mexico), Roberto Ubertino Rosso (Brazil)

SS B3: Petri Nets for FMS Modelling and Performance Evaluation  
Chairs: Laszlo Monostori (Hungary), Tiberiu Leția (Romania)

SS B4: Applications of Petri Nets in Industry and Services  
Chairs: Lionel Amodeo (France), Xiaolan Xie (France)

### **Track C: Intelligent Transportation and Logistics Systems: Modelling, Simulation, Control and Communication**

**Organizers/Chairs:** Hassane Abouaissa, University of Artois, France  
Todor Stoilov, Bulgarian Academy of Sciences, Sofia, Bulgaria  
Daniel Jolly, University of Artois, France  
Benoit Montreuil, Laval University, Québec, Canada

SS C1: Intelligent Transportation Systems

Chairs: Todor Stoilov (Bulgaria), Pasquale Carotenuto (Italy)

SS C2: The Physical Internet: Towards Efficient and Sustainable Interconnected Logistics and Supply Networks

Chairs: Benoit Montreuil (Canada), Russell Meller (USA)

SS C3: Dock Assignment and Warehouses Management

Organizers/Chairs: Hamid Allaoui (France), Gilles Goncalves (France)

### **Track D: Design of Reconfigurable Manufacturing Systems**

Supported by IFAC TC5.1

**Organizers/Chairs:** Alexandre Dolgui, Ecole Nationale Supérieure des Mines de Saint-Etienne, France  
Bianca Rimini, University of Reggio Emilia, Italy  
Genrikh Levin, National Academy of Sciences, Belarus

SS D1: Combinatorial Design of Reconfigurable Production and Assembly Lines

Organizers/Chairs: Alexandre Dolgui (France), Rita Gamberini (Italy)

SS D2: Reconfigurable Manufacturing System Planning and Control

Organizers/Chairs: Xavier Delorme (France), Cemalettin Öztürk (Turkey)

SS D3: Performance Evaluation and Optimization in Assembly and Production Line Design

Organizers/Chairs: Alexandre Dolgui (France), Hicham Chehade (France)

### **Track E: Supply Network Engineering**

Supported by IFAC TC5.2

**Organizers/Chairs:** Jean-Claude Hennet, LSIS, Marseille, France  
Dmitry Ivanov, Berlin School of Economics and Law, Germany  
Alexandre Dolgui, Ecole Nationale Supérieure des Mines de Saint-Etienne, France  
Shimon Y. Nof, Purdue University, United States

SS E1: Supply Network Management and Coordination

Chairs: Shimon Y. Nof (USA), Dmitry Ivanov (Germany)

SS E2: Sustainable and Green Supply Chains and Networks

Organizers/Chairs: Daniel Roy (France), Ștefan Mocanu (Romania)

SS E3: Game Theory and Multi-criteria Approaches for Supply Chains

Organizers/Chairs: Jean-Claude Hennet (France), Silviu Răileanu (Romania)

SS E4: Supply Network Dynamics and Control

Organizers/Chairs: Alexandre Dolgui (France), Dmitry Ivanov (Germany)

SS E5: Modelling and Decisions under Uncertainty within Supply Chains

Organizers/Chairs: Jacques Lamothe (France), Séverine Durieux (France)

SS E6: Collaborative, Community-Built Production Systems

Organizers/Chairs: Przemysław Różewski (Poland), Natalia Bakhtadze (Russia)

### **Track F: Holonic and Multi-Agent Technologies for Industrial Systems**

Supported by IFAC TC5.1 and the European Project ERRIC

**Organizers/Chairs:** Paul Valckenaers, University of Leuven, Belgium  
André Thomas, University of Lorraine, France  
Damien Trentesaux, Université Lille Nord de France, Valenciennes, France

SS F1: Intelligent Products

Organizers/Chairs: Kary Främling (Finland), Yves Sallez (France)

- SS F2: Service Orientation in Manufacturing Control and Management  
Organizers/Chairs: Radu Băbiceanu (USA), Fouzia Ounnar (France)
- SS F3: Holonic and Multi-Agent Technologies for Agile Manufacturing  
Chairs: Paul Valckenaers (Belgium), André Thomas (France), Damien Trentesaux (France)
- SS F4: Distributed Intelligence for Sustainable Manufacturing  
Organizers/Chairs: Vittaldas Prabhu (USA), Duncan McFarlane (United Kingdom), Theodor Borangiu (Romania)
- SS F5: Multi-Agent Systems  
Chairs: Radu Dobrescu (Romania), Monica Drăgoicea (Romania)
- SS F6: Service Oriented Architectures within Automation  
Chairs: Tina Krausser (Germany), Tobias Gerber (Austria)

### Track G: Robotics for Manufacturing and Services

Supported by IFAC TC5.1 and TC4.3

**Organizers/Chairs:** Marco Ceccarelli, University of Cassino, Italy  
Theodor Borangiu, University Politehnica of Bucharest, Romania  
Adriana Țăpuș, ENSTA ParisTech, France  
Rosario Sinatra, University of Catania, Italy

- SS G1: Human - Robot Interaction and Coordination  
Chairs: Rosario Sinatra (Italy), Theodor Borangiu (Romania)
- SS G2: Artificial Intelligence in Robotics and Factory Automation  
Chairs: Corneliu Lazăr (Romania), Doru Pănescu (Romania)
- SS G3: Robotic Systems for Services  
Organizers/Chairs: Florin Daniel Anton (Romania), Marco Ceccarelli (Italy)
- SS G4: Mobile Robots  
Organizers/Chairs: Rosario Sinatra (Italy), Ion Ion (Romania)

### Track H: Intelligent Integrated Maintenance and Quality Strategies

Supported by IFAC TC5.1 and TC5.2

**Organizers/Chairs:** Nidhal Rezg, Université Paul Verlaine Metz, France  
Ali Gharbi, École de Technologie Supérieure, Montréal, Canada  
Sofiene Dellagi, Université Paul Verlaine Metz, France

- SS H1: Decision Support in Maintenance and Experience Feedback in Enterprises  
Organizers/Chairs: Luminița Duță (Romania), David Tchoffa (France)
- SS H2: Optimization of Integrated Maintenance and Production Strategies  
Organizers/Chairs: Sofiene Dellagi (France), Nidhal Rezg (France)
- SS H3: Production Policies with Joint Quality Analysis and e-Maintenance  
Organizers/Chairs: Dan Popescu (Romania), Mustapha Noureifath (Canada)
- SS H4: Prognostic and Health Management for Intelligent Maintenance  
Organizers/Chairs: Hector-David Puyosa Piña (Spain), Brigitte Morello (France)
- SS H5: Production Scheduling and Preventive Maintenance  
Chairs: Manuel Avila-Gomez (France), Luca Fumagalli (Italy)

### Track I: Manufacturing Engineering and Product Lifecycle Management

Supported by the European Project AmePLM

**Organizers/Chairs:** Joachim Lentjes, IAO Stuttgart, Germany  
Agostino Villa, Politecnico di Torino, Italy  
Alexandre Dolgui, Ecole Nationale Supérieure des Mines de Saint-Etienne, France  
Cathal Heavey, University of Limerick, Ireland  
Bart MacCarthy, University of Nottingham, United Kingdom  
Walter Ukovich, Università degli Studi di Trieste, Italy

- SS I1: AmePLM: Advanced Platform for Manufacturing Engineering and Product Lifecycle Management  
Organizers/Chairs: Joachim Lentjes (Germany), Paolo Chiabert (Italy)

SS I2: Extended Product Design and Product Lifecycle Management  
Organizers/Chairs: Amira Sharon (Israel), Thierry Coudert (France)

SS I3: Decision Support Systems for Manufacturing  
Organizers/Chairs: Constantin Bălă-Zamfirescu (Romania), Adi-Cristina Mitea (Romania)

SS I4: Collaborative Engineering and System Integration Tools with PLM  
Chairs: Aurélie Bertin (France), Amira Sharon (Israel)

#### **Track J: Models for Competence and Knowledge Management in Industrial Enterprises**

**Organizers/Chairs:** Davy Monticolo, INPL / ENSGSI - ERPI, Nancy, France  
Bertrand Rose, Université de Strasbourg – LGECO, France  
Eric Bonjour, Université de Franche-Comté - FEMTO-ST, France

SS J1: Competence Models and Tools for Enterprise Knowledge Management (KM)  
Chairs: Oleg Zaikin (Poland), Bartłomiej Małachowski (Poland)

SS J2: KM Methods and Knowledge Capturing for Business Process Management and Decision Support Systems  
Chairs: Paul Buijs (Netherlands), Monica Drăgoicea (Romania)

SS J3: Human Resource Allocation and Human Performance Evaluation  
Chairs: Bertrand Rose (France), Robert Buchmann (Austria)

#### **Track K: Enterprise Integration, Interoperability and Networking Solutions**

Supported by IFAC TC5.3

**Organizers/Chairs:** David Romero, Tecnológico de Monterrey, Mexico  
Hervé Panetto, University of Lorraine, France  
Luis M. Camarinha-Matos, New University of Lisbon, Portugal  
Hamideh Afsarmanesh, University of Amsterdam, The Netherlands  
Peter Bernus, Griffith University, Australia

SS K1: Models and Architectures for Collaborative, Interoperable and Networked Organizations  
Chairs: Peter Bernus (Australia), Gerhard Girmscheid (Switzerland)

SS K2: Sustainability of Interoperability in Enterprise Integration and Networking  
Organizers/Chairs: Michele Dassisti (Italy), Bopaya Bidanda (USA), Ricardo Jardim-Goncalves (Portugal),  
Ovidiu Noran (Australia)

SS K3: Enterprise System Redesign for Interoperability and Service Orientation  
Chairs: Mariagrazia Dotoli (Italy), Aurelian Mihai Stănescu (Romania)

SS K4: Industrial Applications for Enterprise Models and Integration  
Organizers/Chairs: Lawrence Whitman (USA), Arturo Molina (Mexico), Marek Obitko (Czech Rep.)

#### **Track M: Metaheuristics and Soft Computing in Production Management**

Supported by IFAC TC5.2

**Organizers/Chairs:** Farouk Yalaoui, Université de Technologie de Troyes, France  
Lionel Amodeo, Université de Technologie de Troyes, France

SS M1: Metaheuristics for Assembly and Production Line Design  
Organizers/Chairs: Hicham Chehade (France), Lionel Amodeo (France)

SS M2: Metaheuristics and Complex Shop Scheduling: Single and Multi-objective Optimization  
Organizers/Chairs: Frédéric Dugardin (France), Ecaterina Virginia Oltean (Romania)

SS M3: Metaheuristics for Industrial Process and Service Optimization: Theory and Implementing  
Organizers/Chairs: Lionel Amodeo (France), Alain Quilliot (France)

#### **Track N: Production Planning and Inventory Control**

**Organizers/Chairs:** Matthieu Godichaud, Université de Technologie de Troyes, France  
Alice Yalaoui, Université de Technologie de Troyes, France  
Lionel Amodeo, Université de Technologie de Troyes, France

SS N1: Inventory Management and Control  
Chairs: Alexander Solomonovich Mandel (Russia), Aurelian Mihai Stănescu (Romania)

SS N2: MRP and Production Planning under Uncertainties  
Chairs: Anna Lindholm (Sweden), Alain Quilliot (France)

SS N3: Demand Forecasting and Stock Management  
Chairs: Eline De Cuyper (Belgium), Suresh P. Sethi (USA)

#### **SS O: From Decision Support Systems and Geographical Information Systems to Buildings and Urban Systems**

**Organizers/Chairs:** Hassan Ait Haddou, Météofrance and LRA-ENSA Toulouse, France  
Luc Adolphe, INSAT and LRA-ENSA Toulouse, France  
Marion Bonhomme, LRA-ENSA Toulouse, France

#### **Track P: Model Based System Engineering: Works in Progress, New Trends, Usages and Opportunities**

Supported by TC5.3

**Organizers/Chairs:** Vincent Chapurlat, École des Mines d'Alès, France  
Jean-Luc Wippler, EADS Cassidian, France  
Alain Kerbrat, CT MBSE AFIS, Colesys, France  
Bruno Vallespir, Université de Bordeaux, France

SS P1: Interoperation between System Engineering Collaborative Processes  
Chairs: Peter Kopacek (Austria), Tobias Gerber (France)

SS P2: Model Based System Engineering for System Requirement Management, Design, Verification and Evaluation  
Chairs: Christoph Legat (Germany), Xavier Boucher (France)

SS P3: Value/Risk and Diagnosis Models for Manufacturing Process Control and Performance Evaluation  
Chairs: François Vernadat (France), Luca Ferrarini (Italy)

SS P4: Formal Methods, Ontologies and Semantic Integration for Enterprise and Production Modelling  
Chairs: Berna Ulutas (Turkey), Niels Lohse (United Kingdom)

SS P5: Dependability Modelling and Analysis of Industry and Service Applications  
Chairs: Adriana Olteanu (Romania), Georg Frey (Germany)

#### **SS Q: Service Supply Systems and Networks Management and Design**

**Organizers/Chairs:** Sergio Cavalieri, University of Bergamo, Italy  
Filippo Visintin, University of Florence, Italy

#### **Track R: Design of Advanced Production Systems**

Supported by IFAC TC5.1

**Organizers/Chairs:** Radu Dobrescu, University Politehnica of Bucharest, Romania  
Dan Popescu, University Politehnica of Bucharest, Romania  
Christoph Legat, Siemens, Munich, Germany

SS R1: Qualitative Process Simulation, Modelling and Identification  
Chairs: Sébastien Castric (France), Ciprian Lupu (Romania)

SS R2: Production System Monitoring and Design Methodology  
Chairs: Thorsten Wuest (Germany), Marcos de Sales Guerra Tsuzuki (Brazil)

SS R3: Real-Time Process Control and Optimization  
Chairs: Pedro Ponce (Mexico), Gerasimos Rigatos (United Kingdom)

SS R4: Wireless Sensor Networks and Signal Processing  
Chairs: Dan Ștefănoiu (Romania), Nick Ivănescu (Romania)

#### **Track ICS: Integrated Information and Control Systems for Smarter Enterprise**

**Organizers/Chairs:** Theodor Borangiu, University Politehnica of Bucharest, Romania  
Alexandre Dolgui, Ecole Nationale Supérieure des Mines de Saint-Etienne, France  
Iuliu Stocklosa, East Electric, Romania  
Pavel Vrba, Czech Technical University in Prague, Rockwell Automation Research Center, Czech Rep.

SS AD: Automation Day of Industry Innovation Meeting  
Chairs: Gheorghie Florea (Romania), Octavian Stocklosa (Romania), Sabin Stamatescu (Romania)



SS ID: Information Day of Industry Innovation Meeting

Chairs: Radu Magda (Romania), MihaiTeodorescu (Romania), Marian Poboroniuc (Romania)