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Chairs' Welcome

We are pleased to welcome all delegates and speakers at the second International Conference on Sustainable Design and Manufacturing (SDM-15), organized jointly by KES International and the University of Seville.

This 2nd International Conference provides excellent opportunities for the presentation of interesting new research results and discussion about the theory and applications in the field of sustainable design and manufacturing, leading to knowledge exchange and the generation of new ideas. This field includes both the manufacturing of sustainable products and the sustainable manufacturing of all products. The application areas include all the activities during the product life cycle and other activities such as modelling and simulation, production planning and control, logistics and supply chain management.

The conference programme is looking very exciting with over 60 papers to be presented across 14 parallel sessions. We are privileged to have three keynote speakers: Dr. Jorge Posada, Associate Director at VICOMTech IK4 Research Centre, Prof. Takashi Maeno, Dean of Graduate School of System Design and Management at Keio University, and Prof. Paul Maropoulos, Head of LIMA, Editor of Journal of Engineering Manufacture and Professor in Mechanical Engineering at University of Bath, UK.

The SDM-2015 conference will kick off on Sunday 12th April 2015 with the Welcome Reception at the NH Plaza de Armas Hotel, the location where the conference will be held. The Conference Dinner will be held on Monday 13th April 2015 at Abades Triana Restaurant, which is located on the riverside of the Guadalquivir River, with beautiful sights to the Golden Tower and Giralda, and is just 20 minutes walk from the conference hotel.

We take this opportunity to acknowledge the effort and work put in by all those people who have it possible to organize SDM-15. We are grateful to the scientific committee, to the supporting organizations and the members of the organizing committee for their effort to ensure that this conference is a success.

We hope that the conference schedule will be interesting and worthwhile for you, and we encourage you to enjoy the delights offered to us by our city. Have a pleasant stay in Seville.



Dr. Ignacio Eguía Salinas
SDM-15 General Co-Chair



Prof. Rossi Setchi
SDM-15 General Co-Chair

Conference Organisation

General Co-Chairs:

Rossi Setchi, Cardiff University, Wales, UK *and*
Ignacio Eguia, University of Seville, Spain

Executive Chair:

Robert J. Howlett, Bournemouth University, UK

Programme Chair:

Jesus Racero, University of Seville, Spain

Chair of the Organising Committee:

Jose Carlos Molina, University of Seville, Spain

Conference Series Chairs:

L.C.Jain and **R.J.Howlett**

KES International Executive Chair:

R.J.Howlett, Bournemouth University, U.K.

KES Founder:

L.C.Jain, University of South Australia

List of General Track Sessions

G01: Sustainable Products and Processes
Chair: Andrew Hopkins, Cardiff University, UK

G02: Sustainable Manufacturing Systems and Enterprises
Chair: Daniel Eyers, Cardiff University, UK

G03: Decision Support Tools for Sustainability
Chair: Ying Liu, Cardiff University, UK

List of Invited Sessions

IS01: Sustainable Business Models and Value Networks
Chair: Nancy Bocken, University of Cambridge / TU Delft, UK

IS02: Sustainability of Additive Manufacturing
Chair: Martin Baumann, University of Nottingham, UK

IS03: Energy Efficient Manufacturing Systems
Chair: Peter Ball, Cranfield University, UK
Co-chaired by Konstantinos Salonitis, Cranfield University, UK

IS04: Design Verification in the Context of the Light Controlled Factory
Chair: David Ross-Pinnock, University of Bath, UK

IS05: Knowledge Networking via Social Media for Sustainable Supply Chains
Chair: Susan Grant, Brunel University, UK

IS06: Sustainable Supply Chains
Chair: Anthony Soroka, Cardiff University, UK

International Programme Committee

Name	Affiliation
Prof. Abdel Ghani Aissaoui	University of Bechar, Algeria
Mr. Soheil Arastehfar	National University of Singapore
Dr. Peter Ball	School of Aerospace, Transport and Manufacturing, Cranfield University, UK
Dr. Claire Biggs	Cardiff University, UK
Dr. Nancy Bocken	University of Cambridge, TU Delft
Dr. Martin Baumers	University of Nottingham, UK
Dr. Anisoara Calinescu	University of Oxford, UK
Dr. Amitava Chatterjee	Electrical Engineering Department, Jadavapur University
Prof. Kai Cheng	Brunel University, UK
Dr. Wai Ming Cheung	Northumbria University, UK
Dr. Theophile K. Dagba	University of Abomey-Calavi, Benin Republic
Assist. Prof. Bryony DuPont	Oregon State University, USA
Dr. Mahieddine Emziane	Masdar Institute of Science and Technology, Abu Dhabi
Dr. Youssef Errami	Faculty of Science - Chouaib Doukkali University, Eljadida, Morocco
Prof. Steve Evans	University of Cambridge, UK
Mr. Daniel Eysers	Cardiff University, UK
Prof. Steve Gill	Cardiff Metropolitan University, UK
Dr. Rick Greenough	De Montfort University, UK
Dr. Susan Grant	Brunel University, UK
Ass.Prof. Dr. Patrick Hirsch	University of Natural Resources and Life Sciences, Vienna - Institute of Production and Logistics
Mr. Andrew Hopkins	Cardiff Business School and Cardiff School of Engineering, UK
Dr. Atanas Ivanov	Brunel University, UK
Prof. Dr. sc. Dragan Jevtic	University of Zagreb, Croatia
Prof. Mark Jolly	Cranfield University, UK
Dr. Taofeeq Ibn-Mohammed	Centre for Energy, Environment and Sustainability (CEES), The University of Sheffield
Dr. Alessio Ishizaka	University of Portsmouth, UK
Prof. Dr.Dr.h.c.mult. (Mr.) Florin Ionescu	Steinbeis University Berlin Institute Dynamic Systems
Prof. I.S. Jawahir	University of Kentucky, USA
Dr. Jian Jin	Beijing Normal University, China
Prof. Kari T. Koskinen	Tampere University of Technology, Finland

Name	Affiliation
Prof. Fiona Lettice	Norwich Business School, University of East Anglia, UK
Dr. Ying Liu	Cardiff University, UK
Dr. Andrew Longstaff	University of Huddersfield, UK
Prof. Paul G. Maropoulos	University of Bath, UK
Prof. Jairo R. Montoya-Torres	Universidad de La Sabana (Chia, Colombia)
Dr. Esmiralda Moradian	Stockholm University, Sweden
Prof. Mohamed Naim	Cardiff University, UK
Prof. Masaru Nakano	Keio University, Japan
Dr. Rui Neves-Silva	Universidade Nova de Lisboa, (UNINOVA), Portugal
Dr. Anthony Soroka	Cardiff University, UK
Mr. Emeka Efe Osaji	Energy Globe Foundation and World Award for Sustainability
Dr. Michael Packianather	University of Cardiff, UK
Dr. Camelia Pintea	Technical University Cluj-Napoca, Romania
Mr. Paul Prickett	Cardiff School of Engineering, UK
Dr. Laura Purvis	Cardiff Business School, Cardiff University, UK
Dr. Ana Rita Campos	UNINOVA, Lisbon, Portugal
Prof. Hefin Rowlands	University of South Wales, UK
Dr. Konstantinos Salonitis	Cranfield University, UK
Dr. Ernesto DR Santibanez-Gonzalez	Universidade Federal do Sul da Bahia, Brasil
Prof. Tadeusz Sawik	AGH University of Science and Technology, Krakow, Poland
Prof. Mahmoud Shafik	College of Engineering and Technology University of Derby, UK
Dr. Shwe Soe	Cardiff University, UK
Dr. Anthony Soroka	Cardiff Business School, Cardiff University, UK
Prof. Fernando Tadeo	University of Valladolid, Spain
Prof. George A. Tsihrintzis	University of Piraeus, Greece
Dr. Jarosław Was	AGH University of Science and Technology, Sweden
Assoc. Prof. Kuan Yew Wong	Universiti Teknologi Malaysia (UTM), Malaysia
Prof. Tetsuya Yoshida	Nara Women's University, Japan
Dr. Cecilia Zanni-Merk	University of Strasbourg, France

Conference Timetable

	Sunday 12th April	Monday 13th April	Tuesday 14th April
08:00		REGISTRATION	
09:00		CONFERENCE OPENING & WELCOME CEREMONY	REGISTRATION
09:30		PLENARY KEYNOTE TALK 1 Dr. Jorge Posada	PLENARY KEYNOTE TALK 3 Prof. Takashi Maeno
10:30		REFRESHMENTS	REFRESHMENTS
11:00		ORAL PRESENTATIONS MON-1 IS-04: SALA CARTUJA IS-01: SALA TORNEO G-03: SALA EXPO	ORAL PRESENTATIONS TUE-1 IS-02: SALA CARTUJA IS-05: SALA TORNEO G-02: SALA EXPO
13:00		LUNCH	LUNCH
14:00		PLENARY KEYNOTE TALK 2 Prof. Paul G. Maropoulos	ORAL PRESENTATIONS TUE-2 IS-06: SALA CARTUJA G-01: SALA TORNEO G-02: SALA EXPO
15:00		REFRESHMENTS	
15:30		ORAL PRESENTATIONS MON-2 IS-04: SALA CARTUJA IS-03: SALA TORNEO G-03: SALA EXPO	REFRESHMENTS
16:00			ORAL PRESENTATIONS TUE-3 IS-06: SALA CARTUJA G-01: SALA TORNEO
17:30			CLOSING CEREMONY
18:30	EARLY REGISTRATION		
20:00	RECEPTION	CONFERENCE DINNER	

All plenary and parallel sessions: NH Plaza de Armas Hotel; Marqués de Parada Street, 41001 Seville; Tel: (+34) 954 90 19 92

Registration & Welcome Reception on Sunday: NH Plaza de Armas Hotel

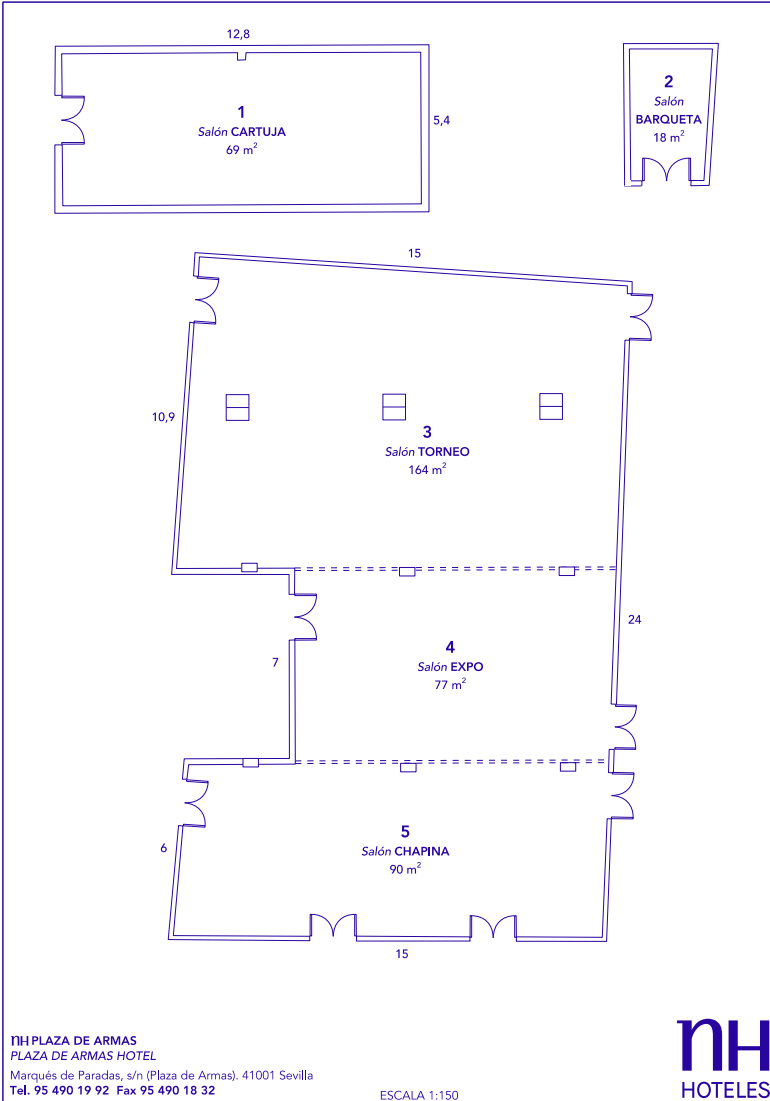
Registration on Monday and Tuesday: NH Plaza de Armas Hotel

Conference Venue

HOTEL NH PLAZA DE ARMAS

* * *

Marqués de Paradas, s/n (Plaza de Armas) · 41001 Sevilla · Tel. 95 490 19 92 Fax 95 490 18 32 · e-mail nhplazadearmas@nh-hotels.com



NH
 HOTELES

Exposición de Detalles

Keynote Speakers

Jorge Posada

VICOMTECH IK4 Research Centre, San Sebastian / Donostia, Spain

Industry 4.0 and industrial internet influence in Sustainable Design and Manufacturing

Abstract: This talk will address the general trends of Industry 4.0 and Industrial Internet, and the way in which these international visions are influencing design and manufacturing in several dimensions. The talk will have a focus on the Visual Computing challenges that are related with these two concepts, and also on particular benefits that derive for the sustainable design and manufacturing, as for instance the empowerment of the people in different roles in manufacturing (workers, engineers, etc.) and the better use of resources in production due to the better use of information and knowledge.



Biography: Dr. Jorge Posada is Associate Director of Vicomtech Research Centre (San Sebastian, Spain), and President of the international network GraphicsMedia.net. Jorge Posada received his Ph.D. in Computer Science and Engineering from the Technische Universität Darmstadt (Germany), in the field of semantic visualization of large industrial plants in Virtual Reality, and his diploma degree in Mechanical Engineering with honors from the EAFIT

University.

He worked as full-time scientific staff member of the Fraunhofer Institute for Computer Graphics (IGD) in Darmstadt from 1997 to 2001, in the department of Industrial Applications. Among others, he collaborated in several German and European Projects for Concurrent Engineering, CAD-VR applications for GIS and Industrial Plants, and new methods for assembly operations for cooperative CAD (with CoCreate).

Since April 2001 he is Associate Director of Vicomtech Research Centre (Visual Communication and Interaction Technologies Centre), in San Sebastian, Spain, where he continues working in applied research for semantic and graphical applications and methods for industrial design and engineering, as well as in other areas of Computer Graphics.

Dr. Posada is the only non-German member -as invited guest-, on behalf of the IK4 Research Alliance, to the subcommittee on "Industrie 4.0: Engineering of Smart Products and Services" of the German Academy of Science and Engineering ACATECH, which is a subgroup between the ICT and the Production Engineering networks. Dr.

Posada is also one of the ten members of the Scientific Advisory Committee of the Basque Government. Dr. Posada has published more than 70 scientific articles in different fields of Visual Computing and Engineering, and has served as General Chair of the Conferences KES 2012: International Conference on Knowledge-Based and Intelligent Information & Engineering Systems (KES 2012), and ACM Web3D International Conference on 3D Web Technology in 2012 and 2013.

Takashi Maeno**Dean, Graduate School of System Design and Management, Keio University, Japan*****Sustainable Design of Products and Services for Human Well-being***

Abstract: Well-being or happiness should be considered as a parameter for designing sustainable products or services. Hence, factor analysis is conducted using results of questionnaire to 1500 Japanese adults asking questions in relation to happiness. As a result four factors are obtained. Those are 1) Self-fulfillment and growth, 2) Relationships and gratitude, 3) Positivity and Optimism, and 4) Independence and going at own pace. Workshops for designing products and services considering four factor of happiness is proposed.



Biography: Takashi Maeno received his B. S. and M. S. degrees in mechanical engineering from the Tokyo Institute of Technology, Tokyo, Japan, in 1984 and 1986, respectively. From 1986 to 1995, he worked for Canon, Inc., in Tokyo, Japan. He received his Ph. D. degree in mechanical engineering from the Tokyo Institute of Technology, Tokyo, Japan, in 1993. From 1995 to 2008, he was with the Department of Mechanical Engineering at Keio University, Yokohama, Japan. Since 2008, he has been with the graduate school of System Design and Management, Keio University as a Professor.

Paul Maropoulos

Head of LIMA, Editor of Journal of Engineering Manufacture, University of Bath, UK

Design Verification in the Context of the Light Controlled Factory

Abstract: “Design for Verification” is a novel DFX philosophy that considers the holistic verification aspects of complex, high value products throughout their life cycle that directly influence rules for assembly, integration and production processes as well as the end product functionality and experience. In this paper, the design for verification is placed in the context of the Light Controlled Factory, an innovative concept that denotes future factories with distributed and embedded metrology for verification as well as metrology-enabled manufacturing and assembly. Design for verification research and practice for complex high-value manufacturing has been lacking due to the inherent knowledge gap between design and production within large scale industries. Increasing product complexity and the rapid evolution of engineering knowledge has created a necessity for high fidelity products manufactured using adaptable and reconfigurable manufacturing systems for ensuring competitive costs and the implementation of state of the art technologies. This evidently places heavy emphasis upon real time metrological verification for both manufacturing and assembly systems as well as the product itself. This paper reviews the standard definitions of verification and the design for X concept within the holistic engineering design process to reveal the necessity for design for verification and then progresses to provide a coherent analysis and classification of these activities from preliminary design, to design in the digital domain and the physical verification of products and processes within the context of the Light Controlled Factory. The scope of the paper includes aspects of system design and demonstrates how complex products are verified in the context of their production and assembly processes.



Biography: Paul Maropoulos is a Professor in Mechanical Engineering and the Editor of the Journal of Engineering Manufacture. His research is in Aerospace Manufacturing and Metrology, specialising in technologies for measurement-assisted aerospace production, large volume metrology, digital process modelling and the integration of design with manufacturing.

Professor Maropoulos is a senior academic with an international research profile, a Chartered Engineer and Fellow of the Institution of Mechanical Engineers. He is an elected Fellow of the International Academy of Production Engineering (CIRP) and the Chairman of CIRP in the UK and of

the CIRP UK Trust.

He is the Director of the Laboratory for Integrated Metrology Applications of the University of Bath and an elected member of Senate. Professor Maropoulos is the Editor of the Journal of Engineering Manufacture, Part B of the Proceedings of the Institution of Mechanical Engineers.

His current interests include; leading innovative research initiatives and forming strategic partnerships with industry at corporate level, promoting technological innovation and knowledge transfer at regional and national levels, defining novel degree programmes that link engineering with management, and promoting collaborative links between UK and international universities. He is a founder of the MSc in Innovation and Technology Management, that is a joint degree with the School of Management.

Plenary & Parallel Sessions

Monday 9:30 – 10:30 Room: SALA TORNEO

Plenary Keynote Talk 1

Industry 4.0 and industrial internet influence in Sustainable Design and Manufacturing, Dr. Jorge Posada

Parallel Sessions

Monday-1 11:00 – 13:00 Oral Presentations (3 parallel sessions)

IS04: Design Verification in the Context of the Light Controlled Factory

Room: SALA CARTUJA

Chair: Mr David Ross-Pinnock

sdm15-010 A hybrid Measurement Systems Analysis and Uncertainty of Measurement Approach for Industrial Measurement in the Light Controlled Factory

Dr Jody Muelaner, Mr Mark Chappell, Mr Andrew Francis, Prof Paul Maropoulos

sdm15-075 Implementation of a machine tool performance measurement and diagnostic system and its impact on parts verification

Mr Akbar Jamshidi, Mr Jon Cave, Mr Mark Chappell, Professor Paul Maropoulos

sdm15-080 Design for Verification in the Context of the Light Controlled Factory

Professor Paul Maropoulos, Mr Andrew Francis, Dr. Jody Muelaner

sdm15-071 Effect of illumination wavelength on optimizing multicamera location systems in a factory environment

Prof Stuart Robson, Dr Stephen Kyle, Dr Lindsay MacDonald, Prof Mark Shortis

IS01: Sustainable Business Models and Value Networks

Room: SALA TORNEO

Chair: Dr Nancy Bocken

sdm15-026 Product design and business model strategies for a circular economy

Dr Nancy Bocken, Dr Conny Bakker, Ms Ingrid de Pauw

sdm15-033 Incorporating Designing Thinking into Sustainable Business Modelling

Mr Martin Lehmann, Dr Nancy Bocken, Prof Steve Evans, Mr Jón Steingrímsson

sdm15-034 Achieving Sustainability in Small to Medium sized Manufacturing Enterprises through Educational Awareness

Dr Michael Packianather, Mr Alan Davies, Mr Sajith Soman, Mr John White

sdm15-078 Sustainable Business Model Innovation: The Cases of Patagonia Inc. and Bureo Skateboards

M.sc. Fiona Stappmanns

sdm15-072 The Choice of Production Volume of the ELV Depollution Station Using the Decision - Making Analysis

MSc Aleksandar Tomovic, PhD Milan Nikolic, PhD Milan Pavlovic, MSc Aleksandar Pavlovic, PhD Danijela Tadic

G03: Decision Support Tools for Sustainability

Room: SALA EXPO

Session Chair: Dr Ying Liu

sdm15-007 Eco-Case Based Reasoning (Eco-CBR) for Supporting Sustainable Product Design

Mrs Awanis Romli, Mr Miguel P. De La Pisa, Mr Paul Prickett, Professor Rossitza Setchi, Dr Shwe Soe

sdm15-012 Sustainability criteria for transport of home care staff and frail people

BSc. Jana Voegl, Ass.Prof. Dr. Patrick Hirsch

sdm15-065 Recommendations for Sustainability in Production from a Machine-Tool Manufacture

Mr. Javier Diaz, Mr. Iñigo Barandiaran, Mr. Jorge Posada, Mr. Carlos Toro

sdm15-041 Remanufacturing in Pearl River Delta Area China: Challenges and Opportunities

Prof. Yong-chao WANG, Lecture Ya-Feng ZHU

Monday 14:00 – 15:00 Room: SALA TORNEO

Plenary Keynote Talk 2

Design Verification in the Context of the Light Controlled Factory, Prof. Paul G. Maropoulos

Parallel Sessions

Monday-2 15:30 – 17:30 Oral Presentations (3 parallel sessions)

IS04: Design Verification in the Context of the Light Controlled Factory

Room: SALA CARTUJA

Chair: Mr David Ross-Pinnock

sdm15-017 The Issues & Challenges of 3D Managed Print Services: Towards a Support Tool for 3D Managed Print Services

Dr James Gopsill, Prof. Ben Hicks

sdm15-064 Tracking Technologies to Support Virtual Prototyping of Manual Composite Lay-Up

Prof Ashutosh Tiwari, Ms Edyta Dzikon, Mr Windo Hutabarat, Dr Christopher Turner

sdm15-073 Remote Real-Time Collaboration Platform enabled by the Capture, Digitisation and Transfer of Human-Workpiece Interactions

Mr Vinayak Prabhu, Mr Yohann Advikolanu, Mr Mark Burgess, Mr Rob McNally, Dr John Oyekan, Professor Ashutosh Tiwari

sdm15-081 Computer aided Micro-EDM die-sinking tool design optimization

Dr Samuel Bigot, Mr Romain Lepert, Dr Jean Phillipe Pernot, Mr Anthony Surleraux

IS03: Energy Efficient Manufacturing Systems

Room: SALA TORNEO

Session Chair: Dr Peter Ball

sdm15-021 A Methodology for Process and Energy Mapping In Production Operations

Ms Maria-Jose Rivas Duarte, Mr John Cosgrove, Dr Frances Hardiman

sdm15-022 Energy Saving Opportunities in a Food Factory

Dr Richard Greenough, Sr Pedro Sánchez Fuentes

sdm15-040 Design and Control of Manufacturing Systems for Enabling Energy-efficiency and -Flexibility

Mr. Tim Stock, Mr. Denys Alva, Prof. Dr.-Ing. Dirk Bähre, Mr. Theo Bietz, Prof. Dr.-Ing. Günther Seliger, Mr. Martin Swat

sdm15-042 The application of web based LEAN Manufacturing tools to support the implementation of ISO 50001 - A Case Study v1.0

Dr Ken Bruton, Mr. Peter O'Donovan, Dr Dominic O'Sullivan

G03: Decision Support Tools for Sustainability

Room: SALA EXPO

Session Chair: Dr Ying Liu

sdm15-006 A Strategy Process for Early Stage Ventures to Develop Sustainable Value Opportunities

Dr Nancy Bocken, Dr Nicky Athanassopoulou, Dr Imoh Ilevbare, Dr Robert Phaal, Dr Padmakshi Rana

sdm15-024 Competences necessary to improve the ability of organisation to design sustainable futures

Mr Lloyd Fernando, Prof Steve Evans

sdm15-027 Developing sustainable manufacturing strategies through practice maturity assessment

Mr Lampros Litos, Professor Steve Evans

Tuesday 9:30 – 10:30 Room: SALA TORNEO

Plenary Keynote Talk 3

Sustainable Design of Products and Services for Human Well-being, Prof Takashi Maeno

Parallel Sessions

Tuesday-1 11:00 – 13:00 Oral Presentations (3 parallel sessions)

IS02: Sustainability of Additive Manufacturing

Room: SALA CARTUJA

Session Chair: Dr Martin Baumers

sdm15-016 Investigation of Influencing Variables on Sustainability of 3D-Printing and Fused Deposition Modelling

Prof. Dr.-Ing. Stefan Junk, B.Eng. Rebecca Matt

sdm15-038 An Investigation into the Recycling of Ti-6Al-4V Powder Used Within SLM to Improve Sustainability

Mr Richard O'Leary, Professor Gareth Hankins, Mr Paul Prickett, Professor Rossi Setchi

sdm15-058 Challenges and Opportunities in the Additive Layer Manufacturing of Al-Al₂O₃ Nanocomposites

Mr Quanquan Han, Prof. Bhushan Karihaloo, Prof. Rossitza Setchi

sdm15-074 Theoretical Analysis of the Mechanical Response of Lattice Structures Manufactured using Selective Laser Melting

Mr Qixiang Feng, Dr. Ying Liu, Prof. Rossi Setchi, Prof. Qian Tang

IS05: Knowledge Networking via Social Media for Sustainable Supply Chains

Room: SALA TORNEO

Session Chair: Dr Susan Grant

sdm15-068 Manufacturing Lead-Time Reduction and Knowledge Sharing in the Manufacturing Sector

Mr Twana Jaff, Mr Atanas Ivanov

sdm15-054 Business applications for Virtual World Platforms for Training

Dr Olinkha Gustafson-Pearce, Dr Susan Grant

sdm15-055 Pre-requisites to transferring tacit knowledge using social media

Dr Susan Grant, Dr Olinkha Gustafson Pearce

sdm15-048 Measuring and linking social network knowledge exchange and organisational performance

Dr Raúl Rodríguez Rodríguez, Dr Ramona Diana Leon, Dr Pedro Gómez-Gasquet, Dr Josefa Mula Bru

sdm15-056 Social Media and Social Networking Analysis for Knowledge Networking

Dr. Josefa Mula, Dr. Pedro Gómez, Dr. Susan Grant, Dr. Raúl Rodríguez

G02: Sustainable Manufacturing Systems and Enterprises

Room: SALA EXPO

Session Chair: Mr Daniel Evers

sdm15-004 Product change management: The through-life impact of diverging designs within product fleets

Mr Paul Prickett, Mr Ashley Morris, Professor Rossi Setchi

sdm15-036 Factory Eco-efficiency Modelling: Framework Development and Testing by Application

Mr. Aanand Davé, Mr. Craig Astfalck, Dr. Peter Ball, Dr. Konstantinos Salonitis

sdm15-039 Exploring Connections between Lean and Sustainability ? A Systematic Literature Review

Dr Anne Touboulis, Dr Claire Biggs, Prof Zoe Radnor, Prof Helen Walker

sdm15-052 Energy Absorbing Characteristics of Additively Manufactured TPE Cellular Structures

Dr Shwe Soe, Dr Graham McShane, Dr Michael Ryan, Dr Peter Theobald

sdm15-035 Conceptual Model for the Use of ICT Systems to Facilitate Manufacturing SME Servitization

Mr Dominic Bevan

Parallel Sessions

Tuesday-2 14:00 – 15:30 Oral Presentations (3 parallel sessions)

IS06: Sustainable Supply Chains

Room: SALA CARTUJA

Session Chair: Dr Anthony Soroka

sdm15-047 Supply Chain Re-shoring and its Relationship with Supply Chain Resilience

Dr Anthony Soroka

sdm15-077 The Speed Dependent Heterogeneous Fixed Fleet Vehicle Routing Problem with Backhauls and Environmental Considerations

Mr. Jose Molina, Dr. Ignacio Eguia, Dr. Jesus Racero

sdm15-051 Opportunities for Sustainable Local Supply Chains: An exploratory study of Welsh Manufacturing Companies

Mrs Jacqueline Marsh, Dr Michael Ryan, Dr Anthony Soroka

G01: Sustainable Products and Processes

Room: SALA TORNEO

Session Chair: Mr Andrew Hopkins

sdm15-061 Non-parametric benchmarking of Life Cycle Impact Assessment results

Professor Sebastián Lozano, Professor Gumersindo Feijoo, Professor M^a Teresa Moreira

sdm15-002 Assessment of Sustainable Product Development Tools and Methods

PhD Candidate Salari Meysam, Professor Bhuiyan Nadia

sdm15-028 The Assembly and Disassembly Process Guided by Software Agents

Dr. Leo van Moergestel, Prof. Dr. John-Jules Meyer, Prof. Erik Puik, MSc. Daniel Telgen

G02: Sustainable Manufacturing Systems and Enterprises

Room: SALA EXPO

Session Chair: Mr Daniel Evers

sdm15-003 Environmental Impact Reduction for Small and Medium-sized Manufacturing Enterprises in New Product Development

Dr Wai Cheung, Dr Kevin Hilton, Dr Roger Penlington, Mr Thomas Woods

sdm15-069 Secondary use of electric vehicle batteries and potential impacts on business models

Miss Na Jiao, Prof Steve Evans

sdm15-053 Continuous improvement of the effectiveness of equipment driven by the dynamics of cost reduction

PhD Student Alin Aurelian Postecă, PhD Student Miruna Zapciu

Parallel Sessions

Tuesday-3 16:00 – 17:30 Oral Presentations (2 parallel sessions)

IS06: Sustainable Supply Chains

Room: SALA CARTUJA

Session Chair: Dr Anthony Soroka

sdm15-070 Control Architectures for Industrial Additive Manufacturing Systems

Mr Daniel Eysers

sdm15-046 Are we really doing the right thing? From sustainability imperialism in global supply chains to an inclusive emerging economy perspective

Dr Anne Touboulic, Mr Ehimen Ejodame

G01: Sustainable Products and Processes

Room: SALA TORNEO

Session Chair: Mr Andrew Hopkins

sdm15-001 A Quantitative Analysis System for Greener Wind Turbine Concept Selection

Dr Wai Cheung, Mr Raymond Aso

sdm15-009 Kinematic Analysis and Optimization of Bicycle Suspension

Dr Jody Muelaner, Dr Joss Darling, Mr Tom Knight

sdm15-015 Effect of Glass Surface Roughness on Separation Energy in Low Temperature Ultrasonic Soldering

Prof. Dr. Erry Adesta, Dr. Irfan Hilmy, Mr. H Mohamad, Mr. M Mustafa

