

Session number	Session name	Room	Date	Hours	Title	Authors	Chairmen & women
S1	PSS Design and Engineering I	203	21 AM	11:00-12:40	Validation of Product-Service Systems in Virtual Reality The Influence of Dynamic Business Models on IPS ² Network Planning - An Agent-based Simulation Approach Simulation of Product-Service-Systems Piloting with Agent-Based Models Development of a Service Platform for Servitization of Manufacturing-Related Activities to Use 3D CAD Data	K. Exner, R. Stark H. Lagemann, M. Boßlau, H. Meier K.R. Wrasse, H. Hayka, R. Stark J-S. Yoon, H. Jin, B-H. Kim	Tomohiko Sakao (SE)
S2	<i>SPECIAL SESSION</i> PSS for Urban Transport Sharing Planning and Management	206	21AM	11:00-12:40	Non-Collaborative versus Collaborative Last-Mile Delivery in Urban Systems with Stochastic Demands Product-service-systems for Heavy-duty Vehicles - An Accessible Solution to Material Efficiency Improvements? Decision Support for Environmental-friendly Vehicle Relocations in Free-floating Car Sharing Systems: The Case of Car2Go Assessing the Environmental Performance of Different IPSS Deployment Scenarios for the Light Commercial Vehicle Industry	A. Muñoz-Villamizar, J.R. Montoya-Torres, C.A. Vega-Mejía D. Diener, M. Williander, A-M. Tillman F. Schulte, S. Voß D. Andriankaja, N. Gondran, J. Gonzalez-Feliu	Jesus Gonzalez-Feliu (FR)
S3	Sustainability and PSS I	212	21 AM	11:00-12:40	A Cluster Reference Framework for analyzing sustainability of SME clusters Product-Service Systems as a Promising Approach to Sustainability: Exploring the Sustainable Aspects of a PSS in Brazil Sustainable Factor Input in Product-Service Operation Sustainable Indicators for Small and Medium-sized Enterprises (SMEs) in the Transition to Provide Product-Service Systems (PSS)	T. Taurino T. Tavares de Sousa, P.A Cauchick Miguel K. Gutsche E. Sundin, E. Nässlander, A. Lelah	Daniela Pigosso (IT)
S4	PSS Case Studies and Lessons from Experience I	220	21 AM	11:00-12:40	Sustainable PSS for an Office Furniture Manufacturer: How Insights from a Pilot Study Can Inform PSS Design A Proposal for Energy Services' Classification including a Product-Service Systems Perspective Supporting PSS Innovation Processes by an Integrating Model Grid Providing Product-Service-Systems - The Long Way from a Product OEM towards an Original Solution Provider (OSP)	F. Costa, S. Prendeville, K.J. Beverley, G. Teso, C. Brooker M. Benedetti, V. Cesarotti, M. Holgado, V. Introna, M. Macchi D. Großmann, D. Kasperek, B. Stahl, B. Lohmann, M. Maurer C. Schnürmacher, H. Hayka, R. Stark	Yutaro Nemoto (JP)
S5	<i>SPECIAL SESSION</i> Lean PSS: Enabling Methods and Tools	224	21 AM	11:00-12:40	Towards a Lean Product Service Systems (PSS) Design: State of the Art, Opportunities and Challenges Expanding Value Driven Design to meet Lean Product Service Development Supporting the Performance Assessment of Product-Service Systems during the Use Phase A Software Demonstrator for Measuring the Quality of PSS	C. Sassanelli, G. Pezzotta, M. Rossi, S. Terzi, S. Cavalieri A. Bertoni, M. Bertoni, M. Panarotto, C. Johansson, T. Larsson J.M. Wilberg, C. Hollauer, M. Omer G. Mert, J. C Aurich	Sergio Terzi (IT)

S6	PSS Design and Engineering II	203	21PM	14:00-15:40	A Context-Based Requirements Analysis Method for PSS Design Review of the Modelling Approaches for Availability Contracts in the Military context New PSS Design Method of a Pneumatic Energy System An Integrated Method to Support PSS Design within the Virtual Enterprise	Y. Nemoto, K. Uei, K. Sato, Y. Shimomura D.P. Rodrigues, J.A. Erkoyuncu, A. Starr, S. Wilding, A. Dibble, M. Laity L. Trevisan, A. Lelah, D. Brissaud E. Marilungo, M. Peruzzini, M. Germani	Peggy Zwolinski (FR)
S7	<i>SPECIAL SESSION</i> Intelligent Objects and Information Technology for PSS	206	21PM	14:00-15:40	The Impact of Cyber-Physical Systems on Industrial Services in Manufacturing Multi-level Self-organization in Cyber-physical-social Systems: Smart Home Cleaning Scenario Business Transformation in the Manufacturing Industry - How Information Acquisition, Analysis, Usage and Distribution Affects the Success of Lifecycle-Product-Service-Systems An IPS ² Automation Approach Based on Workflows and Software Agents	M. Herterich, F. Uebernickel, W. Brenner A. Smirnov, A. Kashevnik, A. Ponomarev G. Schuh, G. Gudergan, B.A. Feige, B. Achim, D.P. Krechting E. Uhlmann, C. Gabriel, N. Raue	Koji Kimita (JP)
S8	Organisational Issues and Transition Management I	212	21PM	14:00-15:40	Evaluating the Readiness to Transform towards a Product-Service System Provider by a Capability Maturity Modelling Approach Service Value Creation Capability Model to assess the Service Innovation Capability in SMEs Intangible Capital, Knowledge and Maintenance Performance in PSS Networks: Process and Interaction among Partners Improvisation as a Prerequisite for the Dynamic Interplay of Production and Service in PSS: Insides of an Organizational Design Principle and a Game-based Learning Approach for Servitization	G. Gudergan, B. Achim, D.P. Krechting, B.A. Feige N. Nada, Z. Ali Y. Hu, J. Ke, Z. Guo, J. Wen T. Suesse	Mattias Lindhal (SE)
S9	Strategy, Marketing and Business Models	220	21 PM	14:00-15:40	A Strategic Prototyping Framework which Supports Value Recognition, Evaluation and Design Improvement of PSS using Co-creation Approach Servitization Strategy and Financial Performance of Manufacturing SMEs Procuring Industrial Service Solutions, Exploring Enablers for Co-creating Value Method to Create Proposals for PSS Business Models	A. Tran, J. Park C. Teyssier, S. Peillon, L. Ambroise, I. Prim-Allaz J. Sandin A.P Bezerra Barquet, J. Steingrímsson, G. Seliger, H. Rozenfeld	Uta Wilkens (DE)
S10	Decision-making for PSS Engineering	224	21PM	14:00-15:40	Product-Service Systems Value Chain Configuration – A Simulation Based Approach A Collaborative Service Decision-making Method for the Delivery Management of PSS A Fuzzy SERVQUAL Based Method for Evaluated of Service Quality in the Hotel Industry Hybrid Fuzzy Methodology for the Evaluation of Criteria and Sub-criteria of Product-Service System (PSS)	K. Medini, X. Boucher, S. Peillon, C. Matos Da Silva R. Zhou, J. Wen, X. Li, Y. Hu N.M. Stefano, N. Casarotto Filho, R. Barichello, A.P. Sohn N.M. Stefano, N. Casarotto Filho, R. Barichello, A.P. Sohn	Sergio Cavalieri (IT)
S11	PSS Design and Engineering III	203	21PM	16:15-17:30	Definition of an Approach for the Development of Product-Service Systems A Method to Bridge Non-functional Requirements and Service Design An Unintended and Simplified Service Engineering Approach used by an Industrial Service Solutions Provider	U. Moser, S. Maisenbacher, D. Kasperek, M. Maurer S. Izukura, S. Hosono, H. Sakaki, E. Numata, K. Kimita, Y. Shimomura J. Sandin, C. Berggren	Henrique Rozenfeld (BR)

S12	Planning for PSS Engineering	206	21PM	16:15-17:30	Decision-Making Process for Product Planning of Product-Service Systems Quantitative Analysis of an IPS ² Delivery Planning Approach Planning of Production Service and Maintenance Activities - A Current State Mapping in Industry	D.M. Schmidt, O. Malaschewski, M. Mörtl T.M. Dorka, H. Lagemann, H. Meier M. Gopalakrishnan, J. Bokrantz, T. Ylipää, A. Skoogh	Alan Lelah (FR)
S13	Customer Analysis for PSS	212	21PM	16:15-17:30	Sustainable Management of Operation for Functional Products: Which Customer Values are of Interest for Marketing and Sales? Modeling of Bike Sharing Demand Customer-oriented Framework for Product-Service Systems	J.D. Lindström, K. Nilsson, V. Parida, D. Rönnerberg Sjödin, H. Ylinenpää T.D. Tran, N. Ovtracht, B. Faivre d'Arcier D.M. Schmidt, O. Malaschewski, D. Fluhr, M. Mörtl	Erik Sundin (SE)
S14	Cost Structures and Economic Models	220	21PM	16:15-17:30	ProVa - Provider Value Evaluation for Integrated Product Service Offerings Evaluation of Cost Structures of Additive Manufacturing Processes Using a New Business Model Life-cycle Cost Strategies for Harbors - The Case of Gothenburg Container Terminal	J. Matschewsky, T. Sakao, M. Lindahl M. Schröder, R. Schmitt, B. Falk S. Lingegård, M. Lindahl, A. Syberg	Veronica Martinez (UK)
S15	<i>SPECIAL SESSION</i> Eco-design for PSS	224	21PM	16:15-17:30	Supporting the Development of Environmentally Sustainable PSS by Means of the Ecodesign Maturity Model Small Household Equipment toward Sustainability A Method Helping to Define Eco-innovative Systems based on Upgradability	D.C. Antelmi Pigosso, T.C. McAloone R. Allais, J. Gobert, B. Laratte, B. Guillaume, D. Bourg O. Pialot, D. Millet, E. Cor, J. Bisiaux	Maud Rio (FR)
S16	PSS Design and Engineering IV	203	22AM	11:00-12:40	Service Engineering Methodology in Practice: A Case Study from Power and Automation Technologies A Conceptual Framework for Designing Informatics-based Services in Manufacturing Industries System Dynamics Cycle Network of the Innovation Process of Product Service Systems PSS Characterisation of Telecom Offerings	A. Rondini, F. Pirola, G. Pezzotta, M-Z. Ouertani, R. Pinto C-H. Lim, M-J. Kim, J-Y. Heo, K-J. Kim P. Grüneisen, B. Stahl, D. Kasperek, M. Maurer, B. Lohmann A. Lelah, T. Bauer, D. Brissaud	Daniel Brissaud (FR)
S17	Organisational Competences and Capabilities	206	22 AM	11:00-12:40	Coping with the Challenges of a Heterogeneous Working Context - A Unique Configuration of Individual Competencies for PSS Workers A Dynamic Capabilities Perspective on Service-Oriented in Demand-Supply Chains Disciplines for Designing PSS Actor Network Roleplay-based Assessment of IPS ² -specific Intellectual Capital	B-F. Voigt M.R. Rasouli, J.J.M. Trienekens, R.J. Kusters, P.W.P.J. Grefen E. Numata, S. Hosono, H. Sakaki, S. Izukura, K. Kimita, Y. Shimomura J.W. Wewior	Nadine Dubruc (FR)
S18	PSS Case Studies and Lessons from Experience II	212	22AM	11:00-12:40	Ericsson - The History from Product to Solution Provider and Challenges and Opportunities in an Evolving Environment From Ownership to Service-oriented Business Model: A Survey in Capital Goods Companies and a PSS Typology Excess Heat Based Integrated Product and Services Offerings Product-Service Business Concept Design: Realworld Case of a Small Furniture Manufacturing Firm	S.W. Elfving, M. Lindahl, E. Sundin F. Adrodegari, A. Alghisi, N. Saccani, M. Ardolino S. Päivärinne, M. Lindahl Y-S. Kim, J. Lee, H. Lee, Y.S. Hong	Tim McAloone (DK)

S19	Organisational Issues and Transition Management II	224	22 AM	11:00-12:40	Change of Culture or Culture of Change? Introducing a Path-Agency-Culture (PAC) Framework to Servitization Research Towards a Meta-model for Description of Sociotechnical Perspective in Product-Service Systems Who Realizes a PSS? An Organizational Framework for PSS Development Partnering as a Stepping Stone in the Transition to PSS for the Construction Industry	A. Lienert C. Hollauer, J. Wilberg, M. Omer K. Kimita, K. Watanabe, T. Hara, H. Komoto S. Lingegård, M. Lindahl	Sophie Peillon (FR)
S20	PSS Design and Engineering V	203	22 PM	14:00-15:40	Bibliometric Analysis of the Product-Service System Research Field Territory Based Industrial Product-Service System design Interactions between Service and Product Lifecycle Management Maintenance of Shape Memory Actuator Systems - Applications, Processes and Business Models	M.G. Oliveira, G.H.S. Mendes, H. Rozenfeld K. Vadoudi S.A. Wiesner, M. Freitag, I. Westphal, K-D. Thoben C. Rathmann, T. Remmetz, D. Kreimeier	Giuditta Pezzotta (IT)
S21	<i>SPECIAL SESSION</i> Mass Customisation and PSS for Leveraging Sustainability	206	22PM	14:00-15:40	Decision Making Support to Mitigate Variety Impact on Sustainability Development of a PSS-oriented Business Model for Customized Production in Healthcare Employing Smart Units and Servitization towards Reconfigurability of Manufacturing Processes Leveraging the Sustainability Potential of Mass Customization through Product Service Systems in the Consumer Electronics Industry	K. Medini, X. Boucher G. Pourabdollahian, G. Copani S. Brad, M. Murar S. Hankammer, F. Steiner	Khaled Medini (FR)
S22	Sustainability and PSS II	212	22PM	14:00-15:40	Local Value Creation and Eco-design: A New Paradigm Investigating Sustainability Assessment Methods of Product-Service Systems Comparing Three Telecom Offers and PSS	B. Tyl, I. Lizarralde, R. Allais B. Doualle, K. Medini, X. Boucher, V. Laforest T. Bauer, A. Lelah, D. Brissaud	Alan Lelah (FR)
S23	Modelling Methods for PSS Engineering	224	22PM	14:00-15:40	Service Value Stream Mapping in Industrial Product-Service System Performance Management An Approach to Reveal Starting Points for PSS Design Support with Dynamic Models A Knowledge-based Assistant for Real-time Planning and Execution of PSS Engineering Chance Processes A Guideline for Product-Service-Systems Design Process	F. Morlock, H. Meier N. Hirth, S. Maisenbacher, D. Kasperek, C. Hollauer, M. Maurer Y. Aidi K. Muto, K. Kimita, Y. Shimomura	Yoshiki Shimomura (JP)

Session number	Session name	Room	Date	Hours	Title	Lecturers
GD I	Educational Game Experimentations	111	20PM	14:15-15:45	Game 1: MicroS+ Integrating product and service dominated logics - A PSS Management Simulation	T. Süße & B-F. Voigt, Ruhr-University Bochum
		121			Game 2: B-to-Green An educational game focused on innovation and eco-innovation mechanisms	S. Mayer, Pôle ecoconception Saint-Etienne
		211			Game 3: WipSim Work In Process SIMulation	P. Burlat, Ecole des mines de Saint-Etienne
GD II	Panel & Discussion	A104	20PM	16:00-17:30	How to design efficient educational games	Prof. Yoshiki Shimomura, Tokyo Metropolitan University
					Bridging the mindset-divide between product and service for PSS education	Thomas Süße, Ruhr-University Bochum
					Round-Table	Conducted by Paul Wheal (Ecole des Mines de Saint-Etienne) and Bernd-Friedrich Voigt (Ruhr-University Bochum)

Session number	Session name	Room	Date	Hours	Title	Lecturers
IPSS Opening Session		A022	21AM	8:30-9:00		
Keynote Session		A022	21AM	9:00-10:30	Adaptation of various Product-Service offers, for dedicated answers to distinct types of usage	E. Grab, Michelin group Vice-President Strategic Anticipation and Innovation, Prospective and Sustainable Development
					Product/Service-Systems as the key to customer insight, product differentiation and increased sustainability performance	T. McAloone, Prof., CIRP & Technical University of Denmark
ID I	Industrial Case Studies	214	21AM	11:00-12:40	PSS in United Kingdom: Case studies from Man Trucks UK, Vitsoe, ICI explosives, Xerox, Alstom	V. Martinez, Cambridge Service Alliance
					PSS in Sweden: Case studies from Toyota, Ericsson, Qlean Scandinavia	M. Lindahl, Linköping University
					PSS in France: SME Case studies from SFH, Automelec, AMVMeca	X. Boucher, Ecole des mines de Saint-Etienne
ID II	European Funding	214	21PM	14:00-15:40	A panorama of the last European funding schemes for industry in the H2020 framework	P. Forminsyn, NCP, Research Department, EMSE & Institut Carnot Mines A. Bocquillon, theme leader, VIAMECA S. Gay, Head Office Europe, ARDI Rhône-Alpes
ID III	Industrial Round-Table	214	21PM	16:15-17:30	Clextral Renault Trucks Thales Group	G. Maller, Vice president of Technologies P. Postel, in charge of service offering P-O. Robic, Manager for Future Services