

20th IFIP/Socolnet Working Conference on Virtual Enterprises
23-25 Sep 2019, Turin, Italy

Collaborative Networks and Digital Transformation

PRELIMINARY PROGRAM

Monday – 23 Sep 2019		Tuesday – 24 Sep 2019		Wednesday – 25 Sep 2019				
08:00	Registration			09:00	F1 Data Management for Collaboration in Value Creation Networks	F2 Education and Enabling Tools for Industry 4.0	F3 Collaborative Building Ecosystems	
09:00	Opening Session			10:30	Coffee break			
09:30	Plenary Talk - <i>Klaus-Dieter Thoben</i> <i>The role of data and Data Analytics along the entire lifecycle of products / systems</i>	09:00	IS1 <i>Industry Session:</i> The role of technology clusters to strengthen the application of Industry 4.0		D1 Collaborative Decision-Making in Value Creation Networks			
10:30	Coffee break	11:00	Coffee break					
11:00	A1 Industry 4.0 Challenges	11:30	Plenary Talk - <i>Paulo Leitao</i> <i>Collaborative networks and Industry 4.0: A Symbiotic Relationship?</i>					
	A2 Open Innovation	12:30	Lunch			11:00	G1 Advanced Cyber Physical Systems	
13:00	Lunch						G2 Digital Transformation of Supply Chain	
14:30	B1 Big Data and Learning	14:00	E1 Collaborative Services for Digital Transformation	E2 Digital Transformation in Food and Agribusiness	E3 Virtual Reality in Education for Industry 4.0	13:00	Lunch	
	B2 Managing Disruption in Collaboration	15:30	Coffee break			14:30	Closing & Rewards	
	B3 Collaborative Business Ecosystems and Processes	16:00	SOCOLNET General Assembly Special open panel: A Leap toward Collaboration Networks 4.0			15:15	Coffee break	
16:00	Coffee break	18:00				15:30	Project Meetings & Networking	
16:30	C1 Collaborative Knowledge Management	18:00				18:00		
	C2 Collaborative Government and Social Policies	19:00	Conference dinner					
	C3 Data Semantics in Food and Agribusiness							
18:00								
18:15	Welcome Reception							

Monday: 23 Sep 2019

08:00 Registration

09:00 Opening session

09:30 Plenary Talk:

The role of data and Data Analytics along the entire lifecycle of products / systems
Klaus-Dieter Thoben

10:30 Coffee break

11:00 Parallel sessions - A

A1: Industry 4.0 Challenges

Chair: José Barata

Non-Technical Challenges of Industry 4.0

Wojciech Cellary

A Meta-Model of Cyber-Physical-Social System: The CPSS Paradigm to Support Human-Machine Collaboration in Industry 4.0

Bereket Abera Yilma, Hervé Panetto, Yannick Naudet

Collaborative Networks and ICT trends for future CPPS and Beyond

István Mezgár

Computational Creativity to Design Cyber-Physical Systems in Industry 4.0

Sanaz Nikghadam-Hojjati, José Barata

A2: Open Innovation

Chair: Ricardo Rabelo

Crowd Engineering: Manage Crowd Contributions for Design and Manufacture of Innovative Products

Agostino Villa, Teresa Taurino

Open Innovation Practitioners Mindset on Risk

Paula Urze, João Rosas, Alexandra Tenera, Luis M. Camarinha-Matos

Developing a Green Product based in an Open Innovation Environment. Case Study: Electrical Vehicle

Ricardo Santos, Antonio Abreu, Vitor Anes

Commute Green! The Potential of Enterprise Social Networks for Ecological Mobility Concepts

Christian Zinke-Wehlmann, Julia Friedrich

13:00 Lunch

14:30 Parallel sessions - B

B1: Big Data and Learning

Chair: António Lucas Soares

Interactive Machine Learning: Managing Information Richness in Highly Anonymized Conversation Data

Ari Alamäki, Lili Aunimo, Harri Ketamo, Lasse Parvinen

Methods of Data Mining for Quality Assurance in Glassworks

Łukasz Paško, Paweł Litwin

Digital-enabled Framework for Intelligent Collaboration in Small Teams

Juanqiong Gou, Qinghua Liu, Wenxin Mu, Wenchi Ying, Hamideh Afsaramanesh and Frederick Benaben

B2: Managing Disruption in Collaboration

Chair: António Abreu

Development of a Methodology for the Analysis and Evaluation of Alternative Actions in Disruption Management in Production

Ben Luetkehoff, Volker Stich, Moritz Schroeter and Felix Steinlein

Actionable Collaborative Common Operational Picture in Crisis Situation: A Comprehensive Architecture Powered with Social Media Data

Julien Coche, Aurélie Montarnal, Andrea Tapia, Frederick Benaben

A Knowledge based System for Collecting and Integrating Production Information

Giulia Bruno, Emiliano Traini, Franco Lombardi

B3: Collaborative Business Ecosystems and Processes

Chair: Teresa Taurino

A Model of Evolution of a Collaborative Business Ecosystem Influenced by Performance Indicators

Paula Graça, Luís M. Camarinha-Matos

Verifying for Compliance to Data Constraints in Collaborative Business Processes

John Paul Kasse, Lai Xu, Paul deVrieze, Yuewei Bai

Collaborative Networks Management from a Theory of Constraints Perspective

Alexandra Tenera, João Rosas

16:00 Coffee break

16:30 Parallel sessions - C

C1: Collaborative Knowledge Management

Chair: István Mezgar

Supporting Transparent Information/Knowledge Federation in Collaborative Administrative Environments

Beibei Pang, Hamideh Afsarmanesh, Juanqiong Gou, Wenxin Mu

A Method of Ontology Evolution and Concept Evaluation Based on Knowledge Discovery in the Heavy Haul Railway Risk System

Tiancheng Cao, Wenxin Mu, Aurélie Montarnal, and Anne-Marie Barthe-Delanoë

Designing a Trusted Data Brokerage Framework in the Aviation Domain

Evmorfia Biliri, Minas Pertselakis, Marios Phinikettos, Marios Zacharias, Fenareti Lampathaki, Dimitrios Alexandrou

C2: Collaborative Government and Social Policies

Chair: Lai Xu

Next Generation Government - Hyperconnected, Smart and Augmented

Adegboyega Ojo

Inter-governmental Collaborative Networks for Digital Government Innovation Transfer – Structure, Membership, Operations

Magdalena Ciesielska and Tomasz Janowski

Where Are Females in OSS Projects? Socio Technical Interactions

Ikram El Asri, Noureddine Kerzazi

C3: Data Semantics in Food and Agribusiness

Organizers: Mareva Alemany, Angel Ortiz, Jorge Hernandez

Semantic Support for Scenarios to Improve Communication in Agribusiness

Leandro Antonelli, Diego Torres, Mariángeles Hozikian, Jorge E. Hernandez

Collaboration Networks for Information Empowerment of Food Consumers

Antonio Palmiro Volpentesta, Alberto Michele Felicetti, Nicola Frega

Big Data Transformation in Agriculture: From Precision Agriculture towards Smart Farming

María Angeles Rodríguez, Llanos Cuenca and Ángel Ortiz

18:00 End of technical activities

18:15 Welcome Reception

Tuesday: 24 Sep 2019

09:00 Parallel sessions - D

Industry session: The role of technology clusters to strengthen the application of Industry 4.0

Moderator: Paolo Dondo (director MESAP innovation center)

Speakers:

Guido Saracco (Rector of Politecnico di Torino)

Paolo Dondo (MESAP)

Gian Paolo Gerio (COMAU robots)

Paolo Calefati (PRIMA Industrie)

Antonio Errichiello (Swam Rail project)

TbD (Sagri project)

Giuseppe Locati (Lanzi project)

Open discussion

D1: Collaborative Decision-Making in Value Creation Networks

Organizers: Xavier Boucher, David Romero

Framework to Model PSS Collaborative Value Networks and Assess Uncertainty of their Economic Models

Xavier Boucher, Khaled Medini, Camilo Murillo Coba

A Business Model Assessment and Evaluation Framework for City Logistics Collaborative Strategic Decision Support

Giovanni Zenezini, Jesus Gonzalez-Feliu, Giulio Mangano, Laura Palacios-Arguello

Assessment of Failures in Collaborative Human-Robot Assembly Workcells

Domenico A. Maisano, Dario Antonelli and Fiorenzo Franceschini

Discrete Event Simulation as a Support in the Decision Making to Improve Product and Process in the Automotive Industry - A Fuel Pump Component Case Study

Luis E. Villagomez, Daniel Cortés, José Ramírez, Alejandro Álvarez, Rafael Batres, Ivann Reyes, Germán Esparza, Nancy Cruz, Arturo Molina

11:00 Coffee break

11:30 Plenary Talk:

Collaborative networks and Industry 4.0: A Symbiotic Relationship?

Paulo Leitão

12:30 Lunch

14:00 Parallel sessions - E

E1: Collaborative Services for Digital Transformation

Chair: Wojciech Cellary

Evaluating the Applicability and Utility of an Elderly Care Ecosystem

Thais A. Baldissera and Luis M. Camarinha-Matos

Towards a Mobility Payment Service based on Collaborative Open Systems

A. Luis Osório, Luis M. Camarinha-Matos, Hamideh Afsarmanesh, Adam Belloum

Value-Added Services, Virtual Enterprises and Data Spaces inspired Enterprise Architecture for Smart Cities

Sobah Abbas Petersen, Zohreh Pourzolfaghar, Iyas Alloush, Dirk Ahlers, John Krogstie, Markus Helfert

E2: Digital Transformation in Food and Agribusiness

Organizers: Mareva Alemany, Angel Ortiz, Jorge Hernandez

Servitization of Biomass Processing for a Virtual Biorefinery: Application to the Lignocellulosic Biomass in a French Local Territory

Michelle Houngbé, Anne-Marie Barthe-Delanoë, Stéphane Négny

Collaborative, Distributed Simulations of Agri-food Supply Chains. Analysis on How Linking Theory and Practice by Using Multi-agent Structures

Alejandro Fernandez, Jorge E. Hernandez Hormazabal, Shaofeng Liu, Hervé Panetto, Matías Nahuel Pankow and Esteban Sanchez

Enhancing the Sustainability Performance of Agri-Food Supply Chains by Implementing Industry 4.0

David Pérez Perales, María-José Verdecho, Faustino Alarcón-Valero

E3: Virtual Reality in Education for Industry 4.0

Organizers: Dorota Stadnicka, Doriana D'Addona, Dario Antonelli

Application of Virtual Reality in Designing and Programming of Robotic Stations

Dariusz Szybicki, Krzysztof Kurc, Piotr Gierlak, Andrzej Burghardt, Magdalena Muszyńska and Marek Uliasz

Application of Virtual Reality in the Training of Operators and Servicing of Robotic Stations

Magdalena Muszyńska, Dariusz Szybicki, Piotr Gierlak, Krzysztof Kurc, Andrzej Burghardt and Marek Uliasz

VR Training for Security Awareness in Industrial IoT

Vasiliki Liagkou and Chysostomos Stylios

15:30 Coffee break

16:00 Special Session: CNs and UN 2030 Agenda

(part of SOCOLNEt General Assembly – Open to all attendees)

Moderators:

A Leap toward Collaboration Networks 4.0

Plenary Introduction

Panel

Plenary Discussion

18:00 End of technical activities

19:00 Conference dinner

09:00 Parallel sessions - F

F1: Data Management for Collaboration in Value Creation Networks

Organizers: Dimitris Karagianis, Mario Lezoche

Data-driven Pattern-based Constructs Definition for the Digital Transformation Modelling of Collaborative Networked Manufacturing Enterprises

Concetta Semeraro, Mario Lezoche, Hervé Panetto, Michele Dassisi, Stefano Cafagna

Data Privacy Concerns Throughout the Customer Journey and Different Service Industries

Marko Mäki, Ari Alamäki

Connected and Multimodal Passenger Transport through Big Data Analytics - Case Tampere City Region, Finland

Riku Viri, Lili Aunimo, Heli Aramo-Immonen

F2: Education and Enabling Tools for Industry 4.0

Organizers: Dorota Stadnicka, Doriana D'Addona, Dario Antonelli

Simulations of Manufacturing Systems: Applications in Achieving the Intended Learning Outcomes

Paweł Litwin, Maksymilian Mądział, Dorota Stadnicka

Influence of Trust Factors on Shared Laboratory Resources in a Distributed Environment

Jannicke Baalsrud Hauge, Valentin Kammerlohr, Barbara Göbl, and Heiko Duin

Key Performance Indicators Integrating Collaborative and Mobile Robots in the Factory Networks

Khurshid Aliev, Dario Antonelli, Ahmed Awouda, Paolo Chiabert

F3: Collaborative Building Ecosystems

Chair: Tom Beach

Outlining a New Collaborative Business Model as a Result of the Green Building Information Modelling Impact in the AEC Supply Chain

João Vilas-Boas, Vahid Mirnoori, Alim Razy, and Agostinho Silva

Development of a Conceptual Architecture for the Energy Management of Building Ecosystems

Filipa Ferrada, Ana Inês Oliveira, João Rosas, Patrícia Macedo, Ricardo Almeida, and Luis M. Camarinha-Matos

Collaborative Safe Escape in Digital Transformation

Ana Inês Oliveira, Pedro Pereira and Javad Jassbi

10:30 Coffee break

11:00 Parallel sessions - G

G1: Advanced Cyber Physical Systems

Chair: Agostino Villa

Adaptive Integration of IoT with Informatics Systems for Collaborative Industry: the SITL-IoT Case

A. Luis Osório, Luis M. Camarinha-Matos, Tiago Dias, José Tavares

Collaborative Softbots: Enhancing Operational Excellence in Systems of Cyber-Physical Systems

Ricardo J. Rabelo, Saulo Popov Zambiasi, David Romero

A Systematic Review of Collaborative Networks: Implications for Sensing, Smart and Sustainable Enterprises

Fábio Müller Guerrini, Juliana Suemi Yamanari

Finding the Right Way Towards a CPS – A Methodology for Individually Selecting Development Processes for Cyber-Physical Systems

Günther Schuh, Violett Zeller, Max-Ferdinand Stroh and Philipp Harder

G2: Digital Transformation of Supply Chain

Organizers: Rosanna Fornasiero, Andrea Zangiacomi, Elena Pessot

A Digital Platform Architecture to Support Multi-Dimensional Surplus Capacity Sharing

Henrique Diogo Silva, António Lucas Soares, Andrea Bettoni, Andrea Barni Francesco, Serena Albertario

Investigating Supply Chains Models and Enabling Technologies towards Collaborative Networks

Elena Pessot, Andrea Zangiacomi, Frank Berkers, David Hidalgo-Carvajal, Ron Weerdmeester, Rosanna Fornasiero

Toward an Agile Adaptation of Supply Chain Planning: A Situational Use Case

Sanaa Tiss, Caroline Thierry, Jacques Lamothe, Christophe Rousse

Managing Logistics in Collaborative Manufacturing: The Integration Services for an Automotive Application

Nicola Mincuzzi, Mohammadtaghi Falsafi, Gianfranco E. Modoni, Marco Sacco, Rosanna Fornasiero

13:00 Lunch

14:30 Closing session and Awards

15:15 Coffee break and farewell

15:30 Project Meetings and Networking

18:00 End