



2019 IEEE 23rd International Conference on Computer Supported Cooperative Work in Design (IEEE CSCWD 2019)

May 6-8, 2019, Porto, Portugal

<http://2019.cscwd.org/>

Program

Sunday May 5, 2019

17:30 - 19:00	Registration – Pestana Porto Vintage
18:00 - 19:30	Welcome reception – Pestana Porto Vintage

Monday May 6, 2019

08:30 - 18:00	Registration – Faculty of Fine Arts of the University of Porto		
08:30 - 09:00	Opening Plenary (Aula Magna)		
09:00 – 10:00	<p style="text-align: center;">Keynote Speech Prof. Keith W. Hipel, University of Waterloo, Ontario, Canada The Graph Model for Conflict Resolution (GMCR): Reflections on Three Decades of Development Chair: Prof. Weiming Shen (Aula Magna)</p>		
10:00 – 10:30	Coffee/Tea Break		
10:30 – 12:30	Session A1: (Room A)	Session B1: (Room B)	Session C1: (Room C)
12:30 – 14:00	Lunch		
14:00 – 16:00	Session A2: (Room A)	Session B2 : (Room B)	Session C2: (Room C)
16:00 – 16:30	Coffee/Tea Break		
16:30 – 18:00	Session A3: (Room A)	Session B3: (Room B)	Session C3: (Room C)
18:00 – 20:00	IEEE SMC CSCWD TC & CSCWD Steering Committee Meeting (Room B)		

Tuesday May 7, 2019

09:00 – 10:00	<p style="text-align: center;">Keynote Speech Prof. Eugenio Oliveira, LIACC, Faculty of Engineering, University of Porto The Quest for Beneficial AI Chair: Prof. Jean-Paul Barthès (Aula Magna)</p>		
10:00 – 10:30	Coffee/Tea Break		
10:30 – 12:30	Session A4: (Room A)	Session B4: (Room B)	Session C4: (Room C)
12:30 – 14:00	Lunch		
14:00 – 16:00	Session A5: (Room A)	Session B5: (Room B)	Session C5: (Room C)
16:00 – 16:30	Coffee/Tea Break		
16:30 – 18:00	Session A6: (Room A)	Session B6: (Room B)	Session C6: (Room C)
18:00 – 20:00	Social Program (Guided walk and Port Wine Cellars visit)		
20:00 – 23:00	Gala Dinner		

Wednesday May 8, 2019

09:00 – 10:00	<p style="text-align: center;">Keynote Speech Prof. Stephan Lukosch, Delft University of Technology, Netherlands Designing for Augmented Humans and Intelligence Chair: Prof. Hugo Paredes (Aula Magna)</p>		
10:00 – 10:30	Coffee/Tea Break		
10:30 – 12:00	Session A7: (Room A)	Session B7: (Room B)	Session C7: (Room C)
12:00 – 12:30	Best Paper Awards and Closing Ceremony (Aula Magna)		
12:30 – 14:00	Light Lunch		
14:00 – 16:00	Social Program		

Monday, May 6, 2019

A1: Security and privacy in collaborative systems (10h30-12h30 May 6, 2019)	
13	Limin Lu, Shaohua Teng, Wei Zhang, Zhenhua Zhang, Dongning Liu and Xiaozhao Fang. Error-correcting ability based collaborative multi-layer selective classifier ensemble model for intrusion detection
32	Xin Zhang and Ru Li. An ARI-HMM based Interest Flooding Attack countermeasure in NDN
39	Abhishek Mahalle, Jianming Yong and Xiaohui Tao. Insider Threat and Mitigation for Cloud Architecture Infrastructure in Banking and Financial Services Industry
78	Naixuan Guo, Ming Yang, Qiyuan Gong, Zhouguo Chen and Junzhou Luo. Data Anonymization Based on Natural Equivalent Class
105	Ricardo Pinheiro, Sidney Lima, Sérgio Fernandes, Edison Albuquerque, Sergio Medeiros, Danilo Souza, Thyago Monteiro, Petrônio Lopes, Rafael Lima, Jemerson Oliveira and Sthéfano Silva. Next Generation Antivirus Applied to Jar Malware Detection based on Runtime Behaviors using Neural Networks

B1: Business and administration (10h30-12h30 May 6, 2019)	
58	Otto R. Lessing, Marcos Weffort, Jones Granatyr, Eduardo Franciscan and Edson E. Scalabrin. Decision-Making: From Pure Uncertainty to Measurable Risk
59	Cleiton Dos Santos Garcia, Rodrigo Vaz Pina Cabral Silva, Alex Meincheim, Arthur Maria Do Valle, Milton Pires Ramos and Edson Emilio Scalabrin. Applying Process Mining in a Multilevel Variants Analysis on Collaborative Sales to Cash Activities
74	Wenan Tan, Deepanjali Shrestha and Seung Ryul Jeong. Digital tourism development and sustainability model for Nepal
76	Qiming Yuan, Rong Zhao and Jin Zhang. FoodCarpool: A Negotiation-based Carpooling System for Take-out Food Delivery
84	Ayslan T. Possebom, Mariela Morveli Espinoza and Cesar Augusto Tacla. Reaching consensus on a group decision using dialogue and arguments

C1: Architecture, engineering, construction, and facility management (10h30-12h30 May 6, 2019)	
35	Vinicius Schettino, Vitor Horta, Marco Antônio P. Araújo and Victor Ströele. Towards community and expert detection in open source global development
48	Thierry Gidel, Shigeru Fujita, Claude Moulin, Kenji Sugawara, Takuo Suganuma, Yuki Kaeri and Norio Shiratori. Enforcing Methodological Rules During Collaborative Brainstorming to Enhance Results
49	Yuling Sun, Jie Zhou, Dong Yao and Liang He. iCare Designer: A Rule-Driven Layout CoDesigning System for Elderly Caring
51	Matheus Camilo da Silva, Patricia Rucker de Bassi, Gregory Moro Puppi Wanderley, Cesar Augusto Tacla and Emerson Cabrera Paraiso. A Visual Tool for Supporting Collaborative Code Quality

Lunch 12:30 – 14:00

A2: Collaborative workspaces (14h00-16h00 May 6, 2019)	
89	Eduardo A. Franciscan, Marcos P. Nascimento, Jones Granatyr, Marcos R. Weffort, Otto R. Lessing and Edson E. Scalabrin. A Systematic Literature Review of Blockchain Architectures Applied to Public Services
90	Lenita Martins Ambrósio, Phillipe Marques, José Maria N. David, Regina Braga, Mário Antonio Ribeiro Dantas, Victor Ströele and Fernanda Campos. An Approach to Support Data Integration in a Scientific Software Ecosystem Platform
93	Angelica F.S. Dias, Juliana B.S. França, Adriana Vivacqua, Marcos Borges, and Bruna Lima. eMOC: An Observation Tool for Collaborative Analysis in Teamwork
100	Bertrand David, René Chalon, Bingxue Zhang and Chuantao Yin. Design of a Collaborative Learning Environment integrating Emotions and Virtual Assistants (Chatbots)

B2: Aerospace, automotive, and manufacturing (14h00-16h00 May 6, 2019)	
25	Shanjin Niu, Chong Su and Xiaozhen Mi. Numerical Analysis on residual stress field of Brake Discs by Ultrasonic Shot Peening
41	Long Wen, Xin Li, Xinyu Li and Liang Gao. A New Transfer Learning Based on VGG-19 Network for Fault Diagnosis
53	Qihao Wan, Jiaxin Zhao, Jianru Xue, Chiyuan Zhang, Bin He and Heming Zhang. A Novel Hierarchical Collaborative Method Based on Multi-objective Optimization for Modularization of Product Platform
56	Weiqing Zhou, Jiashi Yong and Fazhi He. A Collaborative Feature Learning Method for Accurate and Robust Tracking

C2: Collaborative computing (Clouds, Grids, Web Services, Blockchains) (14h00-16h00 May 6, 2019)	
3	Shuang Wang, Xiaoping Li, Rubén Ruiz and Yun Wang. Cost Minimization for Service Providers with Impatient Consumers in Cloud Computing
23	Weizhi Lu, Boyu Li and Bin Wu. Overhead Aware Task Scheduling for Cloud Container Services
38	Weiwei Cai, Agustina Ng and Chengzheng Sun. Design and Implementation of a Concurrency Benchmark Tool for Cloud Storage Systems
72	Rui Wang, Junzhou Luo, Fang Dong and Dian Shen. ParaNF: Enabling Delay-Balanced Network Function Parallelism in NFV
73	Kexi Kang, Jinghui Zhang, Jiahui Jin, Dian Shen, Runqun Xiong and Junzhou Luo. QAECN: Dynamically Tuning ECN Threshold with Micro-burst in Multi-queue Data Centers

Coffee/Tea Break	16:00 – 16:30
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A3: Agents and multi-agent systems (16h30-18h00 May 6, 2019)	
14	Jinyu Zhang, Chenhui Xia, Yao Zhou and Jiaqi Yan. A Multi-agent Based Sage-Fool Model for Rumor Propagation
69	Jieke Shi, Junwu Zhu, Jian Li, Fang Liu and Yunbo Lv. An Efficient Double Auction Mechanism for Job Allocation
36	Weishan Zhang, Liqian Zhu, Liang Xu, Jiehan Zhou, Haoyun Sun and Xin Liu. Deep Learning Based Container Text Recognition

B3: Internet of Things, Cyber-physical systems, Industry 4.0 (16h30-18h00 May 6, 2019)	
87	Edson B dos Santos Jr, Carlos Simões, Ana Cristina Bicharra Garcia and Adriana S Vivacqua. Events that Affect Urban Mobility Patterns: an Analysis of Beijing GPS Data
86	Wenzheng Liu, Jiaxin Zhao, Lipin Shi, Nan Xu, Feng Liu, Fei Li and Heming Zhang. A Mapping Approach of Virtual-Real UR10 Twins Based on Long Short-Term Memory Neural Net
67	YanJun Shi, Yingkai Zhao, Rong Xie and Guangjie Han. Designing a Structural Health Monitoring System for the Large-scale Crane with Narrow Band IoT
10	Gang Xu, Xinyue Wang, Yujie Shi, Xiaolin Guo, Ying Guo and Xiaodong Guo. Community detection in Opportunistic Networks Based on Hierarchical mapping

C3: Collaborative processing of Big Data (16h30-18h00 May 6, 2019)	
70	Chao Zhao, Shijun Liu, Li Pan, Cun Ji and Chenglei Yang. Selecting Superior Candidates from a Suitable Set: A Selective Extraction Algorithm for Accelerating Shapelet Discovery in Time Series Data
31	Wenjing Zhang, Zhongmin Yan and Yongqing Zheng. Author Name Disambiguation Using Graph Node Embedding Method
43	Jing Liu and Guanfeng Xiao. Efficient Bus Arrival Time Prediction Based on Spark Streaming Platform
55	Tingting Luan, Zhongmin Yan and Shidong Zhang. Fraudster Detection Based on Modularity Optimization Algorithm

Tuesday, May 7, 2019

A4: Interoperability, ontology and semantics (10h30-12h30 May 7, 2019)	
9	Elsa Negre and Marie-Hélène Abel. Context-based decision support to form relevant groups of learners
20	Menglong Cui, Detao Ji, Ting Zeng, Dehai Zhang, Cheng Xie, Zhibo Chen and Xiaoqiang Xia. Image Classification Based on Image Knowledge Graph and Semantics
44	Mingzhu Li, Lihua Chen, Tianyuan Liu and Yuqing Sun. Short Text based Cooperative Classification for Multiple Platforms
47	Siying Li, Marie-Hélène Abel and Elsa Negre. Towards a collaboration context ontology

B4: Collaboration methods, mechanisms, processes, and protocols (10h30-12h30 May 7, 2019)	
82	Miaomiao Gong, Yuling Sun and Liang He. A Social Network Engaged Crowdsourcing Framework for Expert Tasks
103	Jorge Carvalho, Arnaldo Santos and Hugo Paredes. Data quality improvement in crowdsourcing systems by enabling a positive personal user experience
104	Maximiliano Canché and Sergio F. Ochoa. A Survey of Development Strategies for Collaborative Systems
91	Adriano D. Moraes, Allan E. S. Freitas and Manoel C. Marques Neto. Collaborative and GPS Sensing for Waiting Time Prediction on Service Queues through Smartphones
96	Ramon Chaves, Daniel Schneider, António Correia, Marcos R. S. Borges and Claudia Motta. Understanding crowd work in online crowdsourcing platforms for urban planning: systematic review

C4: Collaboration platforms, software tools, and services (10h30-12h30 May 7, 2019)	
15	Wei Zhao, Renjie Lu, Zhenyu Cui and Haihua Shen. Energy Optimization of Online Tracker for Mobile Devices
52	Yan Wang, Jiantao Zhou and Yan Jiao and Xiaoyu Song. Comparative analysis of evolutionary algorithms based on swarm intelligence for QoS optimization of cloud services
64	Patrícia de C. Wang, Vanessa S. Soares, Jano M. de Souza, Maria Gilda P. Esteves, Natália C. L. Schots and Felipe R. Duarte. A Crowd Science framework to support the construction of a Gold Standard Corpus for Plagiarism Detection
71	Bingfang Qi, Weizhan Zhang, Chunmeng Yang and Qinghua Zheng. MUCH: Priority-based Collaborative Multi-Channel HTTP Adaptive Streaming
94	Rafael R. J. Jardim, Luiz Felipe Oliveira, Maria Gilda P. Esteves, Jano Moreira de Souza, Nivalde de Castro, Rubens Rosental, Carlos Oliveira, Evandro Cometti and Benedito Miranda. Designing a Collaboration Platform for Electricity Consumer Councils

Lunch 12:30 – 14:00

A5: Special Session: Collaborative Knowledge Creation and Sharing (1) (14h00-16h00 May 7, 2019)	
11	Helvio Jeronimo Junior, Carlos Eduardo Barbosa, Yuri Oliveira de Lima and Jano Moreira de Souza. Approaching Future-oriented Technology Analysis Strategies in Knowledge Management Processes
24	Jiahui Shen, Ji Xiang, Daren Zha, Tianshu Fu and Dingyang Duan. Intention Understanding Model Inspired by CBC Loops
50	Marcos Rodrigues Pinto, Carlos Eduardo Barbosa, Yuri Oliveira de Lima, Luis Felipe Coimbra Costa and Jano Moreira de Souza. A Service Bus for Knowledge Management Systems in Brazilian Federal Government
57	Renato De Donato, Martina Garofalo, Delfina Malandrino, Maria Angela Pellegrino, Andrea Petta and Vittorio Scarano. Linked Data Queries by a Triological Learning Approach
62	Maria Teresa A.Gouvêa, Flavia Maria Santoro, Claudia Cappelli, Claudia L. R. Motta and Marcos R. S. Borges. Epos: The Hero's Journey in organizations through Group Storytelling

B5: Special Session: Multidisciplinary Design Optimization (14h00-16h00 May 7, 2019)	
27	Xiaojun Zheng, Jiang Zhong, Yanbin Sun, Yanjun Shi, Zhizheng Xu and Hao Sun. Design of

	Optimization Platform for Energy Absorption Structure of High Speed Train
34	Jinhao Zhang, Mi Xiao, Liang Gao and Yan Zhang. MEAK-MCS: Metamodel error measure function based active learning Kriging with Monte Carlo simulation for reliability analysis
60	Zhenyu Cui, Ying Liu and Wei Zhao. YUN: A Fast Ground-to-air Cloud Image Recognition Framework
29	Hao Wu, Jonathan Corney and Jing Gan. A Pilot Study: A Statistical Analysis for the Crowdsourced Design Evaluation Results based on the cDesign Framework
107	Fuqing Zhao, Xuan He, Yi Zhang, Weimin Ma and Chuck Zhang. A Novel Pareto Archive Evolution Algorithm with Adaptive Grid Strategy for Multi-objective Optimization problem

C5: Collaboration methods, mechanisms, processes, and protocols (1) (14h00-16h00 | May 7, 2019)

75	Jiaming Cui, Tun Lu, Dongsheng Li and Ning Gu. Matrix Approximation with Cumulative Penalty for Collaborative Filtering
77	Vitor Horta, Victor Ströele, Vinicius Schettino, Jonice Oliveira, José Maria David and Marco Antônio P. Araújo. Collaboration analysis in global software development
97	Zhao Zhao, Wenyu Qu, Chunfeng Liu, Tie Qiu and Xiaoyun Guang. A Novel Self-organizing Routing Algorithm for Underwater Internet of Things
99	Luyang Hou, Jun Yan and Chun Wang. Accommodating More Users in Highway Electric Vehicle Charging through Coordinated Booking: A Market-Based Approach
106	Xiantao Cai and Weidong Li. Secure Sharing of Design Genes in CAD Models for Collaborative Design

Coffee/Tea Break | 16:00 – 16:30

A6: Special Session: Collaborative Knowledge Creation and Sharing (2) (16h30-18h00 | May 7, 2019)

83	António Correia, Shoaib Jameel, Daniel Schneider, Benjamim Fonseca and Hugo Paredes. The Effect of Scientific Collaboration on CSCW Research: A Scientometric Study
88	Gongzhuang Peng, Hongwei Wang and Heming Zhang. Knowledge-based Intelligent Assembly of Complex Products in a Cloud CPS-based System
95	Ana Paula Pimentel, Daniel Schneider, Luiz Oliveira, Jano de Souza, António Correia and Claudia Motta. Exploring social validation on a collaborative curation platform
102	Sozic Linford, Benjamin Bogdanovic, KuoMing Chao, Slađana Janković, Vladislav Maraš, Mirjana Bugarinović and Ilias Trochidis. Data analysis on big data applications with small samples and incomplete information

B6: Collaborative virtual environments (16h30-18h00 | May 7, 2019)

37	Shaojuan Lei, Xiaodong Zhang and Yuning Yan. Research on Opinion Leaders Recognition Based on TOPSIS in open source design community
80	Jiaxin Zhao, Fan Yang, Wenzheng Liu, Feng Liu, Fei Li, Hongwei Wang and Heming Zhang. An approximation model based on kernel ridge regression for robot kinematics simulation
85	Jade Ferreira, José Maria N. David, Regina Braga, Fernanda Campos, Victor Ströele and Leonardo de Aguiar. Supporting the Collaborative Research through Semantic Data Integration
98	Carlos Gomes, Daniel Schneider, Jano de Souza, Geraldo Xexéo, Luiz Oliveira. Evaluation of a GWAP for social recruitment and measurement of musical talent

C6: Collaboration methods, mechanisms, processes, and protocols (2) (16h30-18h00 | May 7, 2019)

18	Hua Li, Ningjiang Chen, Birui Liang and Can Liu. RPBG: Intelligent Orchestration Strategy of Heterogeneous Docker Cluster Based on Graph Theory
21	Marcos Rodrigues Pinto, Yuri Oliveira de Lima, Carlos Eduardo Barbosa and Jano Moreira de Souza. Towards Fact-Checking through Crowdsourcing
26	Wei Zhao, Haihua Shen, Feng Zhang and Huazhe Tan. Adaptive Power Optimization for Mobile Traffic based on Machine Learning
40	Abhishek Mahalle, Jianming Yong and Xiaohui Tao. Ethics of IT Security Team for Cloud Architecture Infrastructure in Banking and Financial Services Industry

Wednesday, May 8, 2019

A7: Collaboration theories and methodologies (10h30-12h00 May 8, 2019)	
6	Jiayin Lin, Geng Sun, Jun Shen, Tingru Cui, Ping Yu, Dongming Xu and Li Li. A Survey of Segmentation, Annotation, and Recommendation Techniques in Micro Learning for Next Generation of OER
7	Qian Luo and Yun Wang. UHUM: An Efficient Hybrid Update Mechanism in Distributed Storage Systems with Erasure Coding
19	Yadi Wang, Xiaoping Li, Rubén Ruiz and Xia Zhu. Feature Selection via Adaptive Spectral Clustering based on Joint Mutual Information
B7: Intelligent systems, health and homecare (10h30-12h00 May 8, 2019)	
61	Jing Hao, Yongqing Zheng, Chengyuan Xu, Zhongmin Yan and Hui Li. Feature Assessment and Classification of Diabetes Employing Concept Lattice
81	Liuqian Ni, Yuling Sun, Yanqin Yang and Liang He. Human-Engaged Health Care Services Recommendation for Aging and Long-term Care
101	Zhelong Wang, Ning Yang, Hongyu Zhao, Xin Shi, Sen Qiu and Zhengyu Wang. A Multi-Featured Analysis for Body Sensor Networks-based Affective Actions Recognition
C7: Topology, Optimization, Logistics and transportation (10h30-12h00 May 8, 2019)	
17	Xiaozhen Mi, Mengting Mei and Xiaojun Zheng. Study on optimal routes of multimodal transport under time window constraints
5	Chunsheng Yang, Takayuki Ito and Wen Gu. Toward case-based reasoning facilitation for online discussion in deliberation
16	Jie Gao, Hao Li, Zhen Luo, Peigen Li and Liang Gao. Isogeometric density field method for topology optimization of micro-architected materials