

2018 ACM/IEEE 1st International Workshop on Software Engineering for Cognitive Services SE4COG 2018

Table of Contents

Message from the ICSE 2018 General Chair	vii
Message from the SE4COG 2018 Co-Chairs	x
Organizing Committee for SE4COG 2018	xi
Program Committee for SE4COG 2018	xiii
SE4COG 2018 Sponsors and Supporters	xiv
ICSE 2018 Sponsors and Supporters	xv

Autonomic Workloads and Multicloud Engineering

The Beginning of a Cognitive Software Engineering Era with Self-Managing Applications	1
<i>Giovanni Morana (C3DNA Inc.)</i>	

Data Science, AI, ML, and DL Engineering

Self-Organizing Infrastructure for Machine (Deep) Learning at Scale	5
<i>Samir Mittal (Micron Technology)</i>	
Intra-Thalamic and Thalamocortical Connectivity: Potential Implication for Deep Learning	9
<i>Jie Mei (Charité-Universitätsmedizin Berlin) and Tarry Singh (deepkapha.ai)</i>	

Nature-Inspired Cognitive Systems

Safety from Ethical Hazards: Prospects for a Contribution from Software Engineering	15
<i>Kurt Wallnau (Carnegie Mellon University)</i>	
Learning Network Flow Based on Rough Set Flow Graphs and ACO Clustering in Distributed Cognitive Environments	18
<i>Arkadiusz Lewicki (University of Information Technology and Management) and Eugene Eberbach (Leaders in Machine Learning and Robotics Engineering)</i>	
Natural Engineering: Applying a Genetic Computing Model to Engineering Self-Aware Software	25
<i>Abhi Sharma (Avaamo) and Giovanni Morana (C3DNA)</i>	

Software Engineering for Cognitive Services

Enterprise Crowd Computing for Human Aided Chatbots	29
<i>Alessandro Bozzon (Delft University of Technology)</i>	
Toward Truly Personal Chatbots: On the Development of Custom Conversational Assistants	31
<i>Florian Daniel (Politecnico di Milano), Maristella Matera (Politecnico di Milano), Vittorio Zaccaria (Politecnico di Milano), and Alessandro Dell'Orto (Politecnico di Milano)</i>	

The Future of Intelligent Systems

Keeping Intelligence under Control	37
<i>Piergiuseppe Mallozzi (Chalmers University of Technology-University of Gothenburg), Patrizio Pelliccione (Chalmers University of Technology-University of Gothenburg), and Claudio Menghi (Chalmers University of Technology-University of Gothenburg)</i>	
Toward a Practical Process Model for Anomaly Detection Systems	41
<i>Nils Schwenzfeier (University Duisburg-Essen) and Volker Gruhn (University Duisburg-Essen)</i>	
Adaptive Rule Monitoring System	45
<i>Alireza Tabebordbar (University of New South Wales) and Amin Beheshti (Macquarie University)</i>	

Cognitive and Conversational Systems Era

Smart Conversational Agents for Reminiscence	52
<i>Svetlana Nikitina (University of Trento), Sara Callaioli (University of Trento), and Marcos Baez (University of Trento)</i>	
Author Index	59