Keynote 1

Cyber-Physical Event Business Systems

Tokuro Matsuo, Ph.D.

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Abstract

Nowadays, a lot of types of communication system to make consensus among people are provided. We can utilize these kinds of systems, such as Social network system, e-mail, and instant messenger system, to make a decision and determination through online discussion. In the next decade, we can forecast a lot of types of consensus formation systems are provided and we may find new communication systems integrating between cyber and physical environment. In this talk, I introduce our conducted experiments using cyber-physical discussion environment in the panel discussion session in the conference. In the session, facilitator asks question to panelists about issues on the discussion and attendees can also do as well by their voice. Each attendee also can post and declare his/her opinions and suggestions through the online discussion system during the session. One or two facilitators facilitate the discussion in the online system as well as real discussion. We found out a lot of interesting results of attendees survey taken in before/after the experiments. I also introduce the environment to provide useful information for attendees by the digital signage system in the conference venue. This digital signage system is connected to the attendees location capture system and conference registration system. These integrations between cyber and physical environments and data enable to make better consensus formation between all sorts of people.

Biography

Dr. Tokuro Matsuo is currently Full Professor at Advanced Institute of Industrial Technology (AIIT) in Tokyo Public University Corporation from 2012. Also, he is currently Visiting Professor at Sam Houston State University, USA; Director of Research Center for Artificial Intelligence and Service Science at AIIT; Executive Director of International Institute of Applied Informatics (IIAI); Executive Director of International Accreditation Association for Higher Education; Guest Professor at Bina Nusantara University, Indonesia; Japan MICE Ambassador; and Kumamoto City MICE Ambassador. He was Associate Professor at Yamagata University, Japan (2006-2012); Adjunct Professor at Asian University, Taiwan (2019-2021); Invited Professor at City University of Macau, Macau (2018-2020); Visiting Professor at University of Nevada, Las Vegas, USA (2016-2017); Vice-President, International Association for Computer and Information Science, USA (2015-2017); Vice-President, Software Engineering Research Foundation, USA (2013-2018); Visiting Researcher at University of California at Irvine, USA (2010-2011); Research Fellow at Shanghai University, China (2010-2013); and Project Professor of Green Computing Research Center at Nagoya Institute of Technology, Japan (2011-2014); Guest Professor at Nagoya Institute of Technology, Japan (2021-2023); and Research Fellow of SEITI in Central Michigan University, USA (2010-2018). He received his Ph.D. in computer science from Nagoya Institute of Technology in 2006. His current research interests include agent-based electronic commerce, qualitative reasoning and simulation, material informatics, IT and business management, and IoT. Also, he is a professional event planner and event producer. He delivered 200 keynotes and invited talk at international conferences, symposia, and seminars. He also received over 10 awards on research and over 30 research grants from government, research foundations, and company. He has ever presented over 120 papers in journals and over 220 papers in international conference and including top/high-ranked international journals and conferences, such as, SN Applied Sciences, Data in Brief, Marine Systems & Ocean Technology, International Journal of Neural Systems, International Journal of Business Information Systems, Logic Journal of IGPL, IEEE Access, Heliyon, Applied Artificial Intelligence, Emerging Science Journal, AAAI, IEEE CEC, AAMAS, IEEE WCCI, and WWW. Also, he has published 14 edited books from Springer, IGI-Global, and WIT Press. He has been over 90 international conference organizing chairs (conference chair/ program chair / finance chair / publication chair) of IEEE PRIWEC(2006), IEEE/ACIS SNPD (2009 2012, 2013, 2014, 2015, 2017, 2018, 2019), PRIMA (2009, 2020, 2024), PRICAI (2024), IEEE/ACIS ICIS (2010, 2013, 2015, 2016), IIAI AAI (2012-2024), AAMAS (2013), IEEE/ACIS SERA (2014, 2015), IEEE SOCA (2014, 2017), IEEE TENSYMP (2016), IEEE ICA (2016, 2017, 2023), IEEE SC2 (2017), ASEAN-AI (2018), and other 50 international conferences and workshops.

Keynote 2

From Data to Development: Empirical Approaches in Software Engineering

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Abstract:
Empirical research plays a critical role in advancing software engineering by collecting and analyzing both quantitative and qualitative data to enhance software products, development processes, and project management. Core empirical methods, which includes controlled experiments, case studies, and surveys, offer distinct ways to investigate real-world challenges. These studies typically follow a structured process involving the design of the research setting, data collection, and data analysis.

This keynote will provide an overview of key empirical research methods used in software engineering, highlighting their respective strengths and limitations. In particular, the talk introduces a novel method, dialog-based protocol analysis, as an extension to traditional approaches such as introspective, retrospective, and think-aloud techniques. A case study is presented to evaluate the effectiveness of this new method. The presentation concludes with a discussion on the current challenges and future opportunities for empirical research in the evolving landscape of software engineering.

Biography
Dr. Simon Xu is the Dean and Professor in the Faculty of Computer Science and Technology at Algoma University, where he has been a faculty member since 2002. Prior to his tenure at Algoma University, he was working in the School of Computer Science of University of Windsor, Canada. Additionally, he serves as a guest professor at Wuhan University and the adjunct professor at China University of Mining and Technology, China. Dr. Xu earned his Ph.D. degrees from Wayne State University, in the United States, and the University of Liege in Belgium. His research focuses on software evolution, program comprehension, big data, and cognitive process during software development. Dr. Xu has published more than 90 articles in referred journals and conference proceedings and a few authored/co-authored books. He has chaired seven IEEE international conferences and has been invited to deliver keynotes at various IEEE conferences. He is a senior member of IEEE and a member of ACM.