Call for Papers
Special Issue on Software Engineering and Applications for Cloud-based Mobile Systems
for IEEE Transactions on Services Computing

With the global trend in making software systems both mobile and cloud-based, many such systems are being designed and offer situation-aware runtime services to their end users. At the same time, both latest and historic data, in massive amount, generated or accepted by these systems can be kept, processed, used, derived, and shared. Mobile components of such systems can be installed and upgraded through app markets either automatically or manually. Moreover, the changes in features of cloud components of such systems can be chosen by service providers at any time. This emerging type of software systems both enables and requires novel methods in conducting software requirement, design, verification and validation, deployment, operation, and maintenance activities. It also finds major applications in solving technical issues in the domains of smart and connected health, software analytics, wearable computing, internet-of-things, cyber-physical systems, creative computing, and smart planet, to name a few. Nonetheless, significant new challenges must be addressed. For instance, how to scale up and downsize mobile or cloud-based components of such systems at run time, how to collaboratively discover, manage and harvest lifecycle data and social information when conducting development activities and in operation, how to achieve data-driven coordination among the cyber-physical entities, how to manage the information flow and decision making options in such systems are pressing issues to be investigated.

This special issue solicits papers that address significant and new software engineering and applications issues in cloud-based mobile system (CMS). Topics include, but not limited to, the following. Networking, security, and data management aspects of CMS are not within the scope of this special issue.

* Foundations of software engineering for CMS

* Software business of CMS

* CMS infrastructure and platforms for third-party services

* Analysis, design and test of situation-aware and dynamically adaptable CMS

* Deployment and delivery of customizable CMS

* Ecosystem of CMS

* Open-source CMS

* Mining repositories or social media websites of CMS

* Empirical studies and industrial case studies on CMS

* Novel applications of CMS in emerging application domains

Important Date

December 1, 2015 (extended): Deadline for paper submission

Submission Guidelines

This special issue accepts two types of submissions. First, we welcome manuscripts that have not been previously published or considered for publication elsewhere. Second, we accept extensions of the best papers published in COMPSAC 2015 Symposium of Software Engineering Technology and Applications (SETA) http://www.computer.org/portal/web/COMPSAC/COMPSAC-SETA .

All manuscripts must include empirical evaluations using real-world subjects. Manuscripts without empirical evaluations or manuscripts only analyzing the findings theoretically will not be accepted.

If a submitted manuscript is the extended version of a conference paper, the authors of the manuscript must also precisely document the difference in technical contribution between the two versions in both the cover letter and the manuscript. The full reviews of the conference papers together with the response letters detailing how the submitted manuscript has addressed the reviewers' comments on the conference versions must be submitted.

Authors should submit their manuscripts through the TSC online system

(https://mc.manuscriptcentral.com/tsc-cs) and select "SI on SE and Applications for Mobile Cloud

Systems". Author guidelines are available at the journal website (http://www.computer.org/tsc).

Guest Editors

[in alphabetical order]

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Bibliography

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Doris Carver is a Professor in the Division of Computer Science and Engineering at Louisiana State University where she holds a Dow Chemical Distinguished Professorship. She recently served at the National Science Foundation as a Program Officer in the Division of Graduate Education. She previously served in numerous administrative positions at Louisiana State University, including Senior Associate Vice Chancellor of Research and Economic Development, Interim Vice Chancellor of Research and Economic Development, and Interim Dean of the Graduate School. She also has served as the Associate Commissioner of Sponsored Research and Development and as Louisiana NSF EPSCoR Director for the Louisiana Board of Regents. Carver's research area is software engineering. Her research includes the application of formal methodologies to the reengineering of systems, to process improvement for software requirements, and to the testing of hard-to-detect timing errors in distributed systems. She previously served as Chair of the IEEE Fellow Committee and as Editor-in-Chief of IEEE Computer. She has also served as President of the IEEE Computer Society, as a member of the IEEE Board of Directors, and as a member of the Board of Directors of the Computing Research Association. Carver is both an IEEE Fellow and AAAS Fellow. She received her BA in mathematics from Carson Newman College, her MS in mathematics from the University of Tennessee, and her PhD in Computer Science from Texas A&M University.

W.K. Chan, City University of Hong Kong

W.K. Chan is an associate professor of computer science, City University of Hong Kong. He received his PhD from The University of Hong Kong after many years of industrial practices in the information technology industry. Prof Chan is currently the special issues managing editor of Journal of Systems and Software, program committee members of ICSE, FSE, COMPSAC, QSIC, ICWS and ICSOC series of conferences. His current research interests are software analysis and testing for large-scale software applications. His work has been published in international venues including TSE, TOSEM, TSC, TPDS, IST, JSS, ICSE, FSE, COMPSAC, QSIC, and ICWS.

Carl K. Chang, Iowa State University

Carl Chang is a Professor of the Department of Computer Science at Iowa State University. He was the chair of the same department in 2002–2013. He received a PhD in computer science from Northwestern University. He worked for GTE Automatic Electric and Bell Laboratories before joining the University of Illinois at Chicago in 1984, where he directed the International Center for Software Engineering. He served as Professor and Director for the Institute for Mobile, Pervasive, and Agile Computing Technologies (IMPACT) at Auburn University from 2001–2002, before moving to Iowa State University in July 2002. Chang was the 2004 IEEE Computer Society president. Previously he served as the Editor-inChief for IEEE Software (1991–1994) and Editor-in-Chief for IEEE Computer (2007–2010). He spearheaded the Computing Curricula 2001 (CC2001) project jointly sponsored by the IEEE Computer Society, the ACM, and the National Science Foundation. He is Fellow of both IEEE and AAAS, and a member of the European Academy of Sciences. He received the 2000 IEEE Third Millennium Medal, the 2006 Bulgaria Academy of Sciences Marin Drinov Medal, and the 2012 IEEE Computer Society Richard E.

Merwin Medal. More recently he was named the 2014 Outstanding Alumnus of National Central University in Taiwan, and won the 2014 Overseas Outstanding Contributions Award by the China Computer Federation. As a three times winner of IBM Faculty Award, Chang's research interests include software engineering, net-centric computing and successful aging.

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His current research interests include Software Engineering and Creative Computing. He received his BSc and MPhil from Jilin University, China in 1982 and 1985 respectively, and hid PhD from Durham University, UK. He served as a Programme Co-Chair at IEEE International Conference on Software Maintenance 1999 (ICSM '99) and is serving as the Programme Chair at IEEE Computer Software and Application Conference 2002 (COMPSAC'02). He is chief editing the International Journal of Creative Computing. He has published five books and well over 300 papers in Software Engineering, Computer Networking and Creative Computing.