

■ Call for Papers

In line with the IEEE CloudNet 2014 technical program and scientific objectives the special session on Mobile Cloud Networking and Services aims to discuss the recent trends in mobile communications and cloud computing and will in particular focus on challenges to be solved when integrating these technologies as well as possible synergies of these technologies. Access to cloud storage and computing service via wireless/mobile networks should be optimized in terms of delay, bandwidth and energy consumption from an end user perspective. Moreover, there is an increasing trend to implement more and more functions of a mobile communications network in software, e.g., for signal and protocol processing. This trend is reflected in activities on Network Function Virtualization (NFV), which enables to use cloud computing infrastructures as processing platform for signal and protocol processing, namely for current and future generation mobile communications networks. In particular, the integration of protocol and application/service processing allows several opportunities to optimize performance of cloud applications and services observed by the mobile user, whose device is connected to the cloud via wireless access networks.

The special session will address the integration of two technologies that are expected to have significant impact in the ICT area for the next decade(s): next generation mobile communication networks (mainly 5G) and cloud computing. While mobile communications networks have been established decades ago and are still continuously evolving, cloud computing became a hot topic in recent years and is expected to have a significant impact on novel applications as well as on ICT infrastructures. Cloud computing and mobile communication networks have been considered separate from each other in the past, but there are various possible synergies between them, converging into cloud networking.

First, access to cloud storage and computing services via wireless/mobile networks should be optimized in terms of delay, bandwidth and energy consumption from an end user perspective.

Second, there is an increasing trend to implement more and more functions of a mobile communications network in software, e.g., for signal and protocol processing. This enables the use of cloud computing infrastructures as processing platforms for signal and protocol processing, namely for current (4G) and future (5G) generation networks. In particular, the integration of protocol and application/service processing enables several opportunities to optimize the performance of cloud applications and services observed by the mobile user, whose device is connected to the cloud via wireless access networks. This trend is also in line with the recently emerging ETSI activities in Network Functions Virtualization.

The special session solicits original contributions in the topics of interest for the workshop. Those topics include but are not limited to the following:

- Protocols and wireless network technologies for mobile cloud applications
- Network functions virtualization for mobile cloud networks

- Standardization activities in the area of Software Defined Networking (SDN) and virtualization, such as Network Function Virtualization (NFV)
- Energy-saving at mobile end systems in network elements supporting mobile cloud applications
- Distributed mobility management, including mobility prediction
- Future Internet architectures and protocols for mobile cloud computing, including content-centric/context-based networking
- Network and protocol support for delay-tolerant applications
- Cloud computing in opportunistic networks
- Management and allocation of mobile cloud resources, including SLA management
- Cloud service management and migration
- Seamless handover support for mobile cloud applications
- Resource and service monitoring in mobile cloud networks
- Physical radio resource sharing
- End-to-end performance of mobile cloud applications
- Novel cloud-based implementation architectures for mobile communication networks
- Quality-of-Experience in mobile cloud applications
- Cloud-based applications and services for mobile users, including social networks
- (Participatory) sensing and mobile cloud applications, including data aggregation
- Security and privacy issues of mobile cloud computing, including authentication and authorization
- Accounting and charging of mobile cloud services
- Test-beds and performance evaluation for mobile cloud networking and applications.

Authors of papers included in should submit a manuscript on or before June 16th, 2014. Manuscripts should conform to the formatting and electronic submission guidelines of regular IEEE CloudNet 2014 papers. The papers will undergo a review process as regular papers by at least 3 independent reviewers.

■ Important dates

Paper Submission: July 3, 2014 (Extended)

Notification of Acceptance: August 1, 2014

Final Paper: August 15, 2014

Submit online at [EDAS website](#) »

■ Session organizers

Thomas Bohnert holds a PhD from the University of Coimbra and a Diploma degree in Computer Engineering from the University of Applied Sciences Mannheim for which he also worked as research associate and lecturer at the Institute for Software Engineering and Communications. He is the founder of BNCS, an ICT Consultancy, which he ran from 2000 to 2004 and prior to joining the Center of Informatics and Systems of the University of Coimbra (CISUC) in Portugal as research scientist and PhD student. While working at CISUC he was invited scholar at Tampere University of Technology (TUT), VTT Technical Research Centre and Beijing University for Post and Telecommunication (BUPT). After his academic tenure he joined SIEMENS Corporate Technology, the company's corporate research department, responsible for defining and driving a Future Internet strategy. In 2008 he joined SAP AG, working at the SAP Research Labs Zurich, Switzerland first as senior researcher and later as technical director. In mid 2009 he was appointed chief Future Internet strategist. From 2012 onwards he is with Zurich University of Applied Sciences teaching Service Engineering and continuing Future Internet research as head of the ICCLab.

Torsten Braun got his Ph.D. degree from University of Karlsruhe (Germany) in 1993. From 1994 to 1995 he has been a guest scientist at INRIA Sophia-Antipolis (France). From 1995 to 1997 he has been working at the IBM European Networking Centre Heidelberg (Germany) as a project leader and senior consultant. He has been a full professor of Computer Science at the University of Bern (Switzerland) since 1998 and director (chair) of the Institute (Department) of Computer Science and Applied Mathematics at University of Bern from 2007 to 2011. He was visiting scientist at INRIA, France and SICS, Sweden in 2004 and at Bell Labs, USA in 2010 as well as guest professor at Lancaster University, UK and Universidade de São Paulo, Brazil in 2010. Torsten Braun is member of the IEEE and ACM. He has been member of the SWITCH (Swiss education and research network) board of trustees since 2001.

Luis M. Correia received the Ph.D. in Electrical and Computer Engineering from IST-UL (University of Lisbon) in 1991. He is currently a Professor in Telecommunications at IST-UL and a Research Coordinator at INOV-INESC, with his work focused in Wireless/Mobile Communications in the areas of propagation, channel characterisation, radio networks, traffic, and applications. He has acted as a consultant for Portuguese mobile communications operators and the telecommunications regulator. He has been active in various ones within the European frameworks of RACE, ACTS, IST, ICT and COST (where he also served as evaluator and auditor), having coordinated two COST projects, and taken leadership responsibilities at various levels in many others. He has supervised more than 150 M.Sc. and Ph.D. students, having authored more than 300 papers in international and national journals and conferences, for which he has served also as a reviewer, editor, and board member, and edited 6 books. He was part of the COST Domain Committee on ICT. He was the chairman of the Technical Programme Committee of several conferences, namely PIMRC'2002. He is part of the Expert Advisory Group and of the Steering Board of the European Net!Works platform, and was the Chairman of its Working Group on Applications.

Georgios Karagiannis holds a Ph.D. degree and a M.Sc. degree in Electrical Engineering from the University of Twente, the Netherlands. From 1994 to 1998 he was working as a Researcher at the University of Twente. In 1998 he joined the Wireless Multimedia Research unit of Ericsson Eurolab Netherlands in Enschede, Netherlands, where he stayed until April 2003. Since April 2003 he is Assistant Professor at the Design and Analysis of Communication Systems (DACS) group of the University of Twente (UoT). His research interests are in the fields of fixed, mobile & wireless (inter)networking, cloud computing, end-to-end QoS signalling and provisioning, mobility and routing in communication networks and performance evaluation. He was technical steering and technical program committee member in a number of international conferences and he is currently active within the IETF. He also participated in Dutch and European RACE, ACTS and IST projects.

Edmundo Monteiro is Full Professor at the Department of Informatics Engineering (DEI) of the University of Coimbra (UC), Portugal. He graduated in Electrical Engineering (Informatics Specialty) from the University of Coimbra in 1984, and received his Ph.D. in Informatics Engineering (Computer Networks) and the Habilitation from the same university in 1996 and 2007 respectively. He is a Senior Researcher of the Center for Informatics and Systems of the University of Coimbra. His publications include over 200 papers in international journals, books and refereed conferences. He is also co-author of 9 international patents. He is member of the Editorial Board of Elsevier Computer Communication and Springer Wireless Networks journals and he is involved in the organization of many national and international conferences and workshops. Edmundo Monteiro is member of Ordem dos Engenheiros (the Portuguese Engineering Association), Senior Member of IEEE Communication Society, and ACM SIGCOMM, and the Portuguese representative in IFIP TC6 (Communication Systems).

Paulo Simoes has a Ph.D. degree and a M.Sc. degree in Informatics Engineering from the University of Coimbra in Portugal. He is Assistant Professor at the Department of Informatics Engineering of the University of Coimbra. His research interests include Network and Systems Management, Computer Networks, Critical Infrastructure Protection and Security. He is author of over 100 papers in national and international refereed books, journals and conferences. He has been involved in several European Projects (FP5 E-NET, FP6 E-NEXT, FP6 EUQOS, FP6 WEIRD, FP6 CONTENT, FP6 OpenNet, FP7 GINSENG, FP7 MICIE, FP7 LiveCity, FP7 Adapt4EE, FP7 CockpitCI, FP7 SALUS, FP7 Mobile Cloud Networks, FP7 LiveCity, FP7 CityFlow) and industry funded research activities, with technical and management activities.

■ TPC Members (pending)

- Marcus Brunner, Swisscom, Switzerland
- Joe Butler, Intel, UK
- Gino Carrozzo, Nextworks, Italy
- Eduardo Cerqueira, UFPA, Brazil
- Marius Corici, Fraunhofer, Germany
- Michael Devetsikiotis, North Carolina State University, USA
- Desislava Dimitrova, University of Bern, Switzerland
- Lucio Studer-Ferreira, INOV - INESC Inovacao, Portugal
- Plamen Ganchosov, CloudSigma, Switzerland
- Mario Gerla, UCLA, USA
- Ivano Guardini, Telecom Italia, Italy
- Markus Hofmann, Alcatel-Lucent Bell Labs, USA
- Peter Kropf, Université de Neuchâtel, Switzerland
- Thomas Magedanz, TU Berlin, Germany
- Saverio Mascolo, Uni Bari, Italy
- Borje Ohlman, Ericsson Research, Sweden
- David Palma, OneSource, Portugal
- Aiko Pras, University of Twente, the Netherlands
- Peter Rost, NEC Laboratories Europe, Germany
- Stefan Schmid, Robert Bosch Corporate Research, Germany
- Filip De Turck, University of Gent, Belgium
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