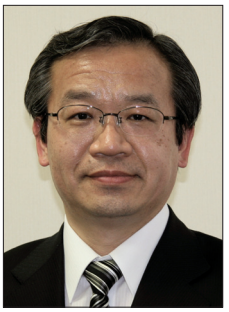
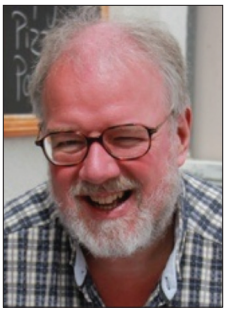
SELECTED PAPERS FROM THE FIFTH ITU KALEIDOSCOPE ACADEMIC CONFERENCE

Mostafa Hashem Sherif



Yoichi Maeda



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This Series presents selected papers from the ITU Kaleidoscope Academic Conference that convened in Kyoto, Japan from the 22nd to 24th of April 2013. The topic of the conference was "Building Sustainable Communities," in recognition of the challenges that Japan is facing after the Great East Earthquake. The hosts were the Ministry of Internal Affairs and Communication (MIC) of Japan and Kyoto University. Kyoto University is the second oldest Japanese national university after the University of Tokyo. It was founded in 1897 following the Meiji Restoration, which adopted various western systems to build a modern state.

Kyoto was the capital of Japan from 794 to 1868. The historical city has many interesting sites (temples, shrines, gardens, palaces). The conference venue was the Clock Tower, International Conference Hall of Kyoto University. The Clock Tower is the emblematic building of the university and was completed in 1925. In 2013, the university has more than 1000 professors, 10 faculties, and 17 graduate schools. Members of the academic staff include several Nobel laureates in chemistry and physics. The current undergraduate enrollment is about 13,500, while the number of post-graduates exceeds 9000, many of them foreign students.

Professor Akihiro Nakao from the University of Tokyo delivered the first keynote speech, "Deeply Programmable Network: Emerging Technologies for Network Virtualization and Software Defined Network (SDN)." The title of the second keynote, by Professor Makoto Nagao from Kyoto University, was "Digital Library for Creative and Sustainable Society."

Many companies provided financial and organizational support for the conference (NICT, NTT, KDD, OKI, Fujitusu, Mitsubishi Electric, and Huawei Japan in addition to Telekom South Africa). This financial support provided a prize fund totaling U.S. $10,000 awarded to the three best papers. Research in Motion (RIM) donated two BlackBerry PlayBook tablets that were given to the authors of the best student papers.

The first prize of U.S. $5000 was awarded to the article entitled "Sustaining Life During the Early Stages of Disaster Relief with a Frugal Information System: Learning from the Great East Japan Earthquake." This article is a joint contribution from Japan and the United States, coauthored by Mihoko Sakurai, Jiro Kokuryo (Keio University, Japan); Richard Watson (University of Georgia, United States); and Chon Abraham (College of William and Mary, United States). The topic is related to the work of the ITU-T Focus Group on Disaster Relief Systems, Network Resilience and Recovery (FG-DR&NRR) and other ITU-T Study Groups dealing with emergency communications.

The second prize of U.S. $3000 went to Phillip H. Griffin for his article, "Telebiometric Information Security and Safety Management." The article presents several proposals for the security, safety, and management of biometric systems. ITU-T Study Group 17 deals with the security of telebiometrics and has already expressed interest in these proposals.

Both articles are included in this issue. The article that was awarded the third prize of U.S. $2000 was not ready for this issue.

Instead, a runner-up article by a team from Spain and Korea with E. Ibarrola as the first author is included. Its title is "QoXphere: A New QoS Framework for Future Networks." The article describes work in progress to update the various ITU-T Recommendations in the area of quality of service (QoS) to reflect the significant changes

in the telecommunications sector. The additions take into account contributions from the TM Forum, particularly its Business Process Framework (eTOM). Other contributions come from the European COST program.

The conference papers are available at IEEE XPlore. The full proceedings can be downloaded for free from the ITU site. The URL is http://www.itu.int/en/ITU-T/academia/kaleidoscope/2013/Documents/K-2013_Proceedings.pdf.

There were around 180 participants from 22 countries. Also, 20 people took advantage of the remote participation possibilities. In parallel with the conference, the National Institute of Information and Communications Technology (NICT) of Japan organized a showcase of the latest products and services in Japan on the technological advances that would enhance the sustainability of communities. Areas included sensor networks, big data analysis, using optical and wireless networks for redundancy in emergencies, as well as home management systems. A workshop on education about standardization was held after the conference. It was jointly organized by the ITU, the Institute of Electronics, Information and Communication Engineers (IEICE) of Japan, Aalborg University's Center for TeleInFrastruktur (CTIF) and the Global ICT Standardization Forum in India.

The next Kaleidoscope conference will be hosted by Bonch-Bruevich Saint-Petersburg State University of Telecommunications (SPbSUT), Russian Federation, 3–5 June 2014. The theme is "Living in a Converged World — Impossible Without Standards?"

In closing, the editors would like to express their gratitude to the reviewers, listed below in alphabetical order, for their assistance in making the selections and for their generous advice to the prospective authors.

AlAhmad, Mohammed, Jaber University, Kuwait
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MOSTAFA HASHEM SHERIF has been with AT&T since 1983. He has a Ph.D. from the University of California, Los Angeles and an M.S. in the Management of Technology from Stevens Institute of Technology, New Jersey, in 1996. He has participated in ANSI, the ITU, and the ATM Forum. He is the author and editor of several books, including *Protocols for Secure Electronic Commerce*, 2nd ed. (2003), *Managing Projects in Telecommunication Services* (2006), and *Handbook of Enterprise Integration* (2009). He is the Standards Editor for *IEEE Communications Magazine* and an Associate Editor of the *International Journal of IT Standards & Standardization Research*. He is a member of the steering committee of the ITU Kaleidoscope conference series.

YOICHI MAEDA received B.E. and M.E. degrees in electronic engineering from Shizuoka University, Japan, in 1978 and 1980, respectively. Since joining NTT in 1980, for the last 30 years he has been engaged in research and development on access network transport systems for broadband communications including SDH, ATM, and IP. From 1988 to 1989 he worked for British Telecom Research Laboratories in the United Kingdom as an exchange research engineer. He currently leads the Japanese telecommunication standardization organization, the Telecommunication Technology Committee (TTC) since October 2010. In November 2012 at the World Telecommunication Standardization Assembly (WTSA '12), he was appointed Chair of the ITU-T Review Committee for the 2013–2016 study period after his Chairmanship of ITU-T SG15 for eight years. He is a Fellow of the IEICE of Japan. He has been a Series Editor of the Standards Series in *IEEE Communications Magazine* since 1999.

KAI JAKOBS (Kai.Jakobs@cs.rwth-aachen.de) joined RWTH Aachen University's Computer Science Department as a member of technical staff in 1985. Since 1987, he has been head of technical staff at the Chair of Informatik 4 (Communication & Distributed Systems). He holds a Ph.D. in computer science from the University of Edinburgh. His research interests and activities focus on various aspects of ICT standards and the underlying standardization process. He is Vice President of the European Academy for Standardisation (EURAS), as well as founder and Editor-in-Chief of the *International Journal on IT Standards & Standardization Research* and , and the EURAS Contributions to Standardisation Research book series.

MARTIN ADOLPH is programme officer in ITU's Standardization Policy and Technology Watch Division. He is responsible for ITU-T Technology Watch activities, surveying the ICT environment to capture new topics for standardization activities. Fascinated with innovation and new technologies, he authored several Technology Watch Reports on topics such as biometrics, cloud computing, gaming, and sensor networks. He is in charge of ITU-T's Focus Group on M2M and acts as a technical advisor to ITU Kaleidoscope, an academic conference on innovation and standards in ICT. He holds a diploma in computer science from Dresden University of Technology, and one in engineering from École Centrale, Paris, France.