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CHAPTER ACTIVITIES

Highlights from the 15th International Conference on Intelligent Transport Systems Telecommunications (ITST 2017)

By Jacek Rak, Poland, Marion Berbineau, France, Juliette Marais, France, and Mirosław Stando, Poland

The 15th edition of ITST, technically co-sponsored by the IEEE Poland Section, was organized in Warsaw, Poland on May 29-31, 2017 by Gdansk University of Technology, Poland, the Polish Association of Telecommunication Engineers (SIT), Poland, and IFSTTAR, France.

ITST was established in 2000 by the National Institute of Information and Communication Technology (NICT, Japan) as one of the first forums on telecommunication issues related to intelligent transport systems. During the next 17 years, ITST has become the event for the newest ideas and latest research results presented by researchers from leading industrial entities and scientific institutions.

Organized in Warsaw, Poland in the central part of Europe, ITST 2017 has also attracted researchers from non-European countries, including Japan, China, Taiwan, Colombia, Iran, and Algeria. After a careful review process of submitted papers, accepted papers were organized into the following sessions:

- Non-satellite Wireless Communications over the Sea (netBaltic project)
- Autonomous Vehicles
- Cooperative Communications
- Smart Cities
- ITS Applications/Services (Part 1 and 2)
- Performance (Part 1 and 2)
- ITS Systems of a New Generation

In addition, there were two special sessions:

- Issues and progress for the introduction of GNSS in railways
- New challenges in wireless communications for railways

The GNSS-related special session addressed topical issues regarding the GNSS introduction in ETCS or future automatic train operation. The authors presented up-to-date projects and experimental results from the EU and China. All of them highlight the potential of GNSS approaches for future safe positioning solutions.

The special session related to new challenges in wireless communications for railways addressed crucial issues such as the use of mmWave for smart rail mobility, comparison of 5G waveforms in the context of high speed railway, channel characterization in metro environments, LTE in railway environments, communications performance inside the carriage, etc. All the communications highlighted future trends for wireless communications in the railway domain.

The technical program of ITST 2017 was enriched by three keynote talks delivered by Prof. Jozef Wozniak from Gdansk University of Technology, Poland entitled "Broadband Communication Solutions for Maritime ITSs: Wider and Faster Deployment of New e-Navigation Services;" Thomas Chatelet from European Union Agency for Railways, France entitled "A European Perspective on the Evolution of Wireless Communications for Railways;" and Dr. Michele Fiorini from IET Italy entitled "Forget the Crew: Drone Ships are Here!." There were also several invited talks.

The Best Paper Award ceremony took place during the Gala Dinner. This year, the award was given to two papers: "Adaptive Beaconing for Safety Enhancement in Vehicular Networks," by Daniele Barbieri (IT), Ilaria Thibault and David Lister (UK), Alessandro Bazzi, Barbara Masini, Oreste Andrisano (IT), presented by Barbara Masini; and "Challenges and Chances for Smart Rail Mobility at mmWave and THz Bands from the Channels Viewpoint," by Ke Guan (CN/DE), Danping He (CN), Andrej Hrovat (SI), Bo Ai (CN), Zhangdui Zhong (CN), Thomas Kuerner (DE), presented by Ke Guan.

The next edition will be held in Lisbon, Portugal, on October 15–17, 2018. More information on ITST 2018 can be found at http://itst2018.org/

Prof. Jozef Wozniak (left), Thomas Chatelet (middle), and Dr. Michele Fiorini (right) delivering their keynote talks.

Barbara Masini and Ke Guan - recipients of the Best Paper Award during presentations of their papers at ITST 2017.

Participants of ITST 2017.

CONFERENCE REPORT

9th IEEE Latin-American Conference on Communications (IEEE LATINCOM 2017) 08-10 November 2017, Guatemala City

By Marco Antonio To, General Chair, LATINCOM 2017

The 9th installment of the IEEE Latin-American Conference on Communications (LATINCOM 2017) was held in Guatemala City, Guatemala, living up to the original objectives, which were to become the flagship conference of the IEEE Communications Society in Region 9, and to attract worldwide renowned researchers, keynote speakers and industry. LATINCOM has now consolidated its place in Region 9 and the world because of these high standards.

Adding to the original objectives, the Organizing Committee (OC) had three basic goals for LATINCOM 2017:

•To promote the dissemination of research results in the area of information and communication technologies in Latin America and worldwide.

•To involve students, professionals, researchers and entrepreneurs in the subject of information and communication technologies.

•To encourage formal technology research activities in Guatemala.

After the conference, the OC believes that the objectives were fulfilled and exceeded their expectations, from the number of submissions to the number of international attendees, and created a very nice and rich knowledge exchange.

Opening session of IEEE LATINCOM 2017. From left to right: Stefano Bregni, IEEE ComSoc VicePresident MGA, Oscar Rodas, LATINCOM 2017 Operations Chair, Marco To, LATINCOM 2017 General Chair, Aldo López, Sub-secretary of Guatemalan Science and Technology Council, Herman Juárez, IEEE Guatemala Section Chair, Juan Alvarado, IEEE ComSoc Guatemala Chapter Chair.

Attendees of IEEE LATINCOM 2017 during a plenary session.

Tutorial session by Yi Qian.

As with previous conferences, LATINCOM 2017 focused on the following topics:

•Networking
•Communication services
•Optical networks
•Communications systems and signal processing
•Wireless communications and networking
•Communications and energy efficiency
•QoS, reliability and performance modeling
•Enabling technologies.

LATICOM 2017 received 119 papers from around the globe. Submissions came from Europe, Asia and the Americas, including countries such as Russia, Japan, Taiwan, France, Switzerland, Italy, USA, Brazil, Chile, and México, among others. From these, 45 papers were accepted. Also, some borderline papers were given the opportunity to present in the conference for feedback from the conference attendees.

LATINCOM 2017 also had an International Technical Program Committee, led by TPC CoChairs Rose Hu from Utah State University, USA, and Luiz Bittencourt from the University of Campinas, Brazil. Both did an outstanding job in following IEEE and ComSoc regulations for international conferences.

Guatemala is becoming a technology hub, where a large number of companies, both national and foreign, are consolidating in the country. In addition to this, universities must keep abreast of the latest developments in the field of communication technologies, where the local offer is extremely scarce of non-commercial events oriented to formal research, making LATINCOM one of the first of its kind to be held in Guatemala. Furthermore, the participation and collaboration of local universities, such as the Universidad Galileo, which hosted the first day of the conference, attracted numerous students and provided great experiences for the young generation. The Convention Center of the Westin Camino Real hosted the remaining two days of the conference.

World renowned keynote speakers and tutorial lecturers took part in the program, some as part of the IEEE Distinguished Visitors Program (DVP). Prof. Luiz DaSilva, IEEE ComSoc Distinguished Lecturer and Chair of Telecommunications at Trinity College Dublin, Ireland, spoke on the topic "Sharing Infrastructure and Spectrum: A Vision for the Future of Mobile Networks." Prof. Moe Win, founding director of the Wireless Communication and Network Sciences Laboratory of the Massachusetts Institute of Technology (MIT), USA, spoke on the topic "Network Localization and Navigation: A New Opportunity in Statistical Communication Theory." Prof. Hikmet Sari, Chief Scientist at Sequans Communications, and professor at Nanjing University, China, spoke on the topic "Multiple Access for 5G: Challenges Ahead." Pramode Verma, Professor Emeritus of Electrical

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and Computer Engineering at the Gallogly College of Engineering of the University of Oklahoma, USA, spoke on the the topic "Unconditional Security through Quantum Uncertainty."

In addition to those mentioned, three high quality tutorials were presented. Prof. Yi Quan, Department of Electrical and Computer Engineering, University of Nebraska-Lincoln, USA, spoke on the topic "Security for 5G Wireless Communication Systems: Recent Development and Challenges." Prof. Carlos Gutiérrez, Faculty of Science, Universidad Autónoma de San Luis Potosí, México, spoke on the topic "Modeling, Analysis, and Simulation of Multipath Radio Channels for Vehicular Communications." Prof. Pramode Verma spoke on the topic "Network Science: An Introduction".

Parallel sessions were presented during the last two days of the conference, where accepted papers were presented in three conference rooms. Session chairs promoted discussions among attendees and authors, creating valuable feedback for future research.

On Thursday evening, LATINCOM hosted its Gala Dinner, including the Best Paper Award Ceremony. Two honorable mentions were given, first to Juan Montoya and Natalia Gaviria for their work on "Optimal RAT Selection and WiFi Offloading in Multi RAT HetNet with User Centric Deployments." The Second honorable mention went to Gourab Maiti, Ravi Shankar B, Naresh Kumar T, Pradeep Goutam, S V Hari Prasad, and Soundarakumar M., for their work on "Variable Fractional Rate Digital Down Converter for Satellite Communication." Finally, the best paper award went to Bryan Teague, Zhenyu Liu, Florian Meyer, and Moe Z. Win for their outstanding work on "Peregrine: 3-D Network Localization and Navigation."

Prof. Moe Win, Keynote Speaker.

The Gala Dinner also recognized the Organizing Committee and its General Chair, Dr. Marco Antonio To, for successfully organizing the first LATINCOM in the northern part of Region 9 and also the first time in Central America. The success was a combination of hard work by the OC and the Steering Committee, and the support of various patrons, especially the National Guatemalan Council for Science and Technology (SENACYT). This event showed that academia, industry and government working together are able to promote the development of technology research in the country and the region.

LATINCOM 2017 concluded on Friday, November 10, after providing a good networking environment and shared experiences by the attendees.

CONFERENCE REPORT

IEEE Communications Society's Presence at the 4th Additive Manufacturing (AM) Summit Series–Emerging Applications Summit

By Ewell Tan, IEEE Asia/Pacific Office, Singapore

Being one of the supporting organizations, the IEEE Communications Society exhibited at the 4th Additive Manufacturing (AM) Summit Series–Emerging Applications Summit, on 7 November 2017 at the Raffles City Convention Centre in Singapore.

This event was organized by the National Additive Manufacturing Innovation Cluster (a.k.a. NAMIC), which aims to increase Singapore's adoption of additive manufacturing technologies to enhance competitiveness in the rapidly evolving landscape of digital industrialization. More than 400 industry players, high-level company decision makers, regulators, researchers, engineers and solutions providers, attended this summit to discuss the role of 3D printing in emerging applications and new design possibilities realized by 3D printing. This Summit is also strongly supported by the Singapore National Research Foundation (NRF) and NTUitive Pte. Ltd.

The Director of IEEE Asia Business Development, Leo Hwa Chiang, collaborated with the event organizer to show the presence of the IEEE Communications Society at this Summit. Richard Chandra, Ewell Tan and Nitcer Chong from the IEEE Singapore office helped man the exhibit booth to showcase and promote IEEE and the IEEE Communications Society to industry practitioners. One of the highlights was when the non-resident Ambassador to the Sultanate of Oman, Mr. Teng Theng Dar, who was also the Guest of Honor of this Summit, visited the IEEE ComSoc booth and showed interest in IEEE, as the world's largest technical professional association for engineers.

(From left to right): Ewell, Leo, Richard and Nitcer from the IEEE Asia-Pacific office.

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