IEEE WCNC 2013 COMPLETES LATEST INTERNATIONAL EVENT IN SHANGHAI, CHINA

GLOBAL CONFERENCE OFFERS NEARLY 1,000 PRESENTATIONS DEDICATED TO NEWEST RESEARCH IN WIRELESS COMMUNICATIONS AND NETWORKING

Dedicated to the next stage of wireless communications and networking advancements, IEEE WCNC 2013 successfully tied together culture and visionary research with its latest annual conference hosted in the magnificent city of Shanghai. Recognized globally as mainland China's "showpiece" cultural, technological and financial center as well as the most populated city worldwide, Shanghai also marked the first IEEE WCNC to be held in the country, which has rapidly grown into the planet's largest mobile communications marketplace

Other landmarks included the submission of more than 1,900 original papers, the most ever received for a single IEEE WCNC event, and the selection of 843 technical papers presented across four separate educational tracks and chosen only after a thorough process composed of three individual reviews per paper. As a result, the broad spectrum of submissions resulted in one of the conference's most comprehensive programs consisting of 160 oral and poster technical sessions, five keynotes, five technology and business panels, five workshops and 10 tutorials.

Attendees networked at the welcome reception.

Additional highlights of the content-rich program covering both fundamental research and newly emerging applications were the presentation of the Best Paper Awards promoting world-class research throughout the industry and the Student Travel Grants encouraging the ongoing participation of international attendees. Given the overwhelming interest in the four-day international event, access to all of the conference's tutorials was provided free-of-charge for the first time to the 974 participants from 90 different countries converging at the Shanghai International Convention and Exhibition Center.

Commencing Sunday, April 7, IEEE WCNC 2013 began with a full day of tutorials dedicated to "Network Processing With Bayesian Graphical Models," "Heterogeneous Networks – Theory and Standardization in LTE," "Resource Allocation in Wireless Physical Layer Security," "Mobility Management in Future Wireless Networks: Past, Present, and Future," "Game-Theoretic Techniques for the Energy Efficiency of Wireless Communications and Sensor Networks," "Spatial Modulation for MIMO Wireless Systems," "Towards Spectrum and Energy Efficient Heterogeneous Wireless Networks," "Cooperative Wireless Communications," "Visible Light Communication: Concept, Technology, Challenges and Possibilities" and "Gigabit Wireless LAN: IEEE 802.11ac." Held concurrently were the workshops led by leading international researchers and industry experts on the "Convergence of Broadcasting and Broadband Communications," "Mobile Cloud Computing and Mobile Traffic Modeling," "New Advances for Physical Layer Network Coding," and "Future gReen End-to-End Wireless Network (FREENET)" and "Applications of Delay Tolerant Networking (A-DTN)."

The conference's first day ended with the annual Welcome Reception. As attendees dined on traditional Chinese dishes and delicacies, Professor Xiaohu You, IEEE WCNC 2013 General Chair, graciously welcomed all of this year's participants to Shanghai, while inviting them to partake in the event's robust learning schedule and the City's many cultural and historic amenities.

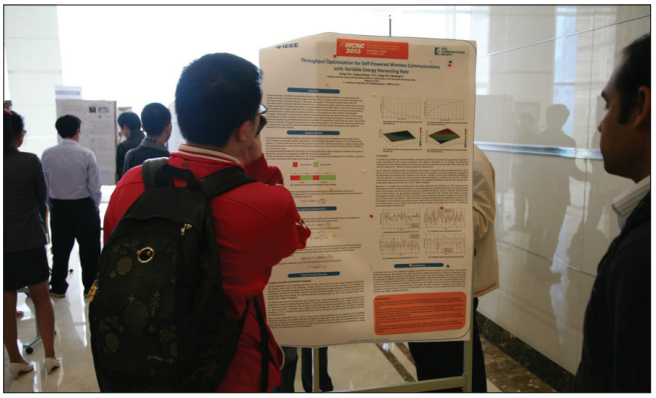
The main body of the conference then ensued on Monday morning with the addresses of Professor Roberto De Marca, IEEE President-Elect; Professor Vijay Bhargava, IEEE ComSoc President; Zhaotin Zhang, Vice Head of Information Science Section of the Natural Science Foundation of China; and Professor You. After a brief overview offered by Professor Jiangzhou Wang, Technical Program Chair, IEEE WCNC 2013 Steering Committee Chair Khaled Letaief introduced Professor Fumiyuki Adachi of Tohoku University in Japan and Dr. Chih-Lin I, Chief Scientist of China Mobile Inc. as the morning's keynote speakers.

During his presentation on "Spectrum & Energy-Efficient Distributed Antenna Network for Future Wireless Communications," Professor Adachi spoke on the newest developments in gigabit wireless technology research. This included the latest methods for achieving higher-than-1Gbps broadband data transmission rates and implementing distributed antenna network (DAN) architectures that significantly reduce the transmit power of wireless networks. Dr. I continued the discussion with her talk titled "Towards Green & Soft," which highlighted the efforts of China Mobile to deliver a technical roadmap for accommodating Chinese network capacities, which are expected to increase dramatically with 1000-fold increases in traffic loads by 2020. Other talking points covered the creation of green, energy-efficient networks composed of soft elements used to further support extremely high-density, yet low-cost and low-power deployments of the latest network communications.

The Monday program then continued with the presentation of hundreds of technical papers exploring topics ranging from robust beamforming and two-way wireless relay networks to inter-cell interference management and medical wireless sensor and cognitve radio ad hoc networking. Throughout the day were also the several well-received Technology and Business panels such as "Mobile Broadband Communications R&D in China," organized by Professor Xiaohu You, "C-RAN: Today and Tomorrow" by Dr. Chih-Lin I, "Small Cell and HetNet" by Dr. Hidetoshi Kayama, and "Wireless Futures" by Professor Lajos Hanzo.

On Tuesday morning, the conference began with the keynote addresses of Professor Victor O.K. Li of the University of Hong Kong and Professor P. R. Kumar of Texas A&M University. Professor Li asked "Can Wireless Technologies Save the Environment?" and then spoke about the challenges

Participants at the ComSoc booth.



Poster session sparked many discussions.

and opportunities presented by the advancement and proliferation of the latest wireless technologies. This included applications such as cloud computing, web applications, global information systems and the Internet, which have fueled a major increase in electric power consumption, as well as devices such as MP3 players, personal computers and smart phones that have created huge disposal problems worldwide. Professor Kumar discussed "A Clean Slate Approach to Wireless Networks Security," while proposing a theoretical framework for reversing the paradigm of placing design and performance above security. In his talk, Professor Kumar highlighted the protocols necessary for enabling good nodes and provably secure and nearly optimal functioning networks in hostile environments. Other Tuesday highlights included the "Green Cellular Networks" technical and business panel organized by Professor Teng Joon Lim and another full day of technical presentations.

That night the festivities also continued as conference participants gathered for the conference banquet at the convention center. Special Chinese art and music performances highlighted the affair as attendees dined on fine Chinese cuisine.

The conference's last day opened on Wednesday morning with the keynote by Mr. Guanghua Yang, Director of Huawei Technologies. Mr. Yang discussed "Progress Toward the Future of Mobile Broadband Communications" and the need to fundamentally improve spectrum efficiency and re-architect radio networking protocols and infrastructures. Following this address, Professor Wang and Professor You presented the year's Best Papers Awards. The honorees were:

- Lennert Jacobs and Marc Moeneclaey for their paper titled "Accurate BER Approximation for OSTBCs With Estimated CSI in Correlated Rayleigh Fading."
- Giacomo Bacci, Luca Sanguinetti, Marco Luise, and H. Vincent Poor for their entry on "Energy-Efficient Contention-Based Synchronization in Multicarrier Systems with Discrete Powers and Limited Feedback."
- Peichang Zhang, Sheng Chen, and Lajos Hanzo for the submission named "Near-Capacity Joint Channel Estimation and Three-Stage Turbo Detection for MIMO Systems."
- Fengkui Gong, Jian-Kang Zhang, Jianhua Ge, and Nan Zhang for "Distributed Collaborative Space-Time Block Codes for Two-Way Relaying Network."
- Hamidreza Shariatmadari, Aamir Mahmood, and Riku Jäntti for "Channel Ranking Based on Packet Delivery Ratio Estimation in Wireless Sensor Networks."
- Li-Hsing Yen, Yuan-Kao Dai, and Kuang-Hui Chi for "Resource Allocation for Multi-Channel Multi-Radio Wireless Backhaul Networks: A Game-Theoretic Approach."
- Jianwei Niu, Long Cheng, Yu Gu, Junghyun Jun and Qingquan Zhang for "Minimum-Delay and Energy-Efficient Flooding Tree in Asynchronous Low-Duty-Cycle Wireless Sensor Networks."
- Nam Tuan Nguyen, Rong Zheng and Zhu Han for "An Unsupervised Mobile Locations Extraction Approach with Incomplete Data."
- Hang Liu, Yiqing Zhou, Lin Tian, Haihua Chen, Xue Han and Jinglin Shi for "Investigation on Energy Efficiency of OFDM-based Two-stage Cooperative Multicast with CP Combining."
- Yingbin Liu, Zhiguo Shi, Kuan Zhang, Yunmei Zheng, Rongxing Lu and Sherman Shen for "A Novel Low-Power Mixed-Mode Implementation of Weight Update in Particle PHD Filters."

Afterwards, the conference closed late in the day with a final agenda of technical sessions detailing topics such as "Collaborative Sensing in Cognitive Radio Networks," "Three-Phase Two-Way Relaying Wiretap Systems," "Self-Powered Wireless Communications with Variable Energy Harvesting Rates," "The Energy Efficiency of LTE/LTE-Advanced Femto/Small Cell Networks," "Mobility Behavior Modeling in UCN," "Enabling Email Access under Intermittent Connectivity" and "Network Survivability under Disaster Propagation: Modeling and Analysis."

For more information on IEEE WCNC 2013, please visit www.ieee-wcnc.org/2013 and access the conference's Facebook page for the opportunity to network with global colleagues and share ideas, concepts and issues with global leaders and experts committed to furthering wireless communications and networking research worldwide.

In addition, planning has already begun for IEEE WCNC 2014 to be held from April 6 - 9, 2014 in Istanbul, Turkey. Conference details including "Call for Papers" submission guidelines can be found at www.ieee-wcnc.org/2014. Heather Ann Sweeney of IEEE ComSoc is also available to answer inquiries at h.sweeney@comsoc.org.