

June 2013

Twenty Years of SoftCOM Conference: A Glimpse to the Past and Short Report on the Last

By Nikola Rozic, Dinko Begusic, Josko Radic, and Nicolae Oaca

Being the largest academic and industrial center as well as the famous tourist destination at the Croatian Adriatic coast, the city of Split was a perfect place to start a conference on software, telecommunications and computer networks. The SoftCOM conference started in 1993 as a joint project of the University of Split, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Croatian Telecom and World Trade Center Split. Soon, SoftCOM has become the major Adriatic area ICT event. Using an innovative approach SoftCOM has been organized aboard the luxury ship which hosted not only the whole conference program, but also the software fare and the exhibition of the telecom and computer equipment, systems and services. The sailing conference connected the main cities on the Adriatic coast including Split, Rijeka, and Dubrovnik on the Croatian coast and Trieste, Venice, Ancona and Bari on the Italian coast. Fruitful collaboration with a number of universities has been estab-

lished including the universities from Ancona, Lecce, Bari, Colmar and Zagreb.

Since 1998 SoftCOM has been technically co-sponsored by IEEE ComSoc. Starting in 2002 the Croatian Communications and Information Society (CCIS), which has established a fruitful collaboration with ComSoc within the Sister Society family, actively participates in the organization of SoftCOM.

The jubilee 20th International Conference on Software, Telecommunications and Computer Networks (SoftCOM 2012) was held in attractive ambience of the Radisson Blu Resort, Split hotel, September 11 to 13. The Conference was organized by the University of Split, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture under the auspices of the Ministry of Science, Education and Sports. The Conference has been technically co-sponsored by the IEEE Communications Society (ComSoc).

Researchers and experts from industry, research institutes and universities from 32 countries all around the

(Continued on Newsletter page 4)



The keynote speech titled "1992 – 2032: Looking back looking ahead – 40 years of Information Communications Technology" was held by Roberto Saracco, Ph.D. (the President of EIT Italy and Node Director of EIT Italy based in Trento (European Institute for Innovation and Technology)). Sinisa Krajnovic, Vice President and Head of Development Unit Core & IMS, Ericsson has presented the invited speech titled "Ericsson Vision 2020: Networked Society & 50 Billion Connected Devices".



SoftCOM has become a reknown Adriatic ICT event connecting the main cities on the Adriatic coast.

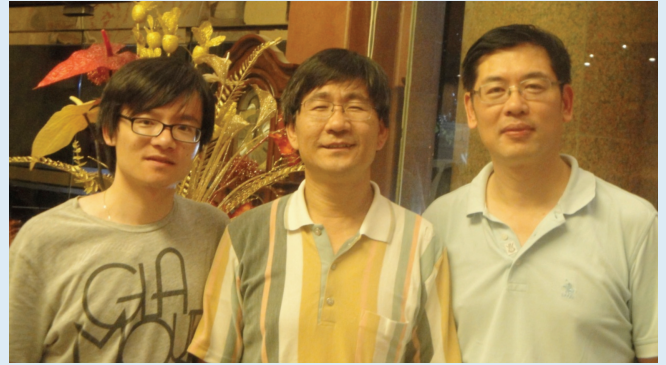
Distinguished Lecture Tour of Yuguang Fang in China, 2012

By Yuguang "Michael" Fang, University of Florida, USA

I have been serving IEEE, particularly ComSoc, for over 15 years as an author, a reviewer, an editor, a conference organizer, and an administrative officer, but this is my first time to serve as a ComSoc Distinguished Lecturer (DL). I made my Distinguished Lecture Tour (DLT) to China during the past summer (July 28-August 23, 2012). It was indeed a fantastic experience. I had not only shared my research findings with our IEEE members, but also got to know more researchers, gain new research ideas, and enrich my understanding of local cultures.

I prepared a list of lectures on various wireless networking technologies and their applications, including three talks on "cognitive radio networks", "cross-layer design" and "social networks", respectively. The talk on cognitive radio networks presented a new architecture on harvesting and managing unoccupied licensed spectrum to provide services to mobile users. In my talk on cross-layer design, I discussed the common problems identified in cross-layer design and illustrated our approach which uses the medium access control (MAC) layer as an anchor to extract cross-layer information, fast adapt to network dynamic changes, and optimize the end-to-end network performance. In the talk on social networks, I articulated the analogy between social networks and wireless ad hoc networks and then present our research findings on wireless ad hoc networks.

My first stop was Shenzhen, China, a special economic zone selected by the Chinese government as a trial site for new economic development model. Many universities in China opened new campuses there to link main campuses to potential technological transfer opportunities and many new companies were established to incubate new technologies, embracing the China-style new economy. I have given two talks ("cognitive radio networks" and "social networks") at Shenzhen Graduate School of Harbin Institute of Technology, with which my host, the IEEE ComSoc Chapter Dr. Qinyu Zhang, is also a Professor. Although it was during their summer vacation time, the talks were well attended and attracted more than 40 attendees with a very enjoyable Q&A session. To help student members, I was asked to give an additional talk on how to do research, which was hosted by Dr. Xiaoxia Huang, the Deputy Director of the Center for Real-time Monitoring and Communications Technology, Shenzhen Institute of Advanced Technologies (SIAT), China Academy of Sci-



Professor Pan Li (Mississippi State Univ.), Professor Yuguang Fang, and Professor Xumin Fang (SWJTU).

ence. Professor Yanchao Zhang from Arizona State University and Professor Pan Li from Mississippi State University also joined the discussions with over 30 students. I talked about how to read good papers, how to tackle difficult problems, how to write papers, how to do good presentation, and how to network with colleagues. I emphasized the role of networking in one's research career by getting involved with the IEEE and his/her community. I was so happy to learn from students afterwards that they had really learned a lot. After the talk, I had the opportunity to visit the Institute's impressive R&D facilities and meet Dr. Jianping Fan, the Director of SIAT, who shared with me his vision and the future development of this institute.

My second stop was Chengdu, China, the hometown of Panda. Although ComSoc does not have a local chapter there, the IEEE Chengdu Section coordinated this part of the tour. My first talk was on cognitive radio networks hosted by Dr. Xumin Fang, Professor and Chair of the Department of Communications Engineering at Southwest Jiao Tong University (SWJTU). The talk was very well received with many lively questions. During this period, Dr. Fang and Dr. Pingzhi Fan, Vice President of SWJTU, also talked about their research effort on communications and networking over high-speed transportation systems, particularly their National 973 Project, a project of national importance.

My second talk in Chengdu was on cross-layer design and was held at the new campus of the University of Electronic Science and Technology of China (UESTC). My host, Professor Gang Feng from National Key Laboratory of Science and Technology on Communications at UESTC, introduced me to the attendees. Since there were quite a few researchers working in this area, there were many intriguing questions raised, which had also greatly benefited my research. To publicize ComSoc, and IEEE in general, I was asked to deliver an additional talk on wireless security in the School of Mathematics and Computer Science at Xihua University, a newly renovated program with tremendous interest in nurturing young faculty in telecommunications. I was happy to share with them not only technical research in the area of wireless security but also on IEEE issues. My host Professor Mingxing He, Dean of this school, expressed his appreciation to my talk and the spon-



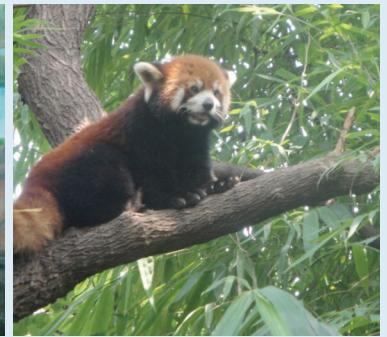
Talk at Shenzhen Institute of Advanced Technology (SIAT).

LECTURE TOUR/continued from page 2

sorship from IEEE Chengdu Section, and sought for long-term collaboration with my lab.

I cannot finish this part of tour without mentioning the local attractions, particularly, pandas. My host Dr. Xumin Fang kindly arranged a special tour for me to visit the Chengdu Panda Base. Pandas seem to naturally live only in the Chengdu region due to its bamboo forest and climate, and hence they have been used to establish friendships with many other countries. For many people including myself, pandas were perceived to be animals with black and white coats as shown in the photo. In fact, there are also some other kinds. For example, in the Panda Base, there are many red pandas, which are small arboreal mammal native to the eastern Himalayas and southwestern China (not necessarily in the Chengdu region). They are much smaller but more agile than pandas. In the Panda Base, visitors can enjoy a closer look at the pandas in their natural habitat.

My final tour stop was Beijing, the capital of China. Dr. Xiaofeng Tao, the newly elected Chair of IEEE ComSoc Beijing Chapter, hosted my talk on cross-layer design at



Black and white and red pandas in the Sichuan Panda Base

Beijing University of Posts and Telecommunications (BUPT). Attendees came from various universities and companies and asked many interesting questions. I was also offered tours to two National Key laboratories sited at BUPT and exchanged research ideas with many faculty and students during this visit.

This was indeed a fruitful lecture tour. The IEEE Distinguished Lecture program is such a fantastic program,
(Continued on Newsletter page 4)

ICUMT 2012 Congress in St. Petersburg, Russia

By: Yevgeni Koucheryavy, Alexey Vinel, Finland; Wojciech Molisz, Jacek Rak, Poland; Kishor S. Trivedi, USA

ICUMT 2012 — 4th International Congress on Ultra Modern Telecommunications and Control Systems was held on October 3-5, 2012 in St. Petersburg, Russia. The event, organized by Tampere University of Technology in co-operation with INCET R&D, Moscow, Russia, followed three very successful consecutive meetings that took place in St. Petersburg (2009), Russia, Moscow (2010), Russia, and Budapest (2011), Hungary, accordingly. The conference was technically co-sponsored by IEEE Region 8.

Similar to previous editions, ICUMT 2012 consisted of two tracks, i.e., Telecommunications, and Control Systems, accordingly, and offered eight specialized workshops/special sessions, i.e., RNDM (Reliable Networks Design and Modeling), FOAN (Fiber Optics in Access Networks), WMCNT (Mobile Computing and Networking Technologies), OPNTDS, (Optical Networking Technologies and Data Security), RABAN (International Workshop on Recent Advances in Broadband Access Networks), IWCC (International Workshop on Cyber Crime), CoCoS (International Workshop on Cognitive and Cooperative Wireless Communication Systems) and IW-ETDSP (First International Workshop on Emerging Technologies and Devices in Signal Processing).

Technical Program of ICUMT 2012 included 165 papers from 50 countries selected after a detailed review process. Noticeably the amount of participants representing Russian universities and research institutes increased in comparison to the previous editions of the conference. Accepted papers published in IEEE Xplore were organized into numerous technical sessions, the most important ones being “Sensor Networks” and “Vehicular Technology”.



Prof. Kishor Trivedi (left) and Prof. Wojciech Molisz (right) delivering their keynote talks at ICUMT 2012.



Left to right: Jacek Rak, Yevgeni Koucheryavy, members of ICUMT Steering Committee, and Prof. Ian F. Akyildiz, ICUMT 2012 Distinguished Guest.

The program was additionally enriched by keynote talks by Dr. Slawomir Pietrzyk (CEO of IS-Wireless, Warsaw, Poland) entitled: “LTE networks: how far are the achievable capacities from the theoretical ones”, Prof. Panagiotis Papadimitratos (Royal Institute of Technology (KTH), Stockholm, Sweden) on: “Secure wireless networks”, Prof. Kishor Trivedi (Duke University, Durham, NC, United States) entitled: “Reliability and availability assurance of SIP on IBM WebSphere”, Prof. Krzysztof Szczypiorski (Warsaw University of Technology, Poland) on “Trends in network steganography”, Prof. G.A. Leonov (St. Petersburg State University & Russian Academy of Science) on: “Control in aerospace communications and computer architecture”, Prof. Wojciech Molisz (Gdansk University of Technology, Poland) entitled: “IP Multimedia Subsystem revisited”, and Dr Edison Pignaton de Freitas (Brazilian Army & University of Brasilia, Brazil) on: “Biologically-inspired solutions for wireless sensor networks”.

Best paper award was given to Dr. João Paulo Carvalho Lustosa da Costa (UnB, Brazil) for the paper entitled “Improved landing radio altimeter for unmanned aerial vehicles based on an antenna array”.

Next ICUMT will be held in Almaty, Kazakhstan, on 10–13 September, 2013. For more information, please visit <http://www.icumt.org>.

world have submitted in total 186 papers for presentation at SoftCOM 2012. Submitted papers have been reviewed by more than 200 scientists from universities, institutes and ICT companies all over the world. All accepted papers have been carefully selected based on their contribution, relevance, conceptual clearness and overall quality.

At the opening ceremony the participants have been welcomed on behalf of the organizers by prof. Srdjan Podrug, the Dean of the Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture in Split, University of Split. Participants have been addressed by M.Sc. Gordana Kovacevic, president of Ericsson Nikola Tesla, dr.sc. Roberto Saracco on behalf of IEEE Comsoc and the Sister societies and Ante Sanader, Governor of the County of the Split and Dalmatia. Dr.sc. Sinisa Krajnovic, Vice President and Head of Development Unit Core & IMS, Ericsson has presented the invited speech titled "Ericsson Vision 2020: Networked Society & 50 Billion Connected Devices", Elya B. Joffe with K.T.M. Project Engineering, Israel, presented his view on "Probing the Future: On the role of Universities, Industry entrepreneurs, and Professional Societies", and Prof. Marco Ajmone Marsan Politecnico di Torino, Italy TREND, presented "The FP7 Network of Excellence on Green Networking".

The technical conference program featured eleven general conference sessions, four special sessions, two symposia and one workshop. The Symposium on RFID Technologies and the Internet of Things has been organized by researchers from University of Salento, Italy, and the Symposium on environmental electromagnetic Compatibility by researchers from University of Split. The 2nd Workshop on Regulatory Challenges in the Electronic Communications Market was chaired by Mario Weber (Croatian Post and Electronic Communications Agency) and Ignac Lovrek (Faculty of Electrical Engineering and

Computing, Zagreb). Workshop has featured invited papers within the project "Looking to the Future", a collaborative project between the Croatian Post and Electronic Communications Agency (HAKOM) and the three Croatian universities. Besides the scientific program a professional workshop dedicated to the wide spectra of topics in ICT has been organized. In addition seven half day tutorials have been held by worldwide recognized experts.

In conjunction with the SoftCOM 2012 conference, a Business Forum has been organized featuring three workshops including invited talks, round tables, presentations with participation of managers, executives, experts, government and institution representatives. Workshop on innovation in ICT was organized by Technology Transfer Office, of the University of Split. The topic was completed with the poster session on "Systems, Applications and Innovations in ICT". Workshop on "Model driven software development in practice" was organized by dr.sc. Darko Huljenic, Ericsson Nikola Tesla, Croatia. Workshop on International Roaming in the SEE Region chaired by Nicolae Oac? ANCOM, Romania, CEE Regional Working Group included presentations and discussion by representatives from Macedonia, Montenegro, Romania, Croatia and Bosnia and Herzegovina.

The presentations of the student projects pursued in the frame of the Ericsson Nikola Tesla Summer Camp 2012 at the Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture in Split, have been held within a special session which was chaired by Sasa Desic (Ericsson Nikola Tesla).

As a part of the conference awards ceremony dr.sc. Marjan Kunstic from the University of Zagreb, Faculty of electrical engineering and computing received the IEEE Communications Society Croatian Section award for his outstanding contribution to the area of ICT, and dr.sc. Algirdas Pakstas received the CCIS plaque in the occasion of the 10-year Society anniversary for his great contribution.

Welcome reception by the Mayor of the town of Split was organized in the attractive ambience of the 1700 years old Diocletian Palace Basement in Split.

More information about the SoftCOM 2012 conference may be found at the address <http://www.fesb.hr/softcom>.

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LECTURE TOUR/continued from page 3

which significantly benefit both the lecturers and IEEE members. Of course, it would not be possible without the IEEE sponsorship and the help from many volunteers. Ms. Ewell Tan, executive of IEEE Asian Pacific Region, had done a fantastic job in shepherding and coordinating this lecture tour. My appreciation is also extended to those from local chapters for their arrangements and hospitality and they are (not in any particular order): Drs. Pingyi Fan, Xiaoxia Huang and Qinyu Zhang from the Shenzhen Chapter; Drs. Pingzhi Fan, Xuming Fang, Gang Feng, Rong He, Li Hao, Zhen Ma, Houjun Wang, and Mr. Yue Zhao from the Chengdu Section; and Drs. Chenyang Yang, Xiaofeng Tao, Song Ci and Ms. Ying Qi from the Beijing Chapter.