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DISTINGUISHED LECTURER TOUR

## Distinguished Lecturer Tour of Prof. Tilman Wolf in Central America

By Carlos Eugenio Martínez-Cruz, El Salvador Chapter Chair

Prof. Tilman Wolf was invited by the Guatemala, El Salvador, and Panama ComSoc Chapters to conduct a Lecturer Tour in November 2015. All three sections asked for two lectures. The first two lectures were held at the World Heritage Site of Antigua Guatemala. This city that features Spanish Baroque-influenced architecture was the tour's first stop. Tilman Wolf presented two of his best demanded talks: 'Economic Principles for Future Internet Architecture' and 'Attacks and Hardware Defenses for Network Infrastructure.' Both lectures supported the joint effort made by Guatemala's IEEE Computer Society and Communications Society.

The second two lectures were given on November 11 in San Salvador, El Salvador's capital. Prof. Wolf was awakened much earlier than 6:00 am, and without having any breakfast he traveled to the place where the lecture was arranged. The first talk started at 7:00 am, on the topic 'Hardware Defenses for Network Infrastructure.' In this presentation, Prof. Wolf discussed his research group's recent work that illustrates the challenges in providing security in Internet routers. He provided an example that showed how vulnerable packet processors can be attacked through the data plane of the network. Using hardware monitors, he showed how his team has developed an effective defense mechanism against such attacks. Finally, it was explained how this work is also applicable to securing general-purpose embedded processing systems.

After finishing his presentation, Prof. Wolf traveled to the University of El Salvador. There the IEEE student branch called for a big meeting. More than 100 students attended the lecture. Again, the talk 'Hardware Defenses for Network Infrastructure' was presented. After this presentation Prof. Wolf interacted with the students. He explained to them how the functionality of routers



Lecture of Prof. Wolf in San Salvador.



Lecture of Prof. Wolf in San Salvador.



Prof. Wolf suffering the inclemency of the rainy forest weather in El Salvador..

inside the Internet continues to grow, as does their complex protocol processing operations for content adaptation, security, and network management. Most of the students were sophomores in the electrical engineering department who were attracted by the computer security issues.

But not everything was work. Central American countries are countries of volcanoes. Our guest was invited to visit El Boqueron, El Salvador's national park, at the top of San Salvador Volcano. There, Dr. Wolf experienced the difference in weather: rain at the top and dry weather at the bottom, where San Salvador is located. For a few minutes it was possible to appreciate the beautiful sight of the San Salvador valley. From above, at a distance, it was possible to see at the same time the crater-lake of Ilopango and a fast-moving tropical rain on the verge of covering the lake.

The final talks were held on November 13 in Panama City at the Hotel Continental. This lecture was supported by the Panama ComSoc chapter made up mostly of professors and students from the Panama University of Technology.

It was a pleasure for the Guatemala, El Salvador, and Panama ComSoc Chapters to host the Distinguished Lecturer tour of Prof. Wolf.

## Highlights of the IEEE COMCAS 2015 Conference, Tel-Aviv, Israel

By Shmuel Auster, IEEE COMCAS 2015 General Chair, and Itai Dabran IEEE COMSOC Chapter Chair, Israel

The fifth biennial IEEE International Conference on Microwaves, Communications, Antennas, and Electronic Systems (IEEE COMCAS 2015) took place at the David Intercontinental Hotel in Tel-Aviv on the 2–4 November 2015. The first two days of the conference included the plenary session together with six regular parallel sessions and poster sessions, while the third day was reserved for tutorial and workshop tracks in three parallel sessions.

IEEE COMCAS is organized as a multidisciplinary international conference where scientists, engineers, and students can meet and discuss their common interests. In addition, it holds an exhibition with more than 100 booths that is attended by top internationally recognized scientists and engineers active in fields such as communication, antennas, microwave, and systems engineering. Colleagues who are developing the products and systems of tomorrow particularly find the exhibition helpful to their projects and careers.

This conference is sponsored by the IEEE Communications Society, the IEEE Microwave Theory and Techniques Society, and the IEEE Israel AP/MTT joint chapter. It is technically co-sponsored by additional chapters, societies, and professional organizations including the IEEE's AES (Aerospace and Electronic Systems) and APS (Antennas and Propagation); the Association of Engineers and Architects in Israel; the European Microwave Association (EuMA); and the GAAS (GaAs and other Compounds Association).

This year the organizers significantly increased the number of tutorials and industry-oriented invited sessions, making this conference more relevant than ever before. The emphasis continues



Frank Traut, Keynote speaker from MACOM Technology, USA, talking about “GaN Technology and Applications” at the Opening (Plenary) session.



Oren Hagai, Interlligent CEO and IEEE COMCAS Exhibition Committee Chair (in black jacket) and his staff at Interlligent during the IEEE COMCAS 2015 Exhibition.



Ingmar Kallfass, Invited Speaker from the University of Stuttgart, Stuttgart, Germany on “MMIC Chipset for 300 GHz Indoor Wireless Communication”.



At the Posters Session, with Beer Cocktail (sponsored by Carlsberg beer). From left: Solon Jose Spiegel, Shraga Kraus, Shmuel Auster, Claudio Jacobson and Ofer Shaham.

to be on applications-oriented research and development, from antennas and devices to systems and software, including GaN technology and applications, biomedical systems and applications, phased array radars, SDR and 5G cellular mobile. The event had strong industry patronage and participation, and the final program comprised 150 technical presentations, talks and tutorials, arranged in 45 sessions over three days with up to six parallel sessions running concurrently for much of the time.

Some of the presented topics at IEEE COMCAS 2015 were: green communication, radar and microwave technologies, device modeling, antennas, networking technologies, defense and UAS applications, communication measurements, implementations and resource allocation, sensors and advanced frequency synthesizers.

The conference also featured a special Women in Engineering session on ‘Diversity in High-Tech – What’s Working and Why?’, presented by Prof. Orit Hazzan from the Technion, that illustrated how the creation of a culture that enhances diversity benefits the entire STEM community. This invited speaker presentation asserted that it is in the interest of the high-tech world, rather than in the interest of any specific underrepresented group in the community, to enhance diversity in general, and gender diversity in particular.

Hosting such conferences in various locations around the world is an excellent way to encourage IEEE members and societies and the technical community at large to participate. This helps improve recognition and generate growth for the IEEE Communications Society, the IEEE Microwave Theory and Techniques Society, and their Sister Societies. The fifth IEEE COMCAS conference was highly successful, with more than 1500 participants from 38 countries who expressed their very positive feedback and comments.

COMCAS continues to be very successful and will likely be well attended in the future by many technologists who lead innovation and have an impact on the microwave, communications, antenna, solid-state circuits, and electronic systems fields.

## Distinguished Lecturer Tour of Tarik Taleb: From Finland to Malaysia

By Fazirulhisyam Hashim, Hafizal Mohamad, and Nur Idora Abdul Razak, IEEE Malaysia ComSoc/VTS Joint Chapter

In November 2015, the IEEE Malaysia ComSoc/VTS Joint Chapter hosted an IEEE ComSoc Distinguished Lecturer Tour (DLT) by Professor Tarek Taleb at three different venues, namely MCMC Cyberjaya, UiTM Shah Alam, and the Hilton Kuching. The speaker, Prof. Taleb, is a Professor at the School of Electrical Engineering, Aalto University, Finland. Prior to his current academic position, he worked as senior researcher and 3GPP standards expert at NEC Europe Ltd, Heidelberg, Germany. Before joining NEC and until March 2009, he worked as an assistant professor at the Graduate School of Information Sciences, Tohoku University, Japan, in a lab fully funded by KDDI, the second largest network operator in Japan.

Prof. Taleb arrived in Malaysia on November 22 and was met by Fazirulhisyam Hashim, the current Chair of the IEEE Malaysia ComSoc/VTS Joint Chapter, at Kuala Lumpur International Airport (KLIA), and later checked-in at the Everly Putrajaya Hotel. After finalizing the check-in process, they had a light dinner at the Black Canyon Restaurant in the Alamanda Shopping Mall, which is a three-minute walk from the hotel.

The following day at 10.30 am, Prof. Taleb delivered his first lecture at the Malaysian Communication and Multimedia Commission (MCMC), Cyberjaya. There were approximately 60 attendees, mainly from various research institutes in Malaysia and industry. In the afternoon, Prof. Taleb went to the Faculty of Electrical Engineering, Universiti Teknologi MARA (UiTM) Shah Alam, to deliver his second lecture. There were approximately 20 attendees at this lecture; 90 percent of them were postgraduate students taking telecommunications courses, and the rest were from academia. The audiences were very interested in the topic, which is relevant to their field of studies and research. The program ended with some refreshments, at which time the audience took the opportunity to interact with the speaker.

On November 24 Prof. Taleb took a flight to Kuching, Sarawak to deliver his third lecture, which was scheduled on the following day at the Hilton Kuching, in the Main Ballroom. He was one of the keynote speakers at the 2015 IEEE 12th Malaysia International Conference on Communications (MICC2015). This lecture attracted 100 attendees, mainly from academia and industry.

In his three lectures, Prof. Taleb started with a video clip and introduction of Aalto University and the city of Helsinki. In general, the audiences were exposed to 5G technology and the research work in this area. Prof. Taleb highlighted some issues on the existing telecommunications networks that are



From left: Sumei Sun, Hamzah Burok, Khairul Akmal Zahri, Tarik Taleb, Tan Ching Seong, Hafizal Mohamad, and Fazirulhisyam Hashim at MCMC, Cyberjaya.



Audience at MCMC Auditorium, Cyberjaya.

hardware-oriented and have a centralized architecture. With the increasing demand for future mobile applications, networks need to be dynamic and flexible. The solution is to migrate to software-defined networking, virtualization, and cloud computing. Prof. Taleb also demonstrated his research work on the topic. In addition, he showcased the feasibility of on-demand creation of cloud-based elastic mobile networks, along with their lifecycle management. The lecture introduced a set of technologies and key architectural elements to realize such a vision, turning end-to-end mobile networking into software engineering.

All three of the lectures were very successful and well attended. We noted that some in the audiences were non-IEEE members. Thus, this event was an ideal platform for us to spread the message of IEEE to postgraduate students and industry. The IEEE Malaysia ComSoc/VTS Joint Chapter would like to thank Prof. Taleb for his lecture, and we hope that we will meet again in the near future. Above all, we would like to extend our special appreciation to IEEE ComSoc for arranging such a wonderful program.



Prof. Taleb during his lecture at MCMC.



Audience at Universiti Teknologi MARA (UiTM) Shah Alam.

# IEEE Latin America Network Operation and Management Symposiums

By Fernando Menezes Matos, Augusto Venâncio Neto, Aldri Luiz dos Santos, and José Neuman de Souza, Brazil

The 8th Latin American Network Operations and Management Symposium (LANOMS) 2015 was held in the beautiful and pleasant coastal city of João Pessoa, jointly organized by the Federal University of Paraíba and the Federal University of Rio Grande do Norte. LANOMS is a biannual conference, and the 2015 event was the first time it was located in the Northeast region of Brazil. It was technically co-sponsored by the IEEE Communications Society (ComSoc) and the International Federation for Information Processing (IFIP). The conference has the goal to bring together international representatives of academic areas, civil services, businesses, and other entities in order to create a stimulating environment to present and discuss ideas, solutions, and lessons learned to solve technical and research challenges in network and service management. Moreover, LANOMS also aims to be the main Latin American conference in the network management field, alongside APNOMS (Asia-Pacific Network Operations and Management Symposium) and NOMS (Network Operations and Management Symposium), the main Asian and worldwide conferences in network management, respectively.

This LANOMS edition received 33 paper submissions, of which 12 were accepted as full papers and selected for oral presentation through four technical sessions (Network Virtualization, Security Management, Monitoring and Management Approaches, and Wireless Network Management). Moreover, five papers were selected for short paper presentations, and five papers were selected for poster presentations. An application session was also part of the LANOMS 2015 program, where applications papers, focusing on tools for contemporary and important paradigms, such as cloud computing and software defined networking (SDN), were presented. In addition, two keynotes were scheduled in the conference program, addressing relevant and up-to-date topics. In the first keynote, Prof. Rui Aguiar from the University of Aveiro, Portugal, outlined the management challenges of 5G networks; in the second keynote, Masum Z Hasan, from Cisco Systems (USA),



Local Organizing Committee.



Technical session.

talked about seamless cloud extensions over multiple disparate clouds. This year, LANOMS 2015 paid a small tribute to Prof. Luiz Fernando Gomes Soares, who developed several research efforts on network management and led the development of Ginga-NCL middleware. Ginga-NCL middleware is part of the Brazilian digital TV system, and has been adopted by several countries in Latin America. Finally, a social event was held at a barbecue restaurant, allowing approximately 40 participants to talk about the event, future cooperation, and the like.

The success of this LANOMS edition was largely due to all the people involved in the conference. First, we are most grateful to the authors who submitted their work and the technical program committee members who devoted their time to support the peer-review process. We also need to thank the Federal University of Paraíba (UFPB), the Federal University of Rio Grande do Norte (UFRN), the Federal University of Ceará (UFC), and the Federal University of Paraná (UFPR), the Brazilian Computing Society (SBC), and the National Laboratory of Computer Networks (LARC), for their invaluable support. We also want to thank the organizing committee members and the volunteers who all worked hard on the details and important aspects of the conference. Finally, but not least, we acknowledge the support of our sponsors (CAPES and CGI.br) who helped us cope with the costs of organizing LANOMS 2015, seeking to ensure a high-level event for all participants. We also invite our community to attend the future events.

For further information about LANOMS, please visit the conference portal at <http://www.lanoms.org>

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IEEE Communications Society Ombudsman  
c/o Executive Director  
3 Park Avenue  
17 Floor  
New York, NY 10017, USA  
[ombudsman@comsoc.org](mailto:ombudsman@comsoc.org)

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**STEFANO BREGNI**  
Editor

Politecnico di Milano — Dept. of Electronics and Information  
Piazza Leonardo da Vinci 32, 20133 MILANO MI, Italy  
Tel: +39-02-2399.3503 — Fax: +39-02-2399.3413  
Email: [bregni@elet.polimi.it](mailto:bregni@elet.polimi.it), [s.bregni@ieee.org](mailto:s.bregni@ieee.org)

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**REGIONAL CORRESPONDENTS WHO CONTRIBUTED TO THIS ISSUE**

CARLOS MARTINEZ ([CARLOS.ELSALVADOR@GMAIL.COM](mailto:CARLOS.ELSALVADOR@GMAIL.COM))  
EWELL TAN, SINGAPORE ([EWELL.TAN@IEEE.ORG](mailto:EWELL.TAN@IEEE.ORG))  
ALEXEY VINEL ([ALEXEY.VINEL@HH.SE](mailto:ALEXEY.VINEL@HH.SE))  
LISANDRO ZAMBENEDETTI GRANVILLE ([GRANVILLE@INF.UFRGS.BR](mailto:GRANVILLE@INF.UFRGS.BR))

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