



# Chapter Chatter

Todd Robinson, Associate Editor

## A New York Hour: My Lunch With Vinny. Part 1

By Mike Violette

The magazine industry has hosted many legends of the written word, notably Stephen Crane, Ernest Hemingway and Sir Arthur Conan Doyle. More recently, Stephen King released *The Green Mile* in serial form. This technique provided for a method to break longer novels into short, easier to digest bits and, more pointedly, kept the magazine with returning subscribers, eager to find out the next twist of the plot.

The tradition of serialized stories goes back many years, before widespread use of the printed word, to the 10th Century AD, where the “*Stories of the Arabian Nights*” was assembled in the city of Baghdad. Originally “*One Thousand and One Nights*,” the story was translated into Arabic from the Persian prototype, *Hazār Afsān*, and features the use of the cliffhanger device, which helped a young woman stay alive night after night.

You see, the Persian King, Shahryar, had sentenced the clever Scheherazade to die because of his misogynistic view of the fairer sex. In order to spare her own life, she wove a series of cliffhanger tales together for one thousand and one nights - hence the title - which included the story of Aladdin’s Lamp, Sinbad the Sailor and Ali Baba. Now that these classics have morphed into the common experience (as immortalized by Disney Co.) one would say that the serialization strategy was a success. I am not sure what happened at night one-thousand and *two*. Perhaps Shahryar relented and fell in love with the comely Scheherazade. After nearly three years, one would think that he formed some kind of opinion.

Alas, in EMC, once you’ve wrapped up the test or troubleshooting exercise or the workshop, there is not much in the way of immortalization. No one really remembers that extra 2 dB that took much labor and tears. Sadly, no songs are sung about the tireless efforts of the antenna balun designer. Alas, so be our lot.

But every once in awhile, a chance to have a glimpse into another world is afforded our lonely existences. This is the tale of one small story: My Lunch with Vinny.

In the mid 1990s I was called to investigate some noise problems in an office in mid-town Manhattan. The organization was (is) the publisher of many top-rated and well-known national magazines, the kind with the perfumed pages and drop-dead gorgeous models displaying the icons of the fashionistas. Entering the lobby, one is greeted, as would be expected, by shiny polished floors and a room-wide reception station; a modern swooping sculpture in glass hangs in the windowed atrium which echoed with the clicks of Bruno Magli high heels.

I hauled my folding cart, loaded with equipment, over to the receptionist, who was turning pages in a magazine. “I’m here to work with Ms. Brady.”

The receptionist looked down from her perch at my battered blue Samsonite suitcase (containing a set of antennas) and the odd machine with a black-green display and dozens of buttons. I had on my clean plaid shirt which I painstakingly matched with my best brown corduroys.

“Hold on. Ah’ll ring hurh.” She looked at her console and jabbed a few buttons. “Ms. Brady? Yur man is here.” She then hung up the phone and went back to her magazine.

After a few moments, Ms. Brady came down. She was pert and trim, signed me in and led me to the inner sanctum. We jammed into an elevator with a hundred other people, all suited, smart and elegant. I swooned with the atmosphere of Chanel and Yves Saint Laurent. There was certainly no opportunity for small talk in this hussle-town elevator.

At the forty-eighth floor, we exited and turned down the hall and into a suite of cubicles, tight with workstations, humans and glossy stacks of magazines.

“The problem is here. These computers aren’t working right.”

“Ok...anything else you can tell me?”

“Well, these machines here are new and they are the same as the setup on the other side of the building where everything is working correctly.” Ms. Brady, obviously pressed for time, didn’t have a lot of information to share. “We think it’s some kind of noise. That’s what our computer guy said. So we called you guys.” She glanced at her watch. “Listen, Mark, is it?” I nodded. What the hell. “Mark, I’ve got meetings all morning. I’m sending Vinny down to look after you. He’ll be here in a while.”

She started walking away, but suddenly turned and looked back over her shoulder, her face softening a little, like she was talking to a stray, “Vinny will take you to lunch, too.” She turned and clicked efficiently down the hall. “I’ll see you at four pm,” she added, waving four fingers in the air; this time not turning.

I unpacked, took out the antennas - which is always good for a few laughs - once I was walking down Third Avenue with a fully-extended bicon. People parted like the Red Sea, and I was Moses with his staff. Anyway, the rest of the morning went by uneventfully. I clipped on current probes and made meaningless measurements of the radiated spectrum. The problem could have been solved by inspection. The CAT 5 cable was unshielded and there was enough incidental noise to corrupt the data. The prescription was going to be pretty easy. This was in the days of plotters and printers (what’s a JPG?); each plot was hard-copy.

At about 11:45 am, the door to the room swung open and a trim, clean, sharp jawed Italian-American guy, about

five foot six in a natty three piece gabardine suit stepped in, looking everything like a young Al Pacino. He surveyed the room, as if checking out the venue for a cock-fight, walked over to me a tipped his chin up.

“Yo! You the consultant?”

“Yes. Are you Vinny?”

“Yep. Getcha coat. We’re going out for *lunch!*” He paused. “And it goes like this, OK: I pick the place. You pick up the check.”

Well this should be good. I flipped off my spectrum analyzer and followed Vinny into the elevator.

He pressed G and the elevator whooshed downwards.

## Chicago

Jerry Meyerhoff, Chapter Secretary, reports that the Chicago Chapter IEEE EMC-S Fall 2011 season opened on Wednesday, September 21 with an evening technical program hosted on the IIT Rice campus in Wheaton, IL. The Chapter provided pizza dinner for the 25 attendees.

The talk “EMC Testing for Cables” was delivered by Louann Devine of Panduit who is also a Chapter officer. Louann explained that copper is still effective as an interconnect to 20 GHz. The challenge is to make the entire cable assembly work for EMC as a system, including the connectors on the cables as well as their receptacles, the PCB cards and boxes. Furthermore, existing standards from



*Speaker Louann Devine and Roy Leventhal discuss “Cable EMC” at the Chicago Chapter’s September meeting.*



*Louann Devine of Panduit receives a speaker’s plaque from Chicago Chapter Chair Jack Black of DLS Electronic Systems.*

CISPR, FCC and the like do not fully address the technical design requirement for success. As a result, Louann performed

some unique mode-stirred shielding effectiveness tests to identify and correct the weakest link in the designs. In short,

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*Bill Kimmel was the featured speaker on the topic of grounding at the Chicago Chapter's OktoberFest meeting hosted by ELITE Electronic Engineering.*



*Bill Kimmel makes a point about grounding to the Chicago Chapter at its October meeting.*

it is all about the mechanical integrity of contacts, particularly the grounds. Testing using realistic and real-world applications of the connectors was crucial.

Louann walked attendees through a large amount of data, interpreting it, to point out the best design performance. She also described practical near-field probe methods to pin-point the weak connection areas.

The annual OktoberFest meeting on Thursday, October 13 was again hosted by ELITE Electronic Engineering in Downers Grove, IL. They provided complimentary traditional German food and drink to the crowd of 75 attendees. Chapter members finally pushed away from the banquet table and conversation to enjoy Bill Kimmel of [www.emiguru.com](http://www.emiguru.com) present on "Mysteries of Grounding." Bill explained that there are a lot of misconceptions about grounding and carefully led us through the hierarchy of requirements from the core of safety up through EMC. He emphasized analysis methodology, focusing on sources, victims, amplitude, time duration, frequency, impedance, pathways and loops. Bill offered useful rules of thumb and rapid approximations to sort through problems. He illustrated the principles through several

case studies and highlighted general design guidelines and best practices for success.

For the next meeting, the Chapter chose to support the Chicago Section's November 15 Technical Conference and Exposition titled "2011 – Today's Engineering Challenges." This is a full day two-track program at the Argonne National Laboratories, in suburban Argonne, IL. Speakers will address the theme "Today's Challenges, Tomorrow's Solutions." The conference will offer insights into the latest in energy topics, new information on engineering issues from a personal level, development of new technology and thought provoking engineering skills enhancement. Chicago EMC-S members are eligible for a limited supportive stipend applied to the conference fee. [www.ieeechicago.org/2011conf](http://www.ieeechicago.org/2011conf).

## Germany

Shortly after the summer break, the German EMC Chapter invited students to meet at the coastline of the Baltic Sea in Schloss Noer, an 18th century country estate turned into a youth hostel. The

Chapter, along with the Helmut-Schmidt-Universität/Universität der Bundeswehr Hamburg and the Summa Foundation HPE 201-2011, organized a short course on High-Power Electromagnetics from September 18 to 24, 2011. The course director, Dr. D. V. Giri, and the organizer, Dr. Lars Ole Fichte, dedicated the HPE 201–2011 course to the memory of Dr. Carl Baum, head of the Summa Foundation courses, who died in November 2010 and who had previously served as the course director of all former HPE short courses.

The fundamental concept of the course was to bring young engineers starting to work in the field of HPEM together with the veteran engineers in a place without any interference from the outside. The outstanding hospitality of the venue and the small number of students guaranteed the success of this concept. The faculty encompassed well recognized colleagues in the field of High-Power Electromagnetics, including Dr. D. V. Giri, Dr. R. Gardner, Dr. F. Tesche, Dr. J.-P. Parman-tier, Dr. A. Kaelin and Dr. F. Sabath.

During the one week duration of the course, 15 students from seven countries attended lectures from six of the leading scientists in the field of High Power Microwave and Electromagnetic Pulse. The students actively contributed to the course by solving a set of exercises in cooperation with the staff. In the historic environment of Schloss Noer, these activities usually took place in the late evenings; the record for the last student leaving the lecture room being 1:30 a.m.

In addition to lectures and practical problems, the participants faced the challenge of composing Limericks on matters or other aspects of the short course. Finally, all students were able to reach the goal of the course.



*Participants and staff of the HPE 201-2011 short course in front of the Schloss Noer, Germany. The course was dedicated to the memory of the late Dr. Carl Baum.*



*Students are shown discussing a topology problem with Jean-Phillippe Parmantier in an evening session of the High-Power Electromagnetics short course held in Germany.*

Mrs. Melanie Deperschmidt of the University of Applied Sciences Hannover was awarded the prize for the best student presentation. All participants as well as members of the faculty agreed that the one week in Schloss Noer was of value and worth the time.

The week after the course in Schloss Noer, several members of the German EMC Chapter attended EMC Europe 2011 which took place at the University of York in the United Kingdom. Following tradition, Germany Chapter members met in a local pub to discuss matters of the Germany Chapter as well as exchange interesting news.

### Hong Kong

The IEEE Hong Kong EMC Chapter and Professor Sergio Pignari (IEEE EMC Society Chapter Coordinator) held a meeting at the City University of Hong Kong (CityU) on September 21, 2011. During the meeting, they discussed and exchanged some ideas on both the current status and future development strategies of the EMC Society and Hong Kong EMC Chapter. Professor Pignari and his colleague, Dr. Flavia



*Professor Sergio Pignari (IEEE EMC-S Chapter Coordinator) and the committee members of the Hong Kong EMC Chapter took a group photo after the meeting. Front row from left are Dr. Flavia Gassi, Dr. Duncan Fung (Chairman of the Hong Kong EMC Chapter), Professor Sergio Pignari, and Dr. Brian Chan. Back row from left are Stanton Lui, K. W. Chen, Wai Leong, Dr. Patrick Wong, Jacky Tang, Dr. K C Lee, George Chan, and Steven Tsang.*

Gassi, were also invited to visit the Applied Electromagnetic Laboratory of City University.


### Italy

The IEEE Italy EMC Chapter held a successful event on September 22, 2011 at the Politecnico di Torino. Professor Mark Steffka of the University of Michigan – Dearborn spoke on “Effective and Efficient Methods for EMC Pre-Compliance Evaluation of Automotive Components and Systems.”



Professor Steffka discussed the basic issues facing vehicle level automotive EMC and how these issues can be identified at a component level to provide valuable insight and maximize the number of possible solutions at the

*A seminar entitled “Effective and Efficient Methods for EMC Pre-Compliance Evaluation of Automotive Components and Systems” was held at the Politecnico di Torino, Italy with speaker Professor Mark Steffka of the University of Michigan – Dearborn.*



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**EMC, RADIO, TELECOM  
ENVIRONMENT, SAFETY**

earliest stages. A total of 20 participants attended this excellent technical seminar, which was chaired by Professor Flavio Canavero of the Politecnico di Torino.

## Nanjing

Professor Xiaowei Zhu, Ph.D., Chapter Secretary, reports that in September Dr. Keren Li from the National Institute of Information and Communications Technology (NiCT), Japan visited the Southeast University in Nanjing, China. During his visit, the IEEE MTT/AP/EMC Joint Nanjing Chapter invited him to give a technical talk titled “60 GHz-Millimeter-Wave Wideband Devices, Circuits, and Antennas,” to Chapter members well as students.



*Blake Dietze gave a history based presentation to the Oregon and SW Washington Chapter on the evolution of tubes from triode to pentode and on.*

new measurement advances in the field of multi-domain measurement correlation for embedded wireless devices. The Chapter will end the year with the winter social event at Who Song and Larry’s overlooking the Columbia River.



PHOTO BY LARRY LEDERER OF IMAGITRON SALES

*Dean Landers of Retlif Labs (back to camera) and (clockwise from left) Finbarr O’Connor of Alion Sciences, Gil Condon of Lockheed-Martin, Chapter Chairman Graham Kilshaw of Interference Technologies Magazine, and Rafik Stepanian of LCR attended the Philadelphia Chapter’s executive committee meeting on October 4.*

Gil Condon of Lockheed-Martin, Chapter Chairman Graham Kilshaw of Interference Technologies Magazine, and Rafik Stepanian of LCR.



*Dr. Keren Li from the National Institute of Information and Communications Technology (NiCT) speaks to the Nanjing Chapter in September.*

## Oregon and SW Washington

Alee Langford, Chapter Vice-Chair, reports that the Oregon and SW Washington Chapter resumed their fall program by welcoming Blake Dietze for the September meeting. With 30 attendees, nine of whom were students from the University of Portland, they enjoyed a great meal consisting of smoked pulled pork sandwiches, chips and slaw. The presentation provided a history of the evolution of tubes from triode to pentode and so on. The speaker brought several radios representing the era from 1910 and 1940. When asked who developed the first radio for cars, the audience was stumped. The answer was so obvious. It was “Motor” ola.

For the October meeting, Charles F. Bunting (Distinguished Lecturer) will present a discussion on the use of reverberation chambers for radiated emissions testing. The following month, Darren McCarthy of Tektronix will present

Meeting details and additional information can be found by visiting the Chapter website at <http://ewh.ieee.org/r6/oregon/emc/>.

## Philadelphia

Larry Lederer reports that the Philadelphia Chapter held a meeting on September 20 at AR RF/Microwave Instrumentation, in Souderton, PA. Nearly 40 attendees were present for networking, dinner and technical presentations. Gary Fenical of Laird Technologies spoke on “Shielding Basics” and George Barth and Mike Hannon of AR spoke on “Testing Faster.”

The Chapter also held an executive committee meeting on October 4, 2011. The committee discussed future meeting topics, speakers and locations for the 2011/2012 time frame. In attendance were Dean Landers of Retlif Labs, Finbarr O’Connor of Alion Sciences, Gil

## Pittsburgh

A joint technical meeting of the IEEE Pittsburgh Women in Engineering (WIE) Affinity Group and the EMC Chapter was conducted on August 11, 2011 at the Westinghouse Facility in Monroeville, PA. Dr. Rin Burke, Chairman of the WIE Affinity Group, and EMC-S Chapter Chair Mike Oliver, along with Co-Chair Harry Godlewski, hosted the technical meeting with approximately 15 people in attendance.

At the onset of the meeting, Rin and Mike discussed WIE and the EMC Chapter of IEEE along with upcoming technical meetings and presentations. The meeting started with a dinner at 6:30 pm prior to a 7:00 pm technical presentation. The Chapter had the privilege of having Paul R. Ohodnicki, Jr. as the technical speaker.



*A well deserved plaque was presented to Dr. Ohodnicki by the Pittsburgh Chapter.*



*The Women in Engineering Affinity Group and the Pittsburgh EMC-S Chapter held a joint technical meeting on August 11.*

Dr. Ohodnicki is employed by the National Energy Technology Laboratory (NETL), Chemistry and Surface Division. His presentation was entitled, "Advanced Nanostructured Materials for Energy Applications: Optical Thin Films for High Temperature Gas Sensing and Magnetic Nanocomposites for High Frequency Power Electronics." Advanced nanostructured materials are playing an increasingly important role in a wide range of energy related applications including catalysts for fossil energy generation, semiconductor and metallic nanostructures for solar energy generation and energy efficiency, advanced energy storage and batteries, and higher frequency power electronics for grid-scale power conditioning and grid integration. Research at the National Energy Technology Laboratory (NETL) is targeted towards improving energy efficiency and reducing greenhouse gas emissions through development of the next generation of advanced fossil energy technologies for large-scale centralized power plants including coal gasification, oxy-fuel combustion, solid oxide fuel cells, gas turbines, and CO<sub>2</sub> capture and sequestration. The talk focused on two areas in which nanostructured materials play an important role in areas of interest to NETL's core mission: (1) Advanced high temperature gas sensor materials for fossil energy process monitoring and control, and (2) Magnetic nanocomposites for grid integration of fuel cells in high frequency power conditioning systems.

### Santa Clara Valley

On September 13, the Santa Clara Valley Chapter gathered at Applied Materials in Santa Clara for dinner, networking and an excellent technical presentation. Lee Ritchey spoke to the Chapter on "Designing PCB Stackups to Balance Signal Integrity vs. Manufacturability."

Mr. Ritchey's session covered all of the aspects of PCB stackup design from materials choices to arrangement of signal layers and power planes to



PHOTO BY JERRY RAMIE


*Lee Ritchey gave an excellent presentation to the Santa Clara Valley Chapter regarding "PCB Design and Manufacturability" issues in September.*

take the most advantage of the fabrication process. It was taught by an engineer who has been designing PCB stackups for the workstation and super computer marketplace since these products began to be designed and is currently designing stackups for a wide range of products including terabit routers and other products employing signaling protocols to as high as 20 GB/S. Mr. Ritchey has worked with PCB fabricators from the inception of multilayer PCB manufacture and currently works with both fabricators and laminate suppliers to achieve the highest performance from the overall process at the lowest cost.

### Sendai

The Chapter is saddened by the passing away of Professor Emeritus Risaburo Sato who was the founder of the Chapter. As a memorial to him, the Sendai Chapter held a meeting, the Risaburo Sato Memorial Colloquium, on October 5, 2011 in Sendai. After a memorial address by Chapter Chair Hiroshi Inoue, a lecture was given by Professor Tetsuo Ikeda in memory of Professor Sato. Professor Ikeda joined Professor Sato's lab in Tohoku University in 1960. His talk included descriptions of the wide-spread research activity of the lab, memories of daily life in the lab and the life lessons he received from Professor Sato.

Following the memorial lecture, Past-Chairs Tasuku Takagi, Hiroshi Echigo, and Akira Sugiura gave talks on the history of



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## EMC, RADIO, TELECOM ENVIRONMENT, SAFETY



*A total of 43 participants attended the Sendai Chapter's Risaburo Sato Memorial Colloquium held on October 5.*



*An invited lecture was given by Tetsuo Ikeda who was a member of Risaburo Sato's lab at the Tohoku University.*

the Sendai Chapter and research work in the Sendai Chapter. Presentations on current research activities and future views on EMC research in the Chapter area were given by Chapter Chair Hiroshi Inoue and twelve other speakers representing 43 participants from EMC research groups in Akita University, Akita Prefectural University, Hachinohe Institute of Technology, Oi Electric, EMC Research Laboratory, NEC Tokin, Alps Electric, Tohoku Gakuin University, and Tohoku University.

After the Colloquium, Chapter members gathered for a banquet and shared memories of Risaburo Sato. The Chapter also discussed future perspectives on collaborative activity of the Chapter and member development. The banquet was concluded by Past Vice-Chair of the Sendai Section, Professor Kunio Sawaya.

### **Serbia-Montenegro – Welcome New Chapter!**

Vesna Javor, Chair of the newly formed Serbia and Montenegro (S&M) EMC Chapter, reports the Chapter actively participated in the Jubilee 10th Interna-

tional Conference on Applied Electromagnetics, ПЕC 2011. In fact, Dr. Javor was also the Conference Chair of ПЕC 2011. The event was held at the Faculty of Electronic Engineering of the University of Niš, from September 25–29, 2011. During ПЕC 2011, there were nine oral and two poster sessions with presentations of papers by 167 authors from 20 countries: Austria, Bosnia & Herzegovina, Bulgaria, China, Croatia, France, Germany, Greece, Hungary, Iran, Italy, Macedonia, Montenegro, Portugal, Romania, Russia, Serbia, Slovenia, Sweden and USA. ПЕC 2011 gathered scientists and researchers, students and engineers in the fields of applied electromagnetics, electromagnetic compatibility, computation of electromagnetic fields, coupled field problems, electric circuits and systems, measurement techniques, computer programs and simulations in electromagnetics. Being a scientific and professional meeting aimed at the efficient exchange of research results, ideas and knowledge, so as information about new development trends in this area, the



*IEEE EMC Society Distinguished Lecturer Mark Steffka of the University of Michigan-Dearborn, USA spoke at the ПЕC 2011 conference.*

ПЕC 2011 Conference contributes to international collaboration of universities and institutions, together with improvements of the quality of education and training at these universities. Selected papers from ПЕC 2011 will be published in the scientific journals: Elektrotehnika&Elektronika E+E (Bulgaria), Facta Universitatis (Serbia), and the international open-access online journal IJES (International Journal of Emerging Sciences).



*(From left to right) Organizers of ПЕC 2011 included Danijel Danković, IEEE Serbia and Montenegro (S&M) Student Branch Chair; Mirjana Perić, S&M EMC Chapter Secretary; Vladimir Katić, S&M PES Chapter Chair; Vesna Javor, S&M EMC Chapter Chair; Nataša Nešković, S&M Section Chair; Vera Marković, S&M Section Vice Chair; and Mladen Koprivica, S&M Section Secretary.*



*ΠEC 2011 participants are shown in front of the Faculty of Electronic Engineering of Niš.*

This year ΠEC 2011 had a Special Session on Green Energy, “New technologies for improving energy efficiency,” devoted to the late Professor Dr. Predrag Rančić, who was a member of the ΠEC Scientific Committee. Papers on this topic, as well as of other ΠEC sessions, had many inspiring and novel ideas. There was also an interesting presentation of 3D computer models of the inventions of Nikola Tesla. It is the result of the Joint Project of the Faculty of Electronic Engineering of Niš

and the Museum of Nikola Tesla in Belgrade ([http://www.tesla-museum.org/meni\\_en.htm](http://www.tesla-museum.org/meni_en.htm)). Nikola Tesla, the great inventor, scientist and electrical engineer, as well as a genius far ahead his time, was of Serbian origin. For more information about ΠEC 2011, see <http://ΠEC2011.elfak.ni.ac.rs>.


The new EMC Society Chapter of Serbia and Montenegro was founded on April 8, 2011, and—what a coincidence – it was also the Jubilee 10th Year of ΠEC. ΠEC Chairman and EMC Chapter



*Nataša Nešković, IEEE S&M Section Chair with the University of Belgrade in Serbia, provides an overview of the Serbia and Montenegro Section’s Student Branches at ΠEC 2011.*



*Mark Steffka and his wife Becky (center foreground) attended the opening ceremony of the ΠEC 2011 conference.*



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*Milena Lukić (left) a student at Niš in Serbia and Bojana Nikolić, a member of the conference organizing committee at Niš in Serbia, staffed the ΠEC 2011 registration desk.*



*At the social event following ΠEC 2011, attendees enjoyed an evening of polka dancing, including Professor Miroslav Prša from the Technical Faculty of Novi Sad, Serbia and Becky Steffka (couple at left).*

Chair Dr. Vesna Javor initiated the first activities of the EMC Chapter meeting together with the visit of an IEEE EMC Society Distinguished Lecturer. On September 26, 2011, Professor Mark Steffka, from the University of Michigan-Dearborn (USA), gave a lecture on two very important topics of interest to the EMC Society members of the region and to ΠEC 2011 participants. The IEEE EMC Society fully supported this event, and colleagues from the Italy EMC Chapter collaborated on rearranging dates of his visit to Italy to make it possible. Thus, Professor Steffka gave an invited lecture at the University of Turin in September as well.

A great number of ΠEC participants attended the very interesting lecture given by Professor Mark Steffka on two topics. The first was on antennas and transmission lines, explaining how electromagnetic energy transferred to and from an antenna or transmission line is responsible for EMC issues, and giving an overview of computer methods to assist in antenna design and “real-life” examples. The second was titled, “Process and Benefits of Industry/Academic Linkage in EMC Education.” As bridging the gap between the knowledge in academia and the application in industry is critical to any successful EMC work, this topic examined methods needed to be considered when trying to fill in this gap, and highlighted examples of successes.

The visit of Professor Mark Steffka was very successful in many ways. He also supported the newly founded IEEE EMC Society Chapter of Serbia and Montenegro and showed great willingness to help professionally, as much as possible, in all the planned activities.

Since October 6 is IEEE Day throughout the world, the ΠEC Conference, together with the IEEE Serbia and Montenegro Section, held a Board meeting and EMC Chapter organized lecture. These were marked as IEEE events to celebrate IEEE Day (see <http://www.ieeeday.org/local-event/upcoming-events>). The year 2011 is also the 40th anniversary of IEEE S&M Section (<http://www.ieee.uns.ac.rs>). Section Chair, Dr. Nataša Nešković, spoke about the Section development at the ΠEC opening ceremony. The local IEEE Student branch also joined the ΠEC events.

ΠEC 2011 participants enjoyed warm hospitality at the Faculty of Electronic Engineering and in the host town of Niš, and shared a very friendly atmosphere not only during the ΠEC Conference sessions, but also in between. They enjoyed being with their colleagues at social program events as well. Niš is the birth place of the Roman Emperor Constantine the Great, who legalized Christianity in the entire Roman Empire in the year 313 by the Milan Edict. The year 2013 will be the celebration of 17 centuries from this event. ΠEC participants visited the remains of Constantine’s residence Mediana near the city, such as the unique Scull-Tower. After the ΠEC working days, participants visited the Resava cave, and the monasteries of Manasija and Ravanica.

ΠEC participants and IEEE EMC Society members attending ΠEC 2011 used this opportunity to build on existing projects and partnerships, and to start the new ones. In this way, ΠEC achieved its goal which benefitted not only the universities and institutions, but the sci-

entific society as well. This conference might not be among the greatest and the most famous, but it is still growing every year, in fact – every second year. The main reason for growth is the progress in the quality of the conference papers, new events following this conference, hospitality of the hosts, as well as warm and sunny Septembers, great food and entertaining national dances. We are grateful to all participants and guests for their scientific contributions and efforts to come this year; the ΠEC Organizing Committee invites you all to attend the ΠEC Conference in 2013!

## Singapore

Dr. Richard Gao Xianke, Chairman of the IEEE EMC Singapore Chapter, reported on the Singapore Chapter’s recent activity.



*Professor Arnulf Kost from the Technical University of Berlin in Germany delivered a technical talk at the A\*STAR Institute of High Performance Computing in Singapore on July 20.*



*Dr. Richard Gao Xianke, Professor Er-Ping Li and Dr. Zhang Yaojiang (from left) staffed an exhibition booth to promote APEMC 2012 at the 2011 IEEE EMC Symposium in Long Beach, California in August.*



*Professor Er-Ping Li from A\*STAR IHPC of Singapore gave a welcome speech at the 2011 IEEE EMC Workshop in Singapore on August 23–24.*

Professor Arnulf Kost, president of the international COMPUNAG Society, from the Technical University of Berlin, Germany, was invited by the Singapore EMC Chapter to deliver a talk with the title, “Characteristics of Microstrip Antennas, Calculated by a Finite Element-Boundary Integral Procedure” at the Institute of High Performance Computing (IHPC) of A\*STAR, Singapore, on

July 20, 2011. In this talk, a finite element-boundary integral method has been developed to investigate the impedance and radiation characteristics of planar and conformal cavity backed microstrip patch antennas. The case studies showed that the simulated results are in good agreement with the measured results. A total of 11 attendees (seven were IEEE members) attended the seminar. On July

29, 2011, Professor Robert Lee from The Ohio State University gave a presentation entitled, “A Hybrid Finite Element/Rigorous Coupled Wave Analysis for Scattering from 3-D Doubly Periodic Structures” at DSO National Laboratories. There were a total of 21 attendees of which 11 were IEEE members. On August 2–3, 2011, Dr. Wenhua Yu from ZCOMU of USA delivered two technical



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*Professor See Kye Yak from the Nanyang Technological University of Singapore delivered a technical talk at the 2011 IEEE EMC Workshop in Singapore.*



*Dr. Klaus Krohne (right) appreciated the speaker gift of a plaque, certificate and tie with the EMC logo presented by Dr. Enxiao Liu, treasurer of the Singapore EMC Chapter.*



*Dr. Lock Kai Sang (left) appreciated the speaker gift of a plaque, certificate and tie with EMC logo presented by Dr. Richard Gao Xianke, Chairman of Singapore EMC Chapter.*

talks entitled, “A Novel Hardware Acceleration Technique for Parallel FDTD Method” at the Nanyang Technological University (NTU) of Singapore and “High Performance Parallel FDTD Method” at the National University of Singapore (NUS), respectively. There were a total of 31 attendees, of which 17 were IEEE members.

Dr. Richard Gao Xianke, Chairman of the Singapore Chapter, together with Professor Er-Ping Li, attended the 2011 IEEE

EMC Symposium in Long Beach, California, USA during August 15–19, 2011. Dr. Gao also attended the Chapter Chair training session and presented the activities organized by the Singapore Chapter at the annual Chapter Chair meeting organized by the IEEE EMC Society.

During August 23–24, 2011, the Singapore EMC Chapter organized a successful two-day EMC workshop. The objective was to bring industry, government, research institutions and universities

together to share experiences and knowledge via presentations on the latest development and work in EMC/EMI/ESD. The workshop had an overwhelming response and over 30 attendees participated in the two-day event of which the majority was from industrial companies. Professor Er-Ping Li from A\*STAR IHPC initiated the workshop with a welcome speech to all invited speakers and attendees. On the first day, Professor See Kye Yak from NTU delivered a talk entitled, “Frequency Selective EMI Shield”; Dr. Klaus Krohne from CST Singapore, gave the second technical talk with the title of “Passing the Limits of Radiated Emissions Analysis”; Dr. Richard Gao Xianke from the Singapore EMC Chapter delivered a talk entitled, “Characterization of Electromagnetic Immunity for ESD”; Dr. Junhong Deng from TUV-SUD-PSB presented “EMC Troubleshooting for Conducted Emissions Test.” On the second day, Dr. Lock Kai Sang from PQR Technologies (S) Pte Ltd, Chairman of Engineering Accreditation Board of Singapore, delivered a talk entitled, “Power Quality and Low Frequency EMC Issues”; Mr. Michael Chu and Mr. Loi Boon Toon from Land Transport Authority of Singapore, delivered talks entitled, “General Railway Electromagnetic Environment” and “EMC Management Process in Railway,” respectively. Professor Wen-Yan Yin from Zhejiang University of China, IEEE EMC Society Distinguished Lecturer, delivered two talks entitled, “EMP Effects and Protection” and “Time-domain CEM and its Application in EMC and EMI Reduction,” respectively. The participants, including speakers and the audience, provided excellent comments on the workshop and expressed the desire to have more workshops in the future.

On August 26, 2011, Professor Wen-Yan Yin from Zhejiang University delivered a technical talk entitled, “Multiphysics Solution for Nanoelectronics,” at NUS with a total of 14 attendees of which six were IEEE members. On September 2 and 5, 2011, Professor R. Mitra from Pennsylvania State University of the USA presented two talks – “A Novel Technique for Efficient Analysis of Microwave Circuits Etched in Layered Media” and “The Exciting World of Future Communications.” The response was very positive as these two talks were held at NUS. The total attendees were 219, of which 30 were IEEE members.



*Professor Wen-Yan Yin from the Zhejiang University of China, IEEE EMC Society Distinguished Lecturer, delivered two technical talks at the 2011 IEEE EMC Workshop in Singapore.*