



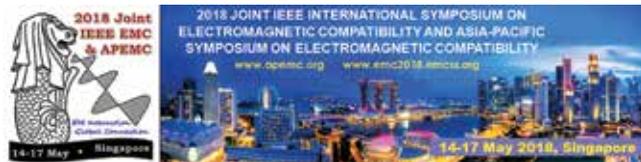
2018 Joint IEEE EMC and APEMC Symposium in Singapore

Reported by En-Xiao Liu and Er-Ping Li

Overview

Every EMC conference is a story - a story made by the participants, of the participants, and for the participants. The 2018 international EMC story was told during 14 to 17 May 2018 at the Suntec International Convention & Exhibition Centre, Singapore.

With the theme of “EM Interaction, Global Connection,” the 2018 Joint IEEE International Symposium on Electromagnetic Compatibility and Asia-Pacific Symposium on Electromagnetic Compatibility (2018 Joint IEEE EMC and APEMC) was organised by the IEEE Electromagnetic Compatibility (EMC) Society and Asia-Pacific EMC (APEMC). The Symposium was also co-organised by Zhejiang University, EMC Laboratory of China, A*STAR Institute of High Performance Computing (IHPC), Nanyang Technological University and National University of Singapore. It was generously supported by the Singapore Exhibition & Convention Bureau, Singapore Tourism Board.



The logo of the 2018 EMC Symposium designed mainly by OC members Sip-ing Gao and Hui Min Lee and the header used in the Call for Papers flyers.



The Symposium event information was displayed prominently from 14-17 May on the huge digital screen at the entrance of the Suntec Convention and Exhibition Center.

One Grand Event, Two Flagship Conferences

The 2018 Joint IEEE EMC & APEMC is best described by one pseudo-equation as follows,

$$60 + 9 == 2018$$

"Sixty" indicates that 2018 marks the 60th IEEE International EMC Symposium; "nine" indicates that it is the 9th Asia-Pacific EMC (APEMC) Symposium. These two Symposiums came together in May 2018

offering a joint IEEE EMC and APEMC Symposium in Singapore. This year marks the 60th edition of the IEEE International EMC Symposium. The IEEE EMC Society was founded 61 year ago and the first Symposium was held in 1959 as a classified Symposium attended by 250 delegates. In the past, the IEEE EMC Symposium is mostly held in USA, but it has also ventured into other countries five times, i.e., Japan (1984), Canada (2001, 2016), Turkey (2003), and Germany (2015). Therefore, the 2018 EMC Symposium in Singapore was the 60th international EMC Symposium and the 6th venture outside the USA.

Compared with the IEEE International EMC Symposium, the APEMC Symposium is younger with the 2018 Symposium as its 9th edition. It was originated in Singapore in 2008, and this year it is celebrating its 10th anniversary.



The APEMC 10th anniversary logo and APEMC chart, designed by En-Xiao Liu.

The grand event of the 2018 EMC Symposium in Singapore attracted 841 participants (including exhibition visitors) of which 650 participants were formally registered conference delegates from 31 countries. Most of the attendees came from overseas countries, with China, Japan, Singapore and the United States sending the highest number of attendees.

One Coherent Team, Three Countries

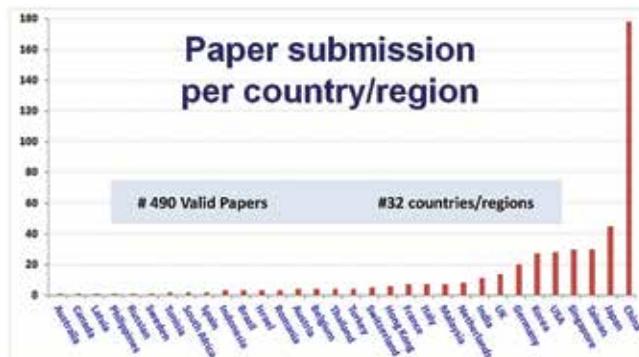
The journey leading to the Symposium was long, but it was fulfilling, all because of a delightful, diligent, and dedicated team. The organizing committee of the Symposium consisted of 27 members, residing in Singapore, the USA, and China. The group photo below is the first and only chance that most of the committee members saw one other face-to-face.



The organizing committee members posed for a group photo at the banquet dinner on 16 May. Front row from left: Caroline Chan, Janet O'Neil, Jun Fan, Er-Ping Li, Bruce Archambeault, Richard Xian-Ke Gao, Xiaoning Ye, Mike Violette, and Siping Gao. Back row from left: En-Xiao Liu, Chao-Fu Wang, Vignesh Rajamani, Xing-Chang Wei, Zaifeng Yang, Albert Lee, Hui Min Lee. Not shown: Bob Davis, John Maas, Martin Leung, Chunfei Ye, Sara Gou, Yan Sun, Rhonda Rodriguez, Eng Kee Chua, Bonnie Brench, Bob Scully, and Allison Law.

One Rich Program, Four-Day Sessions

The Symposium received a record high number of paper submissions. Out of the more than 500 papers, 490 submissions were valid papers from 31 countries. Based on the feedback by 242 reviewers, the Technical Program Committee, chaired by Prof. Jun Fan and Dr. Richard Xian-Ke Gao, eventually accepted 382 papers as oral and poster presentations. The paper acceptance rate was 78 percent. The breakdown of paper submission as per countries and regions is shown in the chart below.



Paper Statistics: Breakdown of paper submissions as per countries and regions.

The 382 paper presentations were arranged in six parallel sessions over three days. It was comprised of regular papers from various Technical Committees (TC), embedded SIPI conference papers, papers from five topical meetings and 14 special sessions. Furthermore, the first day of the Symposium was fully packed with seven workshops and four tutorials.

Opening Ceremony: The opening ceremony of the 2018 Joint IEEE EMC and APEMC Symposium was held on the second day (15 May) of the conference. Prof. Er-Ping Li, Symposium President, welcomed



Prof. Er-Ping Li, Symposium President, delivered an address about the APEMC roadmap and overview of its past 10-years. Dr. Bruce Archambeault, President of IEEE EMC Society and General Co-Chair of the Symposium, later presented an award plaque to Prof. Li in recognition of his exceptional contribution as founding General Chair of the APEMC Symposium.



Dr. Bruce Archambeault (President, IEEE EMC Society) addressed the audience. Right: Dr. En-Xiao Liu once again gave a warm welcome to all the delegates.

all the delegates to the Symposium and also delivered an address about the APEMC roadmap and its history. Dr. Bruce Archambeault, President of the IEEE EMC Society, addressed all delegates on behalf of the EMC Society. Dr. En-Xiao Liu, General Chair of the Symposium, welcomed once again all the delegates by citing Confucius's popular words: "How happy we are with friends from afar!"



Delegates attended the opening ceremony and the first plenary session.

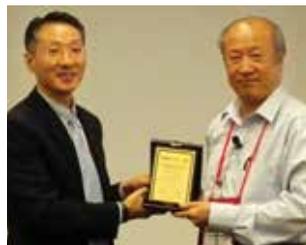


Snapshots from the oral and poster presentation sessions.

Plenary Speeches: The Symposium featured four plenary speeches and the plenary speakers were: Dr. Mark Hayter (Google, USA), Prof. Wolfgang J.R. Hoefer (University of Victoria, Canada), Prof. Weng Cho Chew (Purdue University, USA), and Prof. Yueping Zhang (Nanyang Technological University, Singapore). Two plenary talks were arranged right after the opening ceremony, and the other two talks were arranged the next day.



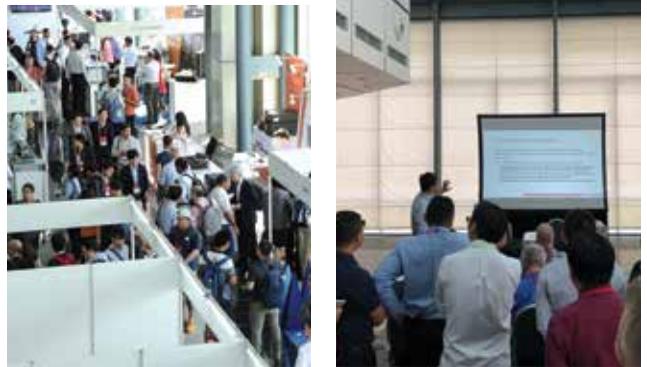
Left: Dr. Mark Hayter received a plaque from Prof. Er-Ping Li after giving an interesting talk about signal integrity with his personalized story. Right: Prof. Wolfgang Hoefer received a plaque from Dr. Bruce Archambeault after giving a talk about time reversal, which carried away the audience!



Left: Prof. Weng Cho Chew received a plaque from Dr. En-Xiao Liu after giving an insightful talk about computational electromagnetics for EMC applications. Right: Prof. Yueping Zhang received a plaque from Dr. Richard Xian-Ke Gao after giving an enlightening talk about a new paradigm for wireless radio communication.

Snapshots of Sessions: The four-day Symposium provided all delegates an excellent forum for technical discussions and interactions. Selected snapshots of the conference oral and poster sessions, especially the questions and answers segments, illustrated some of those memorable moments.

Exhibition and Demos: Concurrently with the Symposium, an exhibition was organized with over 30 booths spread across the concourse area, allowing delegates to mingle and view the displays. More than half of the exhibitors flew in from overseas to participate in the Symposium. In addition, six experiment and demonstrations were arranged concurrently with the exhibition.



Left: The technical exhibition was a busy area! Right: Participants in one of the sessions of Experiments and Demonstrations.

One Big Platform, Many Networking Opportunities

Delegates including students were also treated to two major social functions, in addition to lunches and tea breaks. A Welcome Reception was held on May 14 in the Exhibition Hall at the Suntec Convention & Exhibition Centre. The Banquet Dinner with Award Presentation was held on May 16 at the Raffles City Convention Centre. It was a surprising full house at the banquet dinner with more than 50 family members of the delegates who joined the event.

TPC Report: Prof. Jun Fan delivered his report on behalf of the Symposium technical program committee (TPC), after the delegates enjoyed dinner and a musical performance.



Left: Chinese musical performance with three-piece pipe and string instruments. Right: Prof. Jun Fan, TPC Chair, happily gave his report on behalf of the Symposium technical program committee.

Awards Presentation: IEEE EMC Society has the tradition of presenting its annual awards at the international EMC Symposium. This year's awards were presented in Singapore during the banquet dinner on May 16. Among other personal and achievement awards, Best Student Paper Awards and Best EMC Symposium



Prof. Er-Ping Li, Prof. Wolfgang Hoefer (at the center), and Dr. Richard Xian-Ke Gao (at far right) posed for a group photo with the APEMC Young Scientist Awardees.



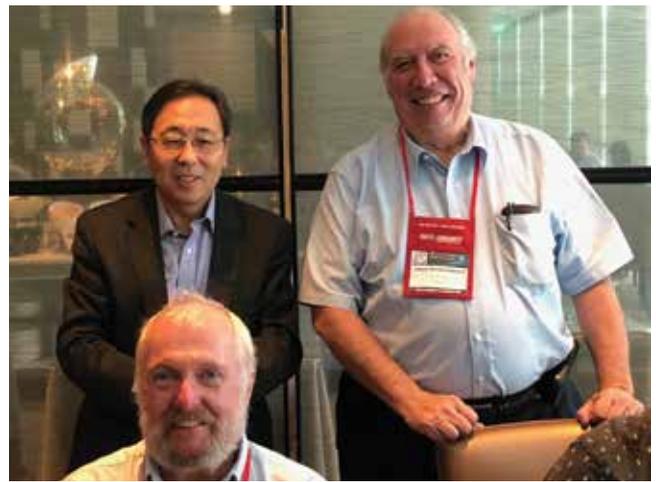
Left: Dr Vignesh Rajamani, Membership VP of the IEEE EMC Society, announced the awards list. Right: Dr. Bruce Archambeault (upper right), President of IEEE EMC Society, who was giving out the awards, invited enthusiastic awardee Mike Violette to come on stage. Mike was the General Chair of the 2017 EMC Symposium in Washington and Publicity Co-Chair of the current Symposium.



On behalf of the Symposium, Dr. En-Xiao Liu, Symposium General Chair, presented tokens of appreciation to the Symposium sponsors: Rohde & Schwarz (Platinum Sponsor & Bag Sponsor), CST (Gold Sponsor), ETS-Lindgren (Lanyard Sponsor). Not shown: e2i (Gold Sponsor) and Ametek (Silver Sponsor).



Delegates enjoyed a relaxing night at the banquet dinner.



Representatives from the APEMC organizing committee and IEEE EMC Society Board of Directors enjoyed the gathering over the luncheon meeting.

Paper Awards were presented to the authors of six papers. In addition, APEMC presented its traditional "APEMC Young Scientist Awards" to seven outstanding young researchers. The readers may refer to the next issue of the IEEE EMC Magazine for the detailed awards list and photos.

Appreciation of Sponsors: Dr. En-Xiao Liu presented tokens of appreciations to the Symposium sponsors to thank them for their generous support to the Symposium.

Luncheon Meeting of APEMC & IEEE EMC Society Board: On May 16, the APEMC committee and IEEE EMC Society Board gathered for a working lunch at the NUSS Suntec Bistro. Matters of the current and future APEMC Symposiums were discussed during the meeting.

One Happy and Memorable Ending, Many More Future Opportunities

At 6:00 pm on the last day of the Symposium, i.e. May 17, 2018, the last few delegates were leaving the conference venue. Inter-

estingly, they were still wearing big sunny smiles! Dr. Flavia Grassi took a photo of the organizing committee members including Richard Xin-Ke Gao, Siping Gao, and Eng Kee Chua, who were bidding goodbye to them; while En-Xiao Liu was taking a picture of Flavia and colleagues, whose leaving nicely wrapped up the Symposium.

The EMC Story is Going On and On: Quoting Dr. Bruce Archambeault, President of the IEEE EMC Society, in the 2nd Quarter issue of the IEEE EMC Magazine: "I am very pleased to report that the first-ever Joint 2018 IEEE EMC Society/ APEMC Symposium held May 14-17 in Singapore was a huge success."

One last time, the organizing committee of the 2018 Joint IEEE EMC & APEMC Symposium in Singapore sincerely thanks all the speakers, authors, paper reviewers, delegates, sponsors, exhibitors, technical committee members, volunteers, visitors, companions, and friends for making the 2018 Joint IEEE EMC and APEMC Symposium such a memorable and fulfilling event! See you at the 2019 EMC Sapporo and APEMC in Japan, and at many more future EMC Symposia!

EMC



We took a photo of them, they took a photo of us! Left: Delegates took pictures at the banquet dinner. Right: At about 6 pm on the last day of the Symposium, the final group of delegates were leaving the Symposium venue, but without wasting the opportunity of taking photos of one another.