



EMC Europe 2008

By Frank Sabbath, Region 8 Conference Coordinator

Today EMC Europe is one of the most important international EMC symposia in IEEE Region 8 and in the world. The conference series was founded in 1994 as a result of a European Research Project between Italy, France, Switzerland and Germany. Symposia in Rome (1994, 1996, 1998), Bruges (2000), Sorrento (2002), Eindhoven (2004), and Barcelona (2006) proved that EMC Europe has been a successful story. In September 2008 the conference series was continued by EMC Europe 2008, which took place at the Hamburg University of Technology in Hamburg, Germany.



Center of Hamburg at night. (Picture: Achim Conring – Hamburg)

Hamburg is the second-largest city in Germany, and, along with its central port, also the second-largest port in Europe (after Rotterdam). Inside the European Union, Hamburg is the most populous city that is not a national capital. The city is home to approximately 1.8 million people, while the Hamburg metropolitan area has more than 4.7 million inhabitants. As Hamburg is a major transportation hub in northern Germany, it is often called Germany's gate to the world. Nowadays Hamburg is also a media and industrial center with more than 120,000 enterprises, including corporations such as Airbus and Blohm + Voss. Additionally, Hamburg offers a rich



View on the campus of the Hamburg University of Technology (TUHH).

cultural scene and many attractions. Some visitors refer to Hamburg as one of the most beautiful cities in the world. As a consequence, the city is a major tourist destination both for domestic and overseas visitors.

The Hamburg University of Technology (TUHH) is one of the youngest universities in Germany. Research work started in 1980 and in 1982/83 lecturing followed. Today some 100 senior lecturers/professors and 1,150 members of staff (450 scientists, including externally funded researchers) work at the TUHH. With an average of 5,000 students, the TUHH offers a uniquely high ratio of staff to students. Between 1982 and today, an attractive architectural ensemble was created on the TUHH campus in the south of Hamburg. The campus, with its modern buildings, fits most naturally into the surrounding parkland. With the combination of beauty and function, the university has become a landmark in city planning.

The park-like campus provides a multifaceted environment, inspiring both social and intellectual exchange. The atmosphere can be described as young, innovative, unconventional, original and creative - ideal for the development of new ideas in

engineering. The fundamental principles of the TUHH are unique in Germany; priority is given to research, interdisciplinary studies and innovation. Also central to the approach is a close working relationship with regional industries and, more recently, the achievement of international scale.

Jan Luiken ter Haseborg, symposium chair, welcomed in his opening address more than 300 participants from more than 40 countries representing all inhabit-



Jan Luiken ter Haseborg welcomed more than 300 participants to EMC Europe 2008.

ed continents. His opening speech was followed by welcome addresses from Axel Gedaschko, State Ministry for Economic and Labor Affairs Free and Hanseatic City of Hamburg; Edwin Kreuzer, President TUHH; Josef A. Nossek, President VDE; Johan Catrysse, Chair ISC EMC Europe; and Elya Joffe, President IEEE EMC Society. Elya Joffe continued with a keynote speech titled "Electromagnetic Compatibility (EMC) from 'Garbage of Electronics' to Global Intersystem Compatibility."

The technical program of the EMC Europe 2008 provided something for everyone, from the novice EMC engineer to the advanced practitioner, from students to academic staff, and from researcher to system developer and pro-



Panoramic view of the port of Hamburg at the river Elbe. (Picture: Alexander Blum)



Elya Joffe started the technical program with a keynote speech titled "Electromagnetic Compatibility (EMC) from 'Garbage of Electronics' to Global Intersystem Compatibility."

gram manager in industry. In oral and poster sessions, more than 140 papers, which were carefully reviewed and selected from over 190 submitted papers, were presented. The high number of submitted papers enabled the technical program committee to organize a set of 40 oral sessions. In order to make it easier for an attendee to follow a particular area of interest, sessions were organized into tracks, which were assigned to the technical areas:

- EMC at PCB and Chip Level and Signal Integrity
- Modeling and Computational Electromagnetics
- Measurement Techniques (Reverberation Chamber, GTEM Cells, Measurement, Instrumentation and Testing)
- Transportation Systems (including Aircraft Systems)
- Transients (LEMP, ESD, EMP and UWB)

A poster session was organized to inspire technical discussions between the presenter and participants. The technical program committee assigned topics of high interest to be mainly presented in the poster sessions. Those topics were: (1) Transients (LEMP, Lightning), (2) Implantable Medical Devices, and (3) Power Line Communication (PLC). Multiple fruitful discussions during the poster



The Opening Ceremony Panel (from right) included Jan Luiken ter Haseborg, Symposium Chair EMC Europe 2008, Edwin Kreuzer, President TUHH, Axel Gedaschko, State Ministry for Economic and Labour Affairs Free and Hanseatic City of Hamburg, Johan Catrysse, Chair ISC EMC Europe, Elya Joffe, President IEEE EMC Society, and Josef A. Nossek, President VDE.

sessions on Wednesday afternoon validated the opinion of the technical committee.

The technical program was completed by an open meeting, four tutorials and six workshops of selected topics and seven experiments. A technical exhibition took place alongside the Symposium, thus forming the link between the models, analyses and theories of scientists and the needs of real world applications and systems. Nineteen exhibitors from Europe and North America were on site to provide hands-on demonstrations and explanations of their products and services.

On Tuesday evening, participants were invited to a welcome cocktail cruise on board the cruise vessel "Hamburg". The cruise started close to Hamburg downtown at the Landungsbrücken. At first the cruise went to large container terminals Altenwerder, Burchardkai and Eurogate, where viewers marveled at the loading and unloading of large container vessels. The Container Terminal Altenwerder (CTA) is a fully automated terminal and one of the latest worldwide. At this station a special gesture organized by Hamburger Hafen und Logistik AG

(HHLA) and Germanischer Lloyd (GL) welcomed the participants of EMC Europe 2008. At the time when the cruise vessel reached a fully automated container terminal, two containers decorated with welcome banners moved towards the cruise vessel. The cruise continued towards Blankenese, an exclusive suburb of Hamburg and the Hamburg plant of Airbus Industries.

The symposium banquet took place in the ancient building of the Chamber of Trade (Handwerkskammer) of Hamburg on Wednesday evening. Participants were impressed by the brick layered architecture, which is typical for the northern part of Germany. At the beginning of the banquet Johan Catrysse, chair of the international steering committee (ISC), announced that his term of office ends with the EMC Europe 2008. During the business meeting, the ISC committee elected Jan Luiken ter Haseborg as the new chair of the ISC. He will be assisted by Heyno Garbe as the new secretary of the ISC. The handover of the leadership of



Presentation of the Best Paper Award to E. Genender, included (from left) J. L. ter Haseborg, symposium chair, F. Sabath, technical program chair, H. Garbe, E. Genender, C. Holloway, and J. Catrysse, chair ISC.



Officers of the German EMC Chapter gather at EMC Europe, including (from left) J. L. ter Haseborg, vice-chair, F. Sabath, chair, H. Garbe, past chair, and R. Keibel, treasurer.

EMC Europe was followed by two keynote speeches. In the first keynote, Hermann Klein, Member of the Executive Board Germanischer Lloyd Hamburg, reflected on the question: "Does size matter." After entertaining with some general consideration he focused on aspects in regard to ships and technical standards for shipbuilding. In the second keynote Stefan Dirmeier, Vice President AIRBUS Deutschland, introduced the participants to "Airbus Engineering - Technical Innovations and Challenges." Finally Frank Sabath, technical program chair, pre-

sented the Best Paper Award to E. Genender, C. L. Holloway, K. A. Remley, J. Ladbury, G. Koepke and H. Garbe for their paper titled "Using Reverberation Chambers to Simulate the Power Delay Profile of a Wireless Environment." Frank advised that E. Genender, the main author, is a student currently working on his master thesis.

The IEEE EMC Society was represented by its President Elya Joffe, John Norgard (Vice President Technical Services) and Board members Francesca Maradei, Bruce Archambeault and Todd Hubing. The Ger-

man EMC Chapter was strongly involved in the organization of EMC Europe. For example, the symposium chair, Jan Luiken ter Haseborg, is the current vice-chair of the chapter and the technical program chair, Frank Sabath, is chair of the German EMC Chapter. In total, seven officers of the German EMC Chapter served on the local organizing committee of EMC Europe 2008.

EMC Europe 2008 was an outstanding symposium with a technical program of highest scientific quality and a wonderful social program. EMC

EMC Europe 2008: Scenes from the Welcome Cocktail Cruise on the River Elbe



The welcome cocktail took place on board the cruise vessel Hamburg.



A scenic view on the Köhlbrandbrücke.



Steffen Schulze (left) and Moawia Al-Hamid from Otto-van-Guericke University Magdeburg used the chance to take pictures.



Elya Joffe (far right) in a discussion with Magnus Höjer and Diethard Hansen (from left).



Happy faces elsewhere on board included (clockwise from left) J.L. ter Haseborg and wife, F. Gronwald, G. Wahmann, F. Canavero, and S. Sarto.



Hamburger Hafen und Logistik AG (HHLA) and Germanischer Lloyd (GL) welcomed participants of the EMC Europe with a special gesture.

EMC Europe 2008: Scenes from the Symposium Banquet in the Ancient Building of the Chamber of Trade (Handwerkskammer) of Hamburg



The welcome cocktail of the symposium banquet was served in the beautiful foyer.



The entertainment was provided by the Altenländer Shanty Chor traditional shanty choir.



Dr. Hermann Klein, Member of the Executive Board Germanischer Lloyd Hamburg, entertained the participants with his speech on "Does Size Matter?"



Dr. Stefan Dirmeier, Vice President and Engineering Senior Site Representative AIRBUS Deutschland, introduced the participants to "Airbus Engineering - Technical Innovations and Challenges."



The symposium banquet in the ancient building of the Chamber of Trade.

