



In Memoriam

Rüdiger Vahldieck 1951–2011

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Rüdiger Vahldieck of Zürich, Switzerland, passed away on 21 March 2011 at age 59 after a long and valiant fight with brain cancer. He leaves behind his wife Zorka and his daughter Masha, who were at his bedside when he passed.

Rüdiger was born in Heiligenhafen, Germany, on 8 July 1951. He received the Dipl.-Ing. and Dr.-Ing. degrees, both in electrical engineering, from the University of Bremen, Germany, in 1980 and 1983, respectively. From 1980 to 1983, he was a research assistant at the Microwave Department of the University of Bremen, where he was engaged in mode-matching techniques and their application to the computer-aided design (CAD) of millimeter-wave integrated circuits. From 1984 to 1986, he was a postdoctoral fellow in the Department of Electrical Engineering, University of Ottawa, Canada. In 1986, he joined the Department of Electrical and Computer Engineering, University of Victoria, Canada, where he became a full professor in 1991. During the fall and spring of 1992–1993, he was a visiting scientist with

the Ferdinand-Braun-Institut für Hochfrequenztechnik, Berlin, Germany. In 1996, he accepted the position of professor of field theory at the Eidgenössische Technische Hochschule (ETH) Zürich (Swiss Federal Institute of Technology), first as leader of the Field Theory Group and subsequently, in 2003, as head of the Department of Field Theory and Microwave Electronics (IFH). In 2005, he became president of the Research Foundation for Mobile Communications and was elected head of the Department of Information Technology and Electrical Engineering (DITET) of ETH Zürich, a position he held at the time when the sudden onset of his grave illness brutally ended his career. Nevertheless, he continued to devote his waning energy to the well being of his family, his institute, his students and his colleagues until he was no longer able to do so. He leaves a rich legacy of scientific discovery, technical innovation, engineering education, and service to the profession.



He was always known as a passionate sailor and outdoor enthusiast. Moreover, he liked to combine his work with leisure activities. While this might be a contradiction for many of us, it never was for Rüdiger. For instance, in 1980 he typed the better part of his master's thesis during a sailing trip in the Baltic Sea. Many of his ideas for his Ph.D. thesis originated at the beach of a small lake close to the University of Bremen, and he organized party-like nightshifts at the then PDP 11 project computer in the institute.

He was open, frank, generous, always ready to help and very hospitable. Some of his student parties remained legendary, which was especially due to the many dishes that he created with know-how, inventiveness, and a touch of improvisation. He was an excellent cook and always looked for a challenge in the culinary category. All of us enjoyed his barbecue and beer parties either on the beach or at home.

Digital Object Identifier 10.1109/MMM.2011.941421
Date of publication: 7 July 2011

Rüdiger engaged in political and social activities and vehemently argued his point of view. He enjoyed convincing his fellow students and colleagues and receiving their support for action items he proposed. Sometimes he pretended to support a point of view which was the direct opposite of his own, just for the purpose of starting a discussion and presenting the winning argument. It is obvious that this talent contributed largely to his later success and his ability to drum up support for his many innovations in research and university administration.

In 1984, Rüdiger accepted a post-doctoral position in the Department of Electrical Engineering at the University of Ottawa, Canada, where he continued his research in mode matching and CAD but also got involved in fabrication techniques for microwave and millimeter-wave circuits. He briefly returned to Bremen in early 1985 to marry Zorka, and together they explored the many challenges offered by the Canadian wilderness.

His time in Victoria was highlighted by a variety of research activities on topics such as numerical techniques, waveguide components, MHMICs, MMICs, microwave photonics, and laser linearization. He set up the first RF and microwave laboratory there, which has evolved into an internationally well-known research base in the field. At the same time, he organized countless sailing, canoeing and outdoor trips involving campfire barbecues with self-caught fish, crabs, mussels and clams.

Rüdiger hardly ever had envisioned himself as a Dad. However, when Masha was born, it turned out to be the most important event during his time in Victoria. He loved her, pampered and adored her.

Rüdiger's and Zorka's annual Christmas party was the highlight of the season and will be remembered fondly by all participants and their children. Many of the festivities took place in homes that Rüdiger had renovated largely himself. He was an excellent craftsman who enjoyed designing, planning, constructing, and making fittings such as kitchen cabinets and curved staircases. His sailboats in Victoria and later Croatia certainly benefitted from this ability. The tree house that he built for his daughter remains unforgettable.

When he accepted the position of professor of field theory at the Eidgenössische Technische Hochschule (ETH) Zürich (Swiss Federal Institute of Technology), he and Zorka made their home in Switzerland, and Rüdiger used his drive and energy to work things out. Typical for him is the fact that, as previously in Victoria, he bought a sailboat before even thinking about a house.

He will always be remembered as working tirelessly towards building bridges, not only between institutes, countries and continents, but foremost between people of different cultural backgrounds. He served the technical community and always endeavored to improve current procedures and relationships.

Prof. Vahldieck was the president and general chair of the International Zürich Symposium on Electromagnetic Compatibility (EMC Zürich) from 2003 to 2009, and was General Chair of the 2006 and 2008 APEMC/EMC Zürich in Singapore and 2007 EMC Zürich in Munich. Concurrently he was

a Scientist-in-Residence at the Institute of High Performance Computing in Singapore where he initiated and oversaw several innovative research projects in microwave electronics and plasmonics. He loved the tropical weather and diversified culture of Singapore and this also triggered his interest in traveling often to this place during the last years of his life. He

tirelessly served the IEEE in key leadership roles, notably as a reviewer of several IEEE journals, associate editor and editor-in-chief of *IEEE Microwave and Wireless Components Letters* (2004–2006), member of the MTT-15 Technical Committee on Field Theory,

chair of IMS TPSC Committee 3, and chair of the Swiss Joint IEEE MTT, AP, and EMC Societies Chapter. He was a Member of IEEE from 1985, became a Fellow in 1999, and received several outstanding publication awards. He rarely missed an IMS event during the past 25 years, regularly contributing innovative papers, workshop presentations, and special sessions each year.

Rüdiger never talked about the end of life but he often mentioned that when the time had come to retire from his many professional responsibilities and to hand over the reins to the next generation, he would weigh anchor and sail the seas. He has now departed on his final voyage, leaving behind his loved ones, friends, students, research associates, and colleagues to remember him fondly and forever.

He leaves a rich legacy of scientific discovery, technical innovation, engineering education, and service to the profession.