

2011 PIONEER AWARD



Wojciech Gwarek

“In recognition of pioneering contributions to the development and practical use of the finite-difference time domain (FDTD) method”

Wojciech K. Gwarek was born in Poland in 1947. He graduated in 1970 from the Faculty of Electronics, Warsaw University of Technology, Warsaw, Poland. In 1973-74 he spent an academic year at M.I.T. (Cambridge, MA) as a Fellow of the Center for Advanced Engineering Study. He was also involved there in the work of the Radio-Astronomy Group of the Research Laboratory of Electronics. His contribution to the area of modeling of non-linear devices brought him an M.Sc degree from M.I.T. (EE'74). Having returned to Poland, he continued his work at the Warsaw University of Technology, whereat he received his Ph.D. (1977) and habilitation (1988). He is currently full professor and the head of the Microwave and Radar Division of the

Institute of Radioelectronics, Warsaw University of Technology. His teaching activities include lectures on electromagnetic theory, microwave technology, and electromagnetic compatibility.

Professor Gwarek's specializes in the field of microwave technology and electromagnetic theory. Since 1984 he has been concentrating on computational electromagnetics and, in particular, on the theory of the finite differences time domain (FDTD) method. In the early nineties he was joined by Dr. M. Celuch and together they published several contributions on FDTD and TLM methods as well as on their formal equivalence. At the same time, a large part of his effort was devoted to practical implementation of those methods in software codes. In 1996, together with his three co-workers (M. Celuch, M.Sypniewski, A. Wieckowski) he founded a company named QWED, in which several software packages for electromagnetic modeling have been implemented. Brand names of QuickWave-3D and QW-V2D have become known worldwide and brought a prestigious European IT Prize in 1998 to their developers. QWED also provides consulting services to industry and Prof. Gwarek is a worldwide recognized expert on industrial design of microwave equipment involving electromagnetic modeling.

Professor Gwarek is author of more than 200 technical papers and a text book on electromagnetic theory used in Poland since 1977. For the last 30, years he has been reviewing papers for many of the leading archive journals and served as a TPC member for many international conferences. In 2008 and 2010 he was a co-chair of the TPC of the MIKON International Conference on Microwaves, Radar, and Wireless Communication. In the years 2003-2005 he served as a Distinguished Microwave Lecturer of the IEEE. Since 2001 he is Fellow Member of the IEEE.