

Jean-Charles Bolomey

Jean-Charles Bolomey is currently retired while Emeritus Professor at Paris-Saclay University (PSU), France. He graduated the Radio Engineer degree from the Ecole Supérieure d'Electricité (Supelec) in 1963, obtained a Ph.D. degree from PSU in 1971 and became a Professor at PSU in 1976. His research has been conducted in the Electromagnetic Department of the Laboratoire des Signaux et Systèmes, a joint unit of PSU, Supelec and the National Center for Scientific Research (CNRS).

Since 1981, his research contributions have been devoted to Near-Field techniques in a broad sense, including antenna measurement, EMC testing as well as Industrial-Scientific-Medical (ISM) applications. These contributions, largely concerning microwave measurement techniques, and were deliberately oriented toward innovative technology transfer and valorization. Jean-Charles Bolomey has more particularly promoted the modulated probe array technology, demonstrating its unrivaled potential for rapid Near-Field scanning in terms of accuracy and cost effectiveness. He has co-authored with Professor F.Gardiol a reference book on principles and applications of the Modulated Scattering Technique (MST). He is holder of numerous patents covering various MST-based probe array arrangements for microwave sensing and imaging systems. In 1986, Professor Bolomey founded the microwave vision company SATIMO (Société d'Applications Technologiques de l'Imagerie Micro-Onde) whose advanced technology and extensive research formed the foundation cornerstone of Microwave Vision Group (MVG) in 1995. He has been also involved in industrial applications of microwave heating and material processing as a Chairman of the Microwave Group of Electricite de France (EDF), and was appointed as a consultant by the Delegation Generale de l'Armement (DGA) in the field of High Power Microwave (HPM) metrology. He also actively contributed to several cooperative European Programs ranging from microwave hyperthermia (COMAC-BME Hyperthermia) to industrial process tomography (European Concerted Action on Process Tomography) and has contributed to several prototype transfer and evaluation procedures in these areas. His recent research was related to RF dosimetry, targeting rapid SAR measurements. As visiting Professor at Universitat Politecnica Catalunya (UPC, Barcelona), his activity continued on load-modulated scattering antennas for novel sensing applications of RFID technology. Diagnostic and imaging applications of Very-Near-Field techniques constitute now his current domain of investigation. He also continuously contributed to several Scientific Advisory Boards of European Institutions and startup companies. Jean-Charles Bolomey has received several Awards, including the 1976 Blondel Medal of the Société des Electriciens et des Electroniciens (SEE), the 1984 General Ferrié Award of the French Academy of Sciences, and the 1983 Best Paper Award of the European Microwave Conference (EuMC) entitled "A microwave diffraction tomography system for biomedical applications". In 1994, he has granted the Schlumberger Stitching Fund Award for his contribution to inverse scattering techniques in microwave imagery. In 2001, he has received the Distinguished Achievement Award of the Antenna Measurement Technique Association (AMTA) for his pioneering activity in the field of modulated probe arrays, and in 2007, was elected as AMTA Edmond S. Gillespie Fellow. He received the 2004 Medal of the French URSI Chapter (CNFRS). He has obtained the 2006 H.A. Wheeler Best Application Prize Paper Award of the IEEE AP-Society for his co-authored paper on "Spherical Near-Field Facility for Characterizing Random Emissions". Professor Bolomey is Fellow of the Institution of Electrical and Electronic Engineers (IEEE). He was Distinguished Lecturer of the IEEE Antenna and Propagation Society (AP-S) from 2010 to 2013, AMTA Invited Speaker at EuCAP 2014 ("Technology-based analysis of probe array systems for rapid near-field imagery and dosimetry") and IEEE AP-S Invited Speaker at AMTA 2019 ("Overview of microwave-based systems for medical applications"). He has received the 2015 Joseph F. Keithley Award from the IEEE Instrumentation and Measurement Society and the 2017 Antenna Award of the European Association for Antennas and Propagation (EurAAP) for his "pioneering contribution to fast electromagnetic near-field techniques and microwave imagery".