

Emilio Macchi, graduated in Physics, Università degli Studi, Milano, in 1969.

He obtained a PhD in 1973 from the Department of Physiology and Biophysics, Dalhousie University, Halifax, Nova Scotia, Canada, under the supervision of Prof. Pentti M. Rautaharju. Subsequently, he became research associate at the Istituto di Cardiologia Sperimentale, Simes-SPA, Milano, in the Electrophysiological Laboratory of Professor Bruno Taccardi (1974–1976); full-time researcher at the Istituto per le Applicazioni del Calcolo “Mauro Picone,” National Research Council, Rome (1976–1987);

associate professor of General Physiology, Istituto di Fisiologia Generale, Università degli Studi, Parma (1987–1994); and

professor of Physiology, Dipartimento di Biologia Evolutiva e Funzionale and Dipartimento di Bioscienze, Università degli Studi, Parma (1994–2016).

He is now Professor Emeritus at the Dipartimento di Scienze Chimiche, della Vita e della Sostenibilità Ambientale, Università di Parma.

Dr. Macchi has been Visiting Professor at the Cardiovascular Research and Training Institute, University of Utah, Salt Lake City, USA, during different periods in 1986–1989.

He also served as Director of the Dipartimento di Biologia Evolutiva e Funzionale, Università degli Studi, Parma (2004–2008).

Dr. Macchi’s scientific activity is documented by 75 full articles/reviews/chapters in books and relates to measurement and modeling of the cardiac electric field in mathematical and animal models and in man. Research work in cardiac electrophysiology continuously progressed in collaboration with Prof. Bruno Taccardi and Prof. Ezio Musso. Relevant results of these studies were relationship between extracellular potential distribution and intra-cardiac electric sources, identification of the oblique dipole layer model of the activation wave front as a realistic equivalent generator presently utilized in experimental and clinical electrophysiology studies, definition of an olive-shaped intra-cavitary probe for arrhythmia detection in experimental, and clinical electrophysiology studies.