



Prof. Giovanni Ghione – Short C.V.

Giovanni Ghione was born in [REDACTED]. He graduated cum laude in Electronic Engineering with Politecnico di Torino in 1981. He was Assistant Professor in Electromagnetic fields since 1983, Associate Professor in Circuit Theory with Politecnico di Milano, Milano, since 1987, and finally Full Professor in Electronics since 1990, first with University of Catania, then again, since 1991, with Politecnico di Torino.

His research activity (<http://scholar.google.com/scholar?q=author:g-ghione>) has mainly concerned the high-frequency electronics and optoelectronics, with particular interest in the following areas:

1. physics-based modelling of semiconductor devices on compound semiconductors, in particular numerical noise modelling in small- and large-signal regime;
2. thermal models of devices and integrated circuits
3. passive element models, in particular of coplanar components, both circuit-oriented and electromagnetic.

Since 2000, this activity was extended to innovative widegap semiconductors such as GaN and related alloys and SiC, and to power electron devices for power switching applications (both SiC and Si).

Prof. Ghione was also actively engaged since 1985 in research on optoelectronic devices, with application to:

1. fast photodetector modelling
2. electrooptic and electroabsorption modulator modelling
3. modelling of far infrared detectors on small-bandgap semiconductors
4. modelling of organic solar cells.

More recently (2016-) prof. Ghione was engaged in projects on the design of integrated Ge detectors for silicon photonics and (2018-) in the simulation and design of plasmonic optical components.

Prof. Ghione has authored or co-authored more than 300 research papers on the above subjects and four books. He has been engaged in several European (ESPRIT 255, COSMIC, MANPOWER, ELEN, NOE TARGET, NOE NEWCOM, KorriGaN) and international (ARL) research projects, Italian research projects (among those he was the national coordinator of a PRIN 2003, PRIN 2005 and PRIN 2007 project on



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GaN devices) and industrial projects (with Agilent, Pirelli Labs, IRCI, Silvaco, AIM, CISCO, Ferrero).

Since 1991 he is member of the Editorial Board of the IEEE MTT Transactions. He has been member of the QPC subcommittee of IEDM (the IEEE International Electron Devices Meeting) in 1997-1998 and in 2006-2007 and Chair in 2008; he was in 2009-2010 the EU Arrangement Chair of IEDM. He also chaired from 2010 to 2015 the ED Society Committee on Compound Semiconductor Devices and Circuits. Since September 2010 he is a T-ED Associate Editor for Compound Semiconductors. He was the T-ED Editor in Chief (2015-2022). He is an IEEE Fellow (2007) and now Life Fello (2022) and member of EUMA (European Microwave Association). He has repeatedly acted as a scientific referee for several research agencies in European countries (Sweden, Ireland, France). He was chairman of GAAS2002 (European Microwave Week 2002) and was (2009-2014) chair of the "Linear and Nonlinear modelling" subcommittee of the European Microwave Week.

From 1998 to 2007 prof. Ghione was the President of the Library System of Politecnico; he was in 2003-2004 a member of the IEEE Electronic Library Advisory Council. During 1998-2007 he was Deputy director of the Department of Electronics of Politecnico; he was 2007-2015 the Head of the Department of Electronics (since 2012 Electronics and Telecommunications). From 2015 to 2018 he was a member of the Academic Senate of Politecnico di Torino. He was (2018-2020) the President of the Italian Society of Electronics (SIE).