



Giovanni Crupi

CURRICULUM VITAE

11/04/2024

PERSONAL DATA

Name Surname	Giovanni Crupi
Birth's city	Lamezia Terme (CZ), Italy
Birth's day	15/09/1978
Fiscal code	CRPGNN78P15M208M
Position held	Associate Professor
Affiliation	BIOMORF Department, University of Messina, Messina, Italy
Phone	+39-338-3179173
E-mail	crupig@unime.it
Skype contact	giocrupi
LinkedIn profile	www.linkedin.com/in/GiovanniCrupi
University profile	www.unime.it/it/persona/giovanni-crupi-0

EDUCATION

- 15/12/2006 Ph.D. degree in “Advanced Technologies for Optoelectronics, Photonics and Electromagnetic Modeling”, University of Messina, Italy
Thesis's title: “Characterization and modelling of advanced GaAs, GaN and Si microwave FETs”
Advisors: Prof. A. Caddemi (University of Messina, Italy)
Prof. D. M. M.-P. Schreurs (Katholieke Universiteit Leuven, Belgium)
- 15/04/2003 M.S. degree in “Electronic Engineering” cum Laude (with Honors), University of Messina, Italy
Thesis's title: “Microwave pHEMT characterization and small signal modeling by direct extraction procedures”
Advisors: Prof. A. Caddemi, Prof. N. Donato (University of Messina, Italy)
- 08/1997 High school degree “Diploma di maturità classica” with full grade 60/60 from the “Liceo Classico-Ginnasio Pitagora” of Crotona, Italy

NATIONAL SCIENTIFIC QUALIFICATION (ASN)

- 28/08/2018 Italian national scientific qualification to function as Full Professor (ASN 2016, sector: 09/E3 - “Electronics”)
- 04/02/2014 Italian national scientific qualification to function as Associate Professor (ASN 2012, sector: 09/E3 - “Electronics”)

PROFESSIONAL EXPERIENCE

- 30/12/2017-present Associate Professor, BIOMORF Department, University of Messina
- 01/01/2015-29/12/2017 Tenure Track Assistant Professor, BIOMORF Department, University of Messina
- 01/06/2013-31/12/2014 Untenured Assistant Professor, DICIEAMA Department, University of Messina
- 02/05/2012-01/05/2013 Research Contract, Dipartimento di Fisica della Materia e Ingegneria Elettronica, University of Messina
Scientific Supervisor: Prof. Alina Caddemi
- 01/09/2011-01/03/2012 Research Contract, Engineering Department, University of Ferrara
Scientific Supervisor: Prof. Giorgio Vannini
- 05/09/2007-04/09/2010 Research Contract under the context of “IMT-ARSEL” FIRB project, Dipartimento di Fisica della Materia e Ingegneria Elettronica, University of Messina
Scientific Supervisor: Prof. Alina Caddemi
- 01/08/2006-15/07/2007 Employment Contract, Katholieke Universiteit Leuven, Belgium
In the framework of the project “Nano-RF” (2002-2006), funded by the European Commission within the Sixth Framework Programme
Research subject: Small- and large-signal modeling of Fin transistors/varactors
Scientific Supervisor: Prof. Dominique Schreurs
- 23/06/2009-02/07/2009 Visiting Scientist, Warsaw University of Technology, Warsaw, Poland
Research subject: Noise modeling of advanced microwave transistors
Scientific Supervisor: Dr. Wiatr Wojciech
- 15/03/2010-14/05/2010 Visiting Scientist, Katholieke Universiteit Leuven and Interuniversity Microelectronics Center (IMEC), Leuven, Belgium
01/11/2008-30/11/2008
01/01/2008-29/02/2008 Research subject: Small- and large-signal modeling of advanced microwave transistors
01/02/2006-31/07/2006 Scientific Supervisor: Prof. Dominique Schreurs
- 01/09/2005-31/12/2005 Visiting Scientist, Katholieke Universiteit Leuven and Interuniversity Microelectronics Center (IMEC), Leuven, Belgium
01/05/2005-30/06/2005 In the framework of the European FP6 Network of Excellence “Top Amplifier Research Groups in a European Team (TARGET)” (2004-2007)
Research subject: Small- and large-signal modeling of GaN HEMTs
Scientific Supervisor: Prof. Dominique Schreurs

TEACHING ACTIVITIES

- 2019/2020-2023/2024 “Electrical and Electronic Devices - Module B”, Ph.D. course in “Bioengineering Applied to Medical Sciences”, University of Messina
- 2015/2016-2023/2024 “Electronics”, School of Specialization in “Nuclear Medicine”, University of Messina
- 2022/2023-2023/2024 “Fundamentals of Electronics”, Bachelor Degree in “Biomedical Engineering”, University of Messina
- 2020/2021-2023/2024 “Principles and Applications of Optoelectronics”, Master Degree in “Electronic Engineering for Industry”, University of Messina
- 2019/2020-2023/2024 “Computer Science”, Bachelor Degree in “Psychiatric Rehabilitation Technique”, University of Messina
- 2022/2023-2023/2024 “Computer Science”, Bachelor Degree in “Medical Radiology, Imaging and Radiotherapy Techniques”, University of Messina
- 2022/2023 “Computer Science”, Master Degree in “Science of Health Professions and Diagnostic Techniques”, University of Messina

2017/2018-2021/2022	“Electronic and Computer Bioengineering”, Bachelor Degree in “Orthoptic and Ophthalmological Assistance”, University of Messina
2013/2014-2021/2022	“Bioengineering”, Bachelor Degree in “Neurophysiopathology Techniques”, University of Messina
2018/2019-2021/2022	“Electronic and Computer Bioengineering”, Master Degree in “Health Professions of Rehabilitation Sciences”, University of Messina
2021/2022	“Wireless Technologies”, Master Degree in “Engineering and Computer Science”, University of Messina
2015/2016-2020/2021	“Laboratory of Wireless Technologies”, Master Degree in “Engineering and Computer Science”, University of Messina
2010/2011, 2014/2015	“Microwave Electronics”, Master Degree in “Electronic Engineering”, University of Messina
2012/2013	“Design and Lab”, Master in “Micro and Nanotechnologies for Extra High Frequency - MINTEHF”, University of Messina
2009/2010	“Optoelectronics”, Master Degree in “Electronic Engineering”, University of Messina
2007/2008	“Fundamentals of Electronics”, Master in “Meccatronica per le Nuove Attività Produttive - MECAP”, University of Messina

ACADEMIC ACTIVITIES

02/2024-present	Coordinator of the AQ-RDTM Committee (Quality Assurance for Research and Third Mission) of the Department BIOMORF, University of Messina
02/2023-present	Member of the Joint Committee Teachers-Students (Commissione Paritetica Docenti-Studenti) of the Department BIOMORF for the 2022-2024 biennium, University of Messina
03/2022-present	Member of the AQ-RDTM Committee (Quality Assurance for Research and Third Mission) of the Department BIOMORF, University of Messina
01/2022-present	Member of the Executive Committee (Giunta) of the Department BIOMORF for the 2021-2024 triennium, University of Messina
12/2018-12/2021	Member of the Executive Committee (Giunta) of the Department BIOMORF for the 2018-2021 triennium, University of Messina
05/2021-present	Member of the Quality Assurance Group for the Bachelor Degree in “Biomedical Engineering,” University of Messina
11/2021-present	International Mobility Coordinator for the Bachelor Degree in “Biomedical Engineering,” University of Messina
03/2018-11/2021	International Mobility Coordinator for the International Master Degree in “Engineering and Computer Science,” University of Messina
11/2019-present	Member of the Steering Committee of the Ph.D. course in “Bioengineering Applied to Medical Sciences” for XXXV, XXXVI, XXXVII, XXXVIII, and XXXIX cycles, University of Messina
11/2017-10/2021	Member of the Steering Committee of the international Ph.D. course in “Cyber Physical Systems” for XXXIII and XXXIV cycles, University of Messina
05/2014-11/2019	Aggregate Member of the Steering Committee of the Ph.D. course in “Civil, Environmental, and Security Engineering” for XXX, XXXI, and XXXII cycles, Mediterranea University of Reggio Calabria, University of Messina, and Kore University of Enna

- 2023/2024 External evaluator for the PhD thesis of Kikuchi Ken, XXXVI cycle candidate of Doctoral Program in “Engineering Science” at the University of Ferrara, Italy
- 2023/2024 External evaluator for the PhD thesis of Simone Spataro, XXXVI cycle candidate of Doctoral Program in “Systems, Energy, Computer and Telecommunication Engineering” at the University of Catania, Italy
- 2023 External evaluator for the PhD thesis of A. Benish Chris, candidate of Doctoral Program at the SRM Institute of Science and Technology (SRMIST), Chennai, India
- 2022 External evaluator for the PhD thesis of Pragyey Kumar Kaushik, candidate of Doctoral Program at the Centre for Applied Research in Electronics (CARE), Indian Institute of Technology Delhi (IITD), India
- 2019/2020 External evaluator and Member of the Examination Committee for the PhD thesis of Xiue Bao, candidate of Doctoral Program in “Engineering” at the Katholieke Universiteit Leuven, Belgium
- 2019/2020 External evaluator and President of the Examination Committee for the PhD thesis of Giovanni Gugliandolo, XXXII cycle candidate of Doctoral Program in “Metrology” at the Politecnico of Turin, Italy
- 2017/2018 External evaluator for the PhD thesis of Francesco Trevisan, XXX cycle candidate of Doctoral Program in “Engineering Science” at the University of Ferrara, Italy
- 2017/2018 External evaluator for the PhD thesis of Ahsin Murtaza Bughio, XXX cycle candidate of Doctoral Program in “Electronic Engineering” at the Politecnico of Turin, Italy

PROJECT MANAGEMENT

- 10/2022-presente Task Leader for the Task 3.4 “Innovative Wearable Sensors Design, Development and Characterization”, member for the Task 3.2 “Advanced BioChip Design, Development and Characterization”, and member for the Task 6.2 “Sensors and Systems for Smart Monitoring and Fruition of Cultural Heritage Sites” of the MUR-PNRR project SAMOTHRACE. – “SiciliAn MicronanOTech Research And innovation Center” (ECS00000022). (budget for the University of Messina: 21.233.853,77 € –36 months).
- 12/2023 Recipient of the “Finanziamento Attività di Base della Ricerca di Ateneo” (FFABR) Unime 2023
- 12/2021 Recipient of the “Finanziamento Attività di Base della Ricerca di Ateneo” (FFABR) Unime 2021
- 12/2017 Recipient of the 2017 FFABR national research grant by the Italian Ministry of Education, University and Research (MIUR)
- 06/2008 Coordinator of the project “Progetto Giovani Ricercatori 2005” (“Project for Young Researchers 2005”) funded by the University of Messina. The project aim is the characterization and modeling of advanced HEMT for microwave applications
- 05/2005-present Involved with several European and Italian projects:
 European FP6 Network of Excellence “Top Amplifier Research Groups in a European Team (TARGET)” (2004-2007) under contract IST-1-507893-NOE; project “Nano-RF” (2002-2006) funded by the European Commission within the Sixth Framework Programme under contract IST-027150; PON “PANREX” (budget for the University of Messina: 1.208.400 €); FIRB “IMT-ARSEL” project prot. RBIP06R9X5 with financial support by Italian MIUR (budget for the University of Messina: 309.000 €); “CMOGAN” project through the contribution of the Italian Ministero degli Affari Esteri, Direzione Generale per la Promozione e la Cooperazione Culturale (budget for the University of Messina: 50.000 €); “TEMPUS” project for the “Development of Master study programmes in Telecommunications and Control” at the University of Nis, Serbia (budget for the University of Messina: 30.000 €); PON “TETI” (budget 9.086.970,34 €)

MEMBERSHIPS AND ACTIVITIES INSIDE INTER-UNIVERSITY CENTERS AND CONSORTIA

- 09/2023-present Representative of the University of Messina inside the Microwave Engineering Center for Space Applications (MECSA), an inter-university center among several Italian Universities that is specialised in microwave and millimetre-wave electronics, for the triennium 2023/25
- 07/2023-present Member of the reserach unit of the University of Messina inside the National Inter-University Consortium for Telecommunications (CNIT), a non-profit consortium bringing together 42 public Italian universities to perform research, innovation and education/training activities in the field of the Information and Communication Technology

SCIENTIFIC SOCIETY MEMBERSHIPS AND ACTIVITIES

- 05/2012-present Chair of the IEEE MTT-S Graduate Fellowship Program
The award of fellowships to outstanding graduate students working in the microwave and RF technologies is one of the longest continuing education-related activities of the IEEE MTT-S. The objective of the Graduate Fellowship Program is to recognize and provide financial assistance to graduate students who show promise and interest in pursuing a graduate degree in microwave engineering. Up to 12 Fellowships (6000\$ plus 1000 \$ to attend IMS) may be granted each year. The recipients are formally recognized at a Student Awards Luncheon held at every IMS conference. Full details of the Fellowship Awardees are available in an article published yearly in the IEEE Microwave Magazine (IF: 3.6)
- 05/2012-present IEEE MTT-S Education Committee Member
The Education Committee of the IEEE MTT-S is responsible for the promotion and coordination of activities furthering the cause of education as it relates to the Society
- 10/2012-present IEEE Microwave Theory and Techniques Society (MTT-S) Member
- 07/2013-present IEEE Senior Member
- 10/2012-07/2013 IEEE Member
- 01/2004-12/2004 IEEE Student Member

JOURNAL EDITORIAL BOARD MEMBERSHIPS

- 07/2023-present Associate Editor of *IEEE Transactions on Electron Devices* (IF: 3.1)
- 10/2022-present Associate Editor of *IEEE Microwave and Wireless Technology Letters* formerly *IEEE Microwave and Wireless Components Letters* (IF: 3.0)
- 09/2012-present Editor-in-Chief (07/2022-present), Senior Editor (01/2022-06/2022), Editor (04/2019-12/2021), and Associate Editor (09/2012-04/2019) of *Wiley International Journal of Numerical Modelling: Electronic Networks, Devices and Fields* (IF: 1.6)
- 09/2021-present Associate Editor of *IEEE Access* (IF: 3.9)
- 04/2021-present Editor-in-Chief of Microwave and Wireless Communications Section (12/2022-present) and Section Associate Editor of Microwave and Wireless Communications Section (04/2021-12/2022) of *MDPI Electronics* (IF: 2.9)
- 10/2015-present Academic Editor (01/2023-present), Associate Editor (10/2017-12/2022), and Member of the Editorial Board (10/2015-10/2017) of *Wiley International Journal of RF and Microwave Computer-Aided Engineering* (IF: 1.7)
- 01/2022-present Advisory Editor of *Wiley Engineering Reports* (IF: 2.0)

GUEST EDITOR

- 2023 Guest Editors: X. Bao, M. B. Lodi, G. Crupi, Special Issue: "Recent advancements in miniaturized microwave sensors and systems," *Electronics*, to appear in 2023
- 2023 Guest Editors: G. Campobello, N. Donato, G. Crupi, Special Issue: "Advanced resonant sensors and signal processing techniques for IoT-enabled applications," *Sensors*, to appear in 2023
- 09/2021-10/2021 Guest Editors: V. Vadalà, G. Crupi, Special Issue: "Modeling of umWave and mmWave electronic devices for wireless systems: Connecting technologies to applications," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, September/October 2021
- 05/2016 Guest Editors: G. Crupi, P. Colantonio, mini Special issue: "Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMIC) 2015," *IEEE Transactions on Microwave Theory and Techniques*, May 2016
- 11/2014 Guest Editors: G. Crupi, A. Raffo, mini Special issue: "Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMIC) 2014," *IEEE Transactions on Microwave Theory and Techniques*, November 2014
- 09/2014-12/2014 Guest Editors: G. Crupi, D. M. M.-P. Schreurs, A. Caddemi, Special Issue: "Modeling of high-frequency silicon transistors," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, September/December 2014

AWARDS

- 10/2022 "Best Paper Presented by a Young Researcher" for the contribution "A combined approach using Lorentzian fitting and ANNs for microwave resonator modeling," Z. Marinkovic, G. Gugliandolo, G. Campobello, G. Crupi, N. Donato, *IEEE International Conference on Metrology for eXtended Reality, Artificial Intelligence and Neural Engineering (IEEE MetroXRAINE)*, Rome, Italy, 26-28 October 2022, pp. 608-612.
- 10/2022 "Best Poster Award" for the contribution "Salt content detection using a microwave sensor," X. Bao, Z. Wang, J. Bao, G. Gugliandolo, H. Yuan, Z. Zhao, J. Li, N. Donato, G. Crupi, B. Nauwelaers, D. M. M.-P. Schreurs, *IEEE International Workshop on Metrology for the Sea (MetroSea)*, Milazzo, Italy, 3-5 October 2022, pp. 479-483.
- 09/2020 "Best Paper Presented by a Young Researcher" for the contribution "Development and metrological evaluation of a microstrip resonator for gas sensing applications," G. Gugliandolo, D. Aloisio, G. Campobello, G. Crupi, N. Donato, *IMEKO TC-4 International Symposium*, Palermo, Italy, 14-16 September 2020, pp.1-4.
- 06/2010 "Outstanding Paper Award" for the contribution "Source-pull characterization of FinFET noise," W. Wiatr, G. Crupi, A. Caddemi, A. Mercha, D. M. M.-P. Schreurs, *IEEE International Conference Mixed Design of Integrated Circuits and Systems (MIXDES)*, Wrocław, Poland, 24-26 June 2010, pp. 425-430.
- 07/2005 "Mario Sannino" award at the Meeting of Italian Electronics Group for the contribution "Caratterizzazione completa di GaAs HEMT: prestazioni DC ed LF, parametri di scattering e parametri di rumore e loro dipendenza dalla temperatura," A. Caddemi, G. Crupi, N. Donato, F. Catalfamo, *Riunione annuale del Gruppo Elettronica (GE)*, Giardini Naxos (ME), Italy, 30 June - 2 July 2005.
- 05/2004 "Student Travel Grant" awarded by IES Student Activities Committee to participate to the conference IEEE-ISIE 2004 for the contribution "Bias and temperature dependent modeling of on wafer HEMT's by a direct and fast procedure," G. Crupi, N. Donato, *IEEE International Symposium on Industrial Electronics (ISIE)*, Ajaccio, France, 4-7 May 2004, pp. 1543-1548.

CHAIR AND MEMBER OF TECHNICAL PROGRAM COMMITTEES FOR CONFERENCES

- 10/2015 Chair of the TPC of the *IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC)*, Taormina, Italy, 1-2 October 2015
- 04/2014 Chair of the TPC of the *IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC)*, Leuven, Belgium, 2-4 April 2014
- 09/2012-present Member of the TPC of the *IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC)*
- 02/2015-present Member of the TPC of the *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS)*
- 06/2019-present Member of the TPC of the *IEEE International Conference on Integrated Circuits, Technologies and Applications (ICTA)*
- 02/2022-present Member of the TPC of the *IEEE Microwave Mediterranean Symposium (MMS)*
- 08/2023-present Member of the TPC of the *IEEE International Conference on Circuits and Systems (ICCS)*

OTHER CONFERENCE ORGANIZATION ROLES

- 10/2022 Local Committee Member, *IEEE International Workshop on Metrology for the Sea (MetroSea)*, Milazzo, Italy, 3-5 October 2022
- 06/2022 Special Sessions Chair, *IEEE International Symposium on Medical Measurements and Applications (MeMeA)*, Giardini Naxos-Taormina, Italy, 22-24 June 2022
- 04/2014 Component of the Jury for the “Best Student Paper Award” supported by the GAAS Association, *IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC)*, Leuven, Belgium, 2-4 April 2014
- 04/2014 Poster Session Chair, *IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC)*, Leuven, Belgium, 2-4 April 2014

SESSION ORGANIZATION AND CHAIRING

- 10/2022 Chair of the Tutorial Session “Seafloor interdisciplinary observatories: A global vision for monitoring underwater processes, and submarine active volcanoes by technological enhancement and new scientific results”, *IEEE International Workshop on Metrology for the Sea (MetroSea)*, Milazzo, Italy, 3-5 October 2022
- 06/2022 Chair of the Special Session “Advanced Micro Devices and Systems for Next Generation of Miniaturized Neuro-Transducers”, *IEEE International Symposium on Medical Measurements and Applications (MeMeA)*, Giardini Naxos-Taormina, Italy, 22-24 June 2022
- 10/2021 Organizer and Chair of the Special Session “Bioelectronic Applications of RF and Microwaves,” *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS)*, Nis, Serbia, 20-22 October 2021
- 10/2019 Organizer and Chair of the Special Session “Bioengineering Applications of Microwave Techniques,” *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS)*, Nis, Serbia, 23-25 October 2019
- 10/2019 Organizer and Chair of the Special Session “Electromagnetics in Biomedical Applications and Healthcare,” *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS)*, Nis, Serbia, 23-25 October 2019

- 05/2019 Organizer of the Workshop “Advances in Smart Modeling Techniques for Microwave Engineering,” *European Microwave Conference in Central Europe (EuMCE)*, Prague, Czech Republic, 13-15 May 2019
- 10/2011 Organizer and Chair of the Workshop “From De-embedding to Waveform Engineering,” *European Microwave Week (EuMW)*, Manchester, UK, 9-14 October 2011
- 10/2008 Session Chair of the Workshop “Advances in Characterization and Modeling of Emerging Low-Power and High-Power Devices,” *European Microwave Week (EuMW)*, Amsterdam, Netherlands, 27-31 October 2008
- 09/2007 Session Chair, *IEEE International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Service (TELSIKS)*, Nis, Serbia, 26-28 September 2007

INVITED LECTURES AND SEMINARS

- 09/2023 Invited Webinar title: “Connecting technologies to applications for humanity's benefit: GaN HEMT modeling based on microwave and mm-Wave measurements,” Workshops on "Evolution of Transistor and Emerging Research Devices" supported by IEEE EDS as part of the “Celebration of 75 Years of Invention of the Transistor,” Delhi, India, 21 September 2023
- 08/2020 Invited Webinar title: “Empowering measurement-based FET models: Going towards higher frequencies,” 2020 International Workshop on “(Sub)mmW Components, Measurement and Applications,” China, 10-11 August 2020
- 02/2007 Invited Lecture title: “Implementation of non-linear model based on lookup table approach”, 3rd TARGET Winter School on “CAD Implementation of Non-Linear Device Model and Advanced Measurements,” Santander, Spain, 19-23 February 2007 (ISBN 978-84-8102-452-4)

REVIEWER ACTIVITIES

Reviewer for the following journals:

- IEEE - Transactions Microwave Theory and Techniques
- IEEE - Microwave and Wireless Components Letters
- IEEE - Transactions on Instrumentation and Measurement
- IEEE - Transactions on Electron Devices
- IEEE - Electron Device Letters
- IEEE - Transactions on Circuits and Systems II
- IEEE - Transactions on Computer-Aided Design of Integrated Circuits and Systems
- IEEE - Transactions on Nanotechnology
- IEEE - Transactions on Device and Materials Reliability
- IEEE - Transactions on Semiconductor Manufacturing
- IEEE - Sensors Journal
- IEEE - Microwave Magazine
- IEEE - Journal of Electromagnetics, RF, and Microwaves in Medicine and Biology
- IEEE - Access
- IEEE - Journal of the Electron Devices Society
- IEEE - Journal of Microwaves
- IEEE - Computational Intelligence Magazine
- Wiley - International Journal of Numerical Modelling: Electronic Networks, Devices and Fields
- Wiley - International Journal of RF and Microwave Computer-Aided Engineering
- Wiley - Microwave and Optical Technology Letters
- Wiley - International Journal of Communication Systems
- Wiley - Engineering Reports
- Elsevier - Solid-State Electronics
- Elsevier - Microelectronic Engineering
- Elsevier - Microelectronics Journal
- Elsevier - Measurement
- Elsevier - Superlattices and Microstructures
- Elsevier - Micro and Nanostructures
- Elsevier - Integration, the VLSI Journal
- Elsevier - Materials Science in Semiconductor Processing
- Elsevier - Engineering Science and Technology, an International Journal
- IOP Publishing Ltd. - Semiconductor Science and Technology
- IOP Publishing Ltd. - Journal of Physics D: Applied Physics
- IOP Publishing Ltd. - Physica Scripta
- IOP Publishing Ltd. - Journal of Micromechanics and Microengineering
- IOP Publishing Ltd. - ECS Journal of Solid State Science and Technology
- IOP Publishing Ltd. - Flexible and Printed Electronics
- IOP Publishing Ltd. - Engineering Research Express
- IET - Electronics Letters
- IET - Circuits, Devices & Systems
- IET - Microwaves, Antennas & Propagation
- IET - Power Electronics
- Cambridge University Press - International Journal of Microwave and Wireless Technologies
- Taylor & Francis - Journal of Electromagnetic Waves and Applications
- Taylor & Francis - IETE Technical Review
- Taylor & Francis - International Journal of Electronics Letters
- Taylor & Francis - Automatika
- Springer Nature - Scientific Reports
- Springer - Journal of Infrared, Millimeter, and Terahertz Waves
- Springer - Journal of Materials Science: Materials in Electronics
- Springer - Journal of Computational Electronics
- Springer - Analog Integrated Circuits and Signal Processing
- Springer - Silicon
- Electrochemical Society, Inc. - ECS Journal of Solid State Science and Technology
- EMW Publishing - Progress in Electromagnetics Research
- American Scientific Publishers - Nanoscience and Nanotechnology Letters
- MDPI - Electronics
- MDPI - Applied Sciences
- MDPI - Micromachines
- MDPI - Energies
- MDPI - Journal of Low Power Electronics and Applications

- Walter de Gruyter GmbH - Frequenz
- Walter de Gruyter GmbH - Bulletin of the Polish Academy of Sciences: Technical Sciences
- Serbia and Montenegro IEEE MTT-S Chapter - Microwave Review
- Hindawi - International Journal of Microwave Science and Technology
- Hindawi - Active and Passive Electronic Components
- Hindawi - Journal of Sensors

Reviewer for the following conferences:

- IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC)
- IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS)
- IEEE International Symposium on Medical Measurement and Applications (MeMeA)
- IEEE International Conference on Integrated Circuits, Technologies and Applications (ICTA)
- IEEE Microwave Mediterranean Symposium (MMS)
- International Conference on Micro/Nanoelectronics Devices, Circuits and Systems (MNDCS)

Reviewer of books for the following publishers:

- Academic Press (an imprint of Elsevier)
- John Wiley & Sons

Other reviewer activities:

- External expert reviewer for the Romanian National Research Council (CNCS), through Executive Agency for Higher Education, Research, Development and Innovation Funding, (UEFISCDI)
- External expert reviewer for the Science Fund of the Republic of Serbia, Program IDEAS and Program PROMIS 2023
- Reviewer for the FAR 2021 and the FAR 2023 – Projects Call for Applications, through which UniMoRe and Modena Foundation intend to finance innovative and interdisciplinary projects aimed at enhancing the scientific groundwork of the University, also in view of a more effective participation in EU Framework Programmes
- Reviewer for the NIST (National Institute of Standards and Technology, Boulder, CO, USA) internal review process: BERB (Boulder Editorial Review Board) review
- Reviewer for the IEEE MTT-S Undergraduate/Pre-Graduate Scholarship Program

Reviewer recognitions:

- Recognized member of the “Golden List” of Reviewers for:
 - IEEE Transactions on Electron Devices in 2011, 2014, 2015, 2016, 2017, 2018, 2020, 2021, and 2022
 - IEEE Electron Device Letters in 2015, 2017, and 2022
- “Outstanding Reviewer Award” for Semiconductor Science and Technology in 2017

PUBLICATION SUMMARY

International Journals: 168 (9 Editorial, 7 Invited, 6 Feature, 1 Review, 1 Call for Papers, 13 Education News)

The reported Impact Factors refer to the year 2022

- IEEE - Transactions on Microwave Theory and Techniques: 12 IF: 4.3
- IEEE - Microwave and Wireless Technology Letters: 13 IF: 3.0
formerly IEEE - Microwave and Wireless Components Letters
- IEEE - Microwave Magazine: 13 IF: 3.6
- IEEE - Transactions on Instrumentation and Measurement: 2 IF: 5.6
- IEEE - Transactions on Computer-Aided Design of Integrated Circuits and Systems: 2 IF: 2.9
- IEEE - Transactions on Power Electronics: 1 IF: 6.7
- IEEE - Transactions on Electron Devices: 1 IF: 3.1
- IEEE - Transactions on Circuits and Systems I: Regular Papers: 1 IF: 5.1
- IEEE - Transactions on Circuits and Systems II: Express Briefs: 1 IF: 4.4
- IEEE - Journal of Biomedical and Health Informatics: 1 IF: 7.7
- IEEE - Sensors Journal: 1 IF: 4.3
- IEEE - Access: 4 IF: 3.9
- IEEE - Journal of the Electron Devices Society: 2 IF: 2.3
- IEEE - Instrumentation & Measurement Magazine: 1 IF: 2.1
- IEEE - Journal of Electromagnetics, RF, and Microwaves in Medicine and Biology: 1 IF: 3.2
- IEEE - Sensors Letters: 1 IF: 2.8
- Wiley - International Journal of Numerical Modelling: Electronic Networks, Devices and Fields: 26 IF: 1.6
- Wiley - Microwave and Optical Technology Letters: 11 IF: 1.5
- Wiley - International Journal of RF and Microwave Computer-Aided Engineering: 9 IF: 1.7
- Elsevier - Solid-State Electronics: 9 IF: 1.7
- Elsevier - Microelectronic Engineering: 4 IF: 2.3
- Elsevier - Microelectronics Journal: 3 IF: 2.2
- Elsevier - Materials Science in Semiconductor Processing: 1 IF: 4.1
- Elsevier - Microelectronics Reliability: 1 IF: 1.6
- IOP Publishing Ltd. - Semiconductor Science and Technology: 2 IF: 1.9
- IOP Publishing Ltd. - Engineering Research Express: 1 IF: 1.7
- IET - Electronics Letters: 2 IF: 1.1
- IET - Circuits, Devices & Systems: 2 IF: 1.3
- Cambridge University Press - International Journal of Microwave and Wireless Technologies: 1 IF: 1.4
- MDPI - Electronics: 14 IF: 2.9
- MDPI - Sensors: 2 IF: 3.9
- MDPI - Micromachines: 4 IF: 3.4
- MDPI - Chemosensors: 1 IF: 4.2
- MDPI - Instruments: 2
- Springer - Silicon: 3 IF: 3.4
- Springer - Transactions on Electrical and Electronic Materials: 2 IF: 1.9
- Springer - Journal of Materials Science: Materials in Electronics: 1 IF: 2.8
- Taylor & Francis - International Journal of Electronics: 1 IF: 1.3
- INOE Publishing House - Journal of Optoelectronics and Advanced Materials: 1 IF: 0.5
- IMEKO - Acta IMEKO: 2
- Serbia and Montenegro IEEE MTT-S Chapter - Microwave Review: 3
- University of Belgrade - Journal of Automatic Control: 1
- University of Banja Luka - Electronics: 1
- ISRAMT - International Journal of Microwave and Optical Technology: 1

Conferenze Internazionali: 102 (8 Invited)

- IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS): 24
- IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC): 10
- IEEE International Symposium on Medical Measurement and Applications (MeMeA): 8
- European Microwave Integrated Circuits Conference (EuMIC): 4
- IEEE International Conference on Metrology for eXtended Reality, Artificial Intelligence and Neural Engineering (MetroXRAINE): 4
- IEEE International Scientific Conference on Information, Communication and Energy Systems and Technologies (ICEST): 4
- IEEE International Workshop on Metrology for the Sea (MetroSea): 3
- IEEE Automatic RF Techniques Group Conference (ARFTG) : 3
- International Conference Mixed Design of Integrated Circuits and Systems (MIXDES): 3

- IEEE International Conference on Microelectronics (MIEL): 3
- International Microwave Symposium (IMS): 2
- IEEE Instrumentation and Measurement Technology Conference (IMTC): 2
- IEEE Mediterranean Microwave Symposium (MMS): 2
- IEEE International Conference on Integrated Circuits, Technologies and Applications (ICTA): 2
- IMEKO TC-4 International Symposium: 2
- IEEE MTT-S International Wireless Symposium (IWS): 1
- IEEE International Conference on Metrology for Archaeology and Cultural Heritage (MetroArchaeo): 1
- IEEE Symposium on VLSI Technology: 1
- IEEE International Conference on Emerging Electronics (ICEE): 1
- IEEE International Symposium on Industrial Electronics (ISIE): 1
- IEEE International Conference on Microwaves, Radar, and Wireless Communications (MIKON): 1
- IEEE International Workshop on Metrology for Living Environment (IEEE MetroLivEnv): 1
- IEEE International Conference on Circuits and Systems (ICCS): 1
- IEEE Calcutta Conference (CALCON): 1
- International Symposium on SiO₂ Advanced Dielectrics and Related Devices (SiO₂): 1
- International Symposium on Microwave and Optical Technology (ISMOT): 1
- International Conference Semiconductor Dresden (SCD): 1
- European Radar Conference (EuRAD): 1
- Symposium on Neural Network Applications in Electrical Engineering (NEUREL): 1
- AIP Proceeding on the 20th International Conference on Noise and Fluctuations (ICNF): 1
- Conference for Electronics, Telecommunications, Computers, Automatic Control and Nuclear Engineering (ETRAN): 1
- International Conference on Numerical Simulation of Optoelectronic Devices (NUSOD): 1
- International Microwave Symposium (IMS) Workshop on “Parameter Extraction Strategies for Compact Transistor Models”: 1
- Automatic RF Techniques Group Conference (ARFTG) Workshop on “Nonlinear measurements to investigate memory effects of RF transistors and active devices”: 1
- European Microwave Week (EuMW) Workshop on “Advanced in Characterization and Modeling of Emerging Low-Power and High-Power Devices”: 1
- European Microwave Week (EuMW) Workshop on “From De-embedding to Waveform Engineering”: 1
- European Microwave Conference in Central Europe (EuMCE) Workshop on “Advances in Smart Modeling Techniques for Microwave Engineering”: 1
- International Workshop on High Temperature Superconductors in High Frequency and Fields (HTSHFF): 1
- International MOS-AK Meeting: 1
- Materials for Advanced Metalization: 1
- TARGET Winter School on CAD Implementation of Non-Linear Device Model and Advanced Measurements: 1

BIBLIOMETRIC INDICATORS

- | | |
|---|----------------------------|
| ➤ ORCID-ID: | 0000-0002-6666-6812 |
| ➤ Number of publications, number of citations, h-index (Scopus): | 247, 2983, 32 |
| ➤ Number of publications, number of citations, h-index (ISI Web of Science): | 209, 2426, 30 |

MAIN RESEARCH AREAS

- Characterization/modeling of microwave electronic devices for wireless communication applications
- Characterization/modeling of microwave sensors for bioengineering and healthcare applications

INTERNATIONAL JOURNALS

- [J168] W. Wang, S. Chen, Y. Tang, J. Cai, **G. Crupi**, and Q. Xue, "Efficiency enhancement technique for outphasing amplifier with extended power back-off range," accepted for publication in *IEEE Transactions on Circuits and Systems I: Regular Papers*.
- [J167] J. Huang, W. Wang, K. Xu, J. Cai, J. Pang, **G. Crupi**, G. Wang, and S. Chen, "Design of a dual-band outphasing power amplifier based on multiple topology fitting," accepted for publication in *IEEE Transactions on Circuits and Systems II: Express Briefs*.
- [J166] W. Wang, S. Chen, Y. Tang, J. Cai, **G. Crupi**, and Q. Xue, "Generalized theory and design methodology of broadband outphasing power amplifiers employing low-order band-pass networks," accepted for publication in *IEEE Transactions on Microwave Theory and Techniques*.
- [J165] **G. Crupi**, V. Vadalà, M. Mercuri, C. Li, and X. Gong, "The 2024 MTT-S graduate student fellowship awards," accepted for publication in *IEEE Microwave Magazine (Education News)*.
- [J164] E. Liu, X. Tang, **G. Crupi**, and J. Cai, "DC-bias and temperature included CSWPL model for RF power transistors," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 37, no. 2, e3229, March/April 2024.
- [J163] D. Pyngrope, S. Majumdar, and **G. Crupi**, "Fractional order capacitance behavior due to hysteresis effect of ferroelectric material on GaN HEMT devices," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 37, no. 2, e3206, March/April 2024.
- [J162] S. Das, T. R. Lenka, F. A. Talukdar, H. P. T. Nguyen, and **G. Crupi**, "The role of Indium composition in $\text{In}_x\text{Ga}_{1-x}\text{N}$ prestrained layer towards optical characteristics of EBL free GaN/InGaN nanowire LEDs for enhanced luminescence," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 37, no. 2, e3169, March/April 2024.
- [J161] Z. Hao, Y. Qu, J. Huang, **G. Crupi**, and J. Cai, "Automatic multi-objective particle swarm optimization method for effective Doherty power amplifier design," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 37, no. 2, e3204, March/April 2024.
- [J160] S. Cheng, X. Tang, Z. Marinković, **G. Crupi**, and J. Cai, "Incorporating DC bias voltage in polyharmonic distortion modelling for RF power GaN transistors," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 37, no. 2, e3201, March/April 2024.
- [J159] X. Tang, A. Raffo, **G. Crupi**, and J. Cai, "Harmonic included CSWPL model for broadband PA design based on GaN HEMTs," *IEEE Transactions on Electron Devices*, vol. 71, no. 3, pp. 1387-1395, March 2024.
- [J158] X. Tang, A. Raffo, N. Donato, **G. Crupi**, and J. Cai, "Theoretical and experimental analysis of a CSWPL behavioral model for microwave GaN transistors including DC bias voltages," *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, vol. 43, no. 3, pp. 933-943, March 2024.
- [J157] G. Gugliandolo, A. Quattrocchi, G. Campobello, **G. Crupi**, and N. Donato, "On the development of inkjet-printed band pass filters based on the microstrip hairpin structure," *Instruments*, vol. 8, no. 1, 23, March 2024.
- [J156] W. Wang, S. Li, S. Chen, J. Cai, Y. Li, X.Y. Zhou, **G. Crupi**, G. Wang, and Q. Xue, "A broadband outphasing GaN power amplifier based on reconfigurable output combiner," *IEEE Transactions on Microwave Theory and Techniques*, vol. 72, no. 2, pp. 1030-1044, February 2024.
- [J155] Z. Zhu, G. Bosi, A. Raffo, **G. Crupi**, and J. Cai, "Accurate modeling of GaN HEMTs oriented to analysis of kink effects in S_{22} and h_{21} : An effective machine learning approach," *IEEE Journal of the Electron Devices Society*, vol. 12, pp. 201-210, February 2024.
- [J154] R. Singh, G. P. Rao, T. R. Lenka, S. V. S. Prasad, N. El. I. Boukourt, **G. Crupi**, and H. P. T. Nguyen, "Design and simulation of T-gate $\text{AlN}/\beta\text{-Ga}_2\text{O}_3$ HEMT for DC, RF and high-power nanoelectronics switching applications," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 37, no. 1, e3146, January/February 2024.
- [J153] Y. Qu, **G. Crupi**, N. Donato, and J. Cai, "Development and validation of a novel bias network design method for a class AB PA," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 37, no. 1, e3153, January/February 2024.
- [J152] **G. Crupi**, "Microwaves go fast: Empowering electronics for a brighter future," *Electronics*, vol. 13, no. 1, 235, January 2024 ([Editorial Paper](#)).
- [J151] C. De Marchis, **G. Crupi**, N. Donato, and S. Baldari, "Wearable electronic systems based on smart wireless sensors for multimodal physiological monitoring in health applications: Challenges, opportunities, and future directions," *Electronics*, vol. 12, no. 20, 4284, October 2023 ([Editorial Paper](#)).
- [J150] S. Das, T. R. Lenka, F. A. Talukdar, H. P. T. Nguyen, and **G. Crupi**, "Polarization engineered p-type electron blocking layer free AlGaIn based UV-LED using quantum barriers with heart-shaped graded Al composition for enhanced luminescence," *Micromachines*, vol. 14, no. 10, 1926, October 2023.
- [J149] H. Yuan, Z. Liu, L. Wang, L. Si, H. Sun, **G. Crupi**, D. Schreurs, and X. Bao, "SLM printed wideband circularly polarized multilayer antenna array with reduced impact by the manufacturing imperfection," *IEEE Access*, vol. 11, pp. 105368-105378, September 2023.

- [J148] M. Wu, S. Wang, C. Yu, **G. Crupi**, and J. Cai, "Application of load-pull X-parameters for GaN device based load modulated balanced power amplifier design," *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, vol. 42, no. 8, pp. 2664-2674, August 2023.
- [J147] S. Das, T. R. Lenka, F. A. Talukdar, **G. Crupi**, and H. P. T. Nguyen, "High-performance DUV AlGaIn multi-quantum well LED with step-graded n-type AlInGaIn electron blocking layer," *Journal of Optoelectronics and Advanced Materials*, vol. 25, no. 7/8, pp. 311-320, July/August 2023.
- [J146] G. Gugliandolo, **G. Crupi**, V. Vadalà, A. Raffo, N. Donato, and G. Vannini, "A systematic and numerical methodology for GaN HEMT current-gain peak analysis using the complex Lorentzian function," *IEEE Microwave and Wireless Technology Letters*, vol. 33, no. 7, 1007-1010, July 2023.
- [J145] G. Gugliandolo, A. Alimenti, M. Latino, **G. Crupi**, K. Torokhtii, E. Silva, and N. Donato, "Inkjet-printed interdigitated capacitors for sensing applications: Temperature-dependent electrical characterization at cryogenic temperatures down to 20 K," *Instruments*, vol. 7, no. 3, 20, July 2023.
- [J144] G. Bosi, A. Raffo, V. Vadalà, R. Giofrè, **G. Crupi**, and G. Vannini, "A thorough evaluation of GaN HEMT degradation under realistic power amplifier operation," *Electronics*, vol. 12, no. 13, 2939, July 2023.
- [J143] M. Wu, **G. Crupi**, C. Yu, and J. Cai, "Application of X-parameter model of gallium nitride device for a continuous broadband Doherty power amplifier design," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 36, no. 4, e3072, July/August 2023.
- [J142] G. Gugliandolo, G. Vermiglio, G. Cutroneo, G. Campobello, **G. Crupi**, and N. Donato, "Development, characterization, and circuit modeling of inkjet printed coupled ring resonators for application in biological samples," *IEEE Transactions on Instrumentation and Measurement*, vol. 72, pp. 1-10, 2023, Art no. 8002810.
- [J141] **G. Crupi**, C. Li, and X. Gong, "The 2023 MTT-S graduate student fellowship awards," *IEEE Microwave Magazine*, vol. 24, no. 7, pp. 70, 72-76, 90, July 2023 ([Education News](#)).
- [J140] B. Liu, J. Guo, X. Tang, **G. Crupi**, and J. Cai, "Threshold optimized CSWPL behavioral model for RF power transistors based on particle swarm algorithm," *IEEE Microwave and Wireless Technology Letters*, vol. 33, no. 5, pp. 531-534, May 2023.
- [J139] M. Radojković, G. Gugliandolo, M. Latino, Z. Marinkovic, **G. Crupi**, and N. Donato, "Development and validation of an ANN-based approach for temperature-dependent equivalent circuit modeling of SAW resonators," *Micromachines*, vol. 14, no. 5, 967, April 2023.
- [J138] **G. Crupi**, M. Latino, G. Gugliandolo, Z. Marinkovic, J. Cai, G. Bosi, A. Raffo, E. Fazio, and N. Donato, "A comprehensive overview of the temperature-dependent modeling of the high-power GaN HEMT technology using mm-wave scattering parameter measurements (Invited Paper)," *Electronics*, vol. 12, no. 8, 1771, April 2023 ([Invited Paper](#)).
- [J137] G. Bhargava, S. Majumdar, G. Gugliandolo, G. Campobello, N. Donato, and **G. Crupi**, "Design and validation of a low-cost antenna-based solution for microwave imaging of RCC structure," *IEEE Sensors Letters*, vol. 7, no. 4, 3500604, April 2023.
- [J136] M. A. Alim, A. Jarndal, C. Gaquiere, and **G. Crupi**, "A study of DC and RF transconductance for different technologies of HEMT at low and high temperatures," *Journal of Materials Science: Materials in Electronics*, vol. 34, 892, April 2023.
- [J135] **G. Crupi**, "From the Editor-in-Chief," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 36, no. 2, e3099, March/April 2023 ([Editorial Paper](#)).
- [J134] M. Geng, **G. Crupi**, and J. Cai, "Accurate and effective nonlinear behavioral modeling of a 10-W GaN HEMT based on LSTM neural networks," *IEEE Access*, vol. 11, pp. 27267-27279, March 2023.
- [J133] N. Boukortt, S. Patanè, B. Hadri, and **G. Crupi**, "Graded bandgap ultrathin CIGS solar cells (Invited Paper)," *Electronics*, vol. 12, no. 2, 393, January 2023 ([Invited Paper](#)).
- [J132] H. Yuan, J. Li, Z. Zhao, Z. Wang, M. B. Lodi, G. Gugliandolo, N. Donato, **G. Crupi**, L. Si, and X. Bao, "Development of a wideband slotted antenna array with low profile and low sidelobe (Invited Paper)," *Electronics*, vol. 12, no. 2, 278, January 2023 ([Invited Paper](#)).
- [J131] **G. Crupi**, "Meet the Editors," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 35, no. 6, e3070, November/December 2022 ([Editorial Paper](#)).
- [J130] G. Bhargava, V. Vadalà, S. Majumdar, and **G. Crupi**, "Auto-encoder based hybrid machine learning model for microwave scaled GaAs pHEMT devices," *International Journal of RF and Microwave Computer-Aided Engineering*, vol. 32, no. 11, e23339, November 2022.
- [J129] Z. Zhao, J. Li, H. Yuan, Z. Wang, G. Gugliandolo, N. Donato, **G. Crupi**, L. Si, and X. Bao, "Electrical characterization of through-silicon-via-based coaxial line for high-frequency 3D integration (Invited Paper)," *Electronics*, vol. 11, no. 20, 3417, October 2022 ([Invited Paper](#)).
- [J128] Y. Qu, **G. Crupi**, and J. Cai, "A broadband PA design based on Bayesian optimization augmented by dynamic feasible region shrinkage," *IEEE Microwave and Wireless Components Letters*, vol. 32, no. 10, pp. 1139-1142, October 2022.
- [J127] **G. Crupi**, "Welcome to the new Editor-in-Chief," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 35, no. 5, e2903, September/October 2022 ([Editorial Paper](#)).
- [J126] A. Jarndal, **G. Crupi**, M. A. Alim, V. Vadalà, A. Raffo, and G. Vannini, "Equivalent-circuit extraction for gallium nitride electron devices: Direct versus optimization-empowered approaches," *International*

- [J125] J. Guo, **G. Crupi**, and J. Cai, "A broadband asymmetric Doherty power amplifier design based on multiobjective Bayesian optimization: Theoretical and experimental validation," *IEEE Access*, vol. 10, pp. 89823-89834, August 2022.
- [J124] **G. Crupi**, R. Kaul, C. Li, and W. Che, "The 2022 MTT-S graduate student fellowship awards," *IEEE Microwave Magazine*, vol. 23, no. 8, pp. 28-33, August 2022 ([Education News](#)).
- [J123] G. Campobello, G. Gugliandolo, A. Quercia, E. Tatti, M. F. Ghilardi, **G. Crupi**, A. Quartarone, and N. Donato, "On the trade-off between compression efficiency and distortion of a new compression algorithm for multichannel EEG signals based on singular value decomposition," *Acta IMEKO*, vol. 11, no. 2, pp. 1-7, June 2022.
- [J122] J. Guo, **G. Crupi**, and J. Cai, "Novel design methodology for a multioctave GaN-HEMT power amplifier using clustering guided Bayesian optimization," *IEEE Access*, vol. 10, pp. 52771-52781, May 2022.
- [J121] G. Gugliandolo, K. Naishadham, **G. Crupi**, G. Campobello, and N. Donato, "Microwave transducers for gas sensing: A challenging and promising new frontier," *IEEE Instrumentation and Measurement Magazine*, vol. 25, no. 3, pp. 42-51, May 2022.
- [J120] G. Gugliandolo, K. Naishadham, **G. Crupi**, and N. Donato, "Design and characterization of a microwave transducer for gas sensing applications," *Chemosensors*, vol. 10, no. 4, 127, March 2022.
- [J119] G. Gugliandolo, Z. Marinkovic, **G. Crupi**, G. Campobello, and N. Donato, "Equivalent circuit model extraction for a SAW resonator: Below and above room temperature," *Sensors*, vol. 22, no. 7, 2546, March 2022.
- [J118] R. Singh, T. R. Lenka, D. K. Panda, H. P. T. Nguyen, N. El. I. Boukortt, and **G. Crupi**, "Analytical modeling of I-V characteristics using 2D Poisson equations in AlN/ β -Ga₂O₃ HEMT," *Materials Science in Semiconductor Processing*, vol. 145, no. 1, 106627, July 2022.
- [J117] S. Das, T. R. Lenka, F. A. Talukdar, R. T. Velpula, B. Jain, H. P. T. Nguyen, and **G. Crupi**, "Effects of polarized-induced doping and graded composition in an advanced multiple quantum well InGaN/GaN UV-LED for enhanced light technology," *Engineering Research Express*, vol. 4, no. 1, 015030, March 2022.
- [J116] X. Bao, L. Wang, Z. Wang, J. Zhang, M. Zhang, **G. Crupi**, and A. Zhang, "Simple, fast, and accurate broadband complex permittivity characterization algorithm: Methodology and experimental validation from 140 GHz up to 220 GHz," *Electronics*, vol. 11, no. 3, 366, January 2022 ([Feature Paper](#)).
- [J115] N. E. I. Boukortt, T. R. Lenka, S. Patanè, and **G. Crupi**, "Effects of varying the fin width, fin height, gate dielectric material, and gate length on the DC and RF performance of a 14-nm SOI FinFET structure," *Electronics*, vol. 11, no. 1, 91, January 2022 ([Feature Paper](#)).
- [J114] V. Vadalà and **G. Crupi**, "Guest editorial for the special issue on modeling of μ mwave and mmwave electronic devices for wireless systems: Connecting technologies to applications," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 34, no. 5, e2940, September/October 2021 ([Editorial Paper](#)).
- [J113] M. A. Alim, M. M. Ali, and **G. Crupi**, "Measurement-based analysis of GaAs HEMT technologies: Multilayer D-H pseudomorphic HEMT versus conventional S-H HEMT," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 34, no. 5, e2873, September/October 2021.
- [J112] **G. Crupi**, R. Kaul, C. Li, W. Che, and R. Henderson, "The 2021 MTT-S graduate student fellowship awards," *IEEE Microwave Magazine*, vol. 22, no. 8, pp. 85-91, August 2021 ([Education News](#)).
- [J111] G. Gugliandolo, D. Aloisio, G. Campobello, **G. Crupi**, and N. Donato, "On the design and characterisation of a microwave microstrip resonator for gas sensing applications," *Acta IMEKO*, vol. 10, no. 2, pp. 54-61, June 2021.
- [J110] M. A. Alim, C. Gaquiere, and **G. Crupi**, "An experimental and systematic insight into the temperature sensitivity for a 0.15- μ m gate-length HEMT based on the GaN technology," *Micromachines*, vol. 12, no. 5, 549, May 2021.
- [J109] M. A. Alim, A. Z. Chowdhury, S. Islam, C. Gaquiere, and **G. Crupi**, "Temperature-sensitivity of two microwave HEMT devices: AlGaAs/GaAs vs AlGaIn/GaN heterostructures," *Electronics*, vol. 10, no. 9, 1115, May 2021.
- [J108] A. Jarndal, M. A. Alim, A. Raffo, and **G. Crupi**, "2-mm-gate-periphery GaN HEMTs on SiC and Si substrates: A comparative analysis from a small-signal standpoint," *International Journal of RF and Microwave Computer-Aided Engineering*, vol. 31, no. 6, e22642, June 2021.
- [J107] **G. Crupi**, G. Gugliandolo, G. Campobello, and N. Donato, "Measurement-based extraction and analysis of a temperature-dependent equivalent-circuit model for a SAW resonator: From room down to cryogenic temperatures," *IEEE Sensors Journal*, vol. 21, no. 10, pp. 12202-12211, May 2021.
- [J106] A. Caddemi, E. Cardillo, and **G. Crupi**, "Optical sensitivity of HEMT-based devices and low-noise amplifiers," *International Journal of Electronics*, vol. 108, no. 3, pp. 361-377, March 2021.
- [J105] A. Jarndal, **G. Crupi**, A. Raffo, V. Vadalà, and G. Vannini, "An improved transistor modeling methodology exploiting the quasi-static approximation," *IEEE Journal of the Electron Devices Society*, vol. 9, pp. 378-386, March 2021.

- [J104] A. Caddemi, L. Boglione, E. Cardillo, **G. Crupi**, and J. Roussos, "Cross-laboratory experimental validation of a tuner-less technique for the microwave noise parameters extraction," *IEEE Transactions on Microwave Theory and Techniques*, vol. 69, no. 3, pp. 1733-1739, March 2021.
- [J103] G. Gugliandolo, Z. Marinkovic, G. Campobello, **G. Crupi**, and N. Donato, "On the performance evaluation of commercial SAW resonators by means of a direct and reliable equivalent-circuit extraction," *Micromachines*, vol. 12, no. 3, 303, March 2021.
- [J102] X. Bao, **G. Crupi**, I. Ocket, J. Bao, F. Ceyssens, M. Kraft, B. Nauwelaers, and D. M. M.-P. Schreurs, "Numerical modeling of two microwave sensors for biomedical applications," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 34, no. 1, e2810, January/February 2021 ([Invited Paper](#)).
- [J101] Z. Marinkovic, G. Gugliandolo, M. Latino, G. Campobello, **G. Crupi**, and N. Donato, "Characterization and neural modeling of a microwave gas sensor for oxygen detection aimed at healthcare applications," *Sensors*, vol. 20, no. 24, 7150, December 2020.
- [J100] M. A. Alim, A. A. Rezazadeh, and **G. Crupi**, "Experimental insight into the temperature effects on DC and microwave characteristics for a GaAs pHEMT in multilayer 3-D MMIC technology," *International Journal of RF and Microwave Computer-Aided Engineering*, vol. 30, no. 10, e22379, October 2020.
- [J99] **G. Crupi**, A. Raffo, V. Vadalà, G. Vannini, D. M. M.-P. Schreurs, and A. Caddemi, "Scalability of multifinger HEMT performance," *IEEE Microwave and Wireless Components Letters*, vol. 30, no. 9, pp. 869-872, September 2020.
- [J98] **G. Crupi**, R. Kaul, C. Li, and R. Henderson, "The 2020 MTT-S graduate student fellowship awards," *IEEE Microwave Magazine*, vol. 21, no. 8, pp. 94-100, August 2020 ([Education News](#)).
- [J97] N. Boukourt, S. Patanè, and **G. Crupi**, "3D investigation of 8-nm tapered n-FinFET model," *Silicon*, vol. 12, no. 7, pp. 1585-1591, July 2020.
- [J96] A. Jarndal, A. S. Hussein, **G. Crupi**, and A. Caddemi, "Reliable noise modeling of GaN HEMTs for designing low-noise-amplifiers," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 33, no. 3, e2585, May/June 2020.
- [J95] Z. Marinković, **G. Crupi**, A. Caddemi, V. Marković, and D. M. M.-P. Schreurs, "A review on the artificial neural network applications for small-signal modeling of microwave FETs," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 33, no. 3, e2668, May/June 2020.
- [J94] A. Caddemi, E. Cardillo, and **G. Crupi**, "Equivalent-circuit based modeling of the scattering and noise parameters for multi-finger GaAs pHEMTs," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 33, no. 3, e2587, May/June 2020.
- [J93] M. A. Alim, M. A. Hasan, A. A. Rezazadeh, C. Gaquiere, and **G. Crupi**, "Multi-bias and temperature dependence of the current-gain peak in GaN HEMT," *International Journal of RF and Microwave Computer-Aided Engineering*, vol. 30, no. 4, e22129, April 2020.
- [J92] **G. Crupi**, X. Bao, O. J. Babarinde, D. M. M.-P. Schreurs, and B. Nauwelaers, "Biosensor using a one-port interdigital capacitor: A resonance-based investigation of the permittivity sensitivity for microfluidic broadband bioelectronics applications," *Electronics*, vol. 9, no. 2, 340, February 2020 ([Feature Paper](#)).
- [J91] A. Caddemi, E. Cardillo, **G. Crupi**, L. Boglione, and J. Roussos, "Microwave linear characterization procedures of on-wafer scaled GaAs pHEMTs for low-noise applications," *Electronics*, vol. 8, no. 11, 1365, November 2019 ([Feature Paper](#)).
- [J90] **G. Crupi**, R. Kaul, C. Li, and R. Henderson, "The 2019 MTT-S graduate student fellowship awards," *IEEE Microwave Magazine*, vol. 20, no. 8, pp. 78-83, August 2019 ([Education News](#)).
- [J89] M. A. Alim, A. A. Rezazadeh, C. Gaquiere, and **G. Crupi**, "Thermal influence on S_{22} kink behavior of a 0.15- μ m gate length AlGaIn/GaN/SiC HEMT for microwave applications," *Semiconductor Science and Technology*, vol. 34, no. 3, pp. 1-8, March 2019.
- [J88] **G. Crupi**, A. Raffo, V. Vadalà, G. Vannini, and A. Caddemi, "High-periphery GaN HEMT modeling up to 65 GHz and 200°C," *Solid-State Electronics*, vol. 152, pp. 11-16, February 2019.
- [J87] **G. Crupi**, A. Raffo, V. Vadalà, G. Vannini, and A. Caddemi, "A new study on the temperature and bias dependence of the kink effects in S_{22} and h_{21} for the GaN HEMT technology," *Electronics*, vol. 7, no. 12, 353, December 2018 ([Feature Paper](#)).
- [J86] **G. Crupi**, A. Raffo, V. Vadalà, G. Vannini, and A. Caddemi, "Current-gain in FETs beyond cut-off frequency," *Microwave and Optical Technology Letters*, vol. 60, no. 12, pp. 3023-3026, December 2018.
- [J85] G. Bosi, A. Raffo, F. Trevisan, V. Vadalà, **G. Crupi**, and G. Vannini, "Nonlinear-embedding design methodology oriented to LDMOS power amplifiers," *IEEE Transactions on Power Electronics*, vol. 33, no. 10, pp. 8764-8774, October 2018.
- [J84] **G. Crupi**, R. Kaul, C. Li, and R. K. Gupta, "The 2018 MTT-S graduate student fellowship awards," *IEEE Microwave Magazine*, vol. 19, no. 6, pp. 114, 116-119, 131, September/October 2018 ([Education News](#)).
- [J83] M. A. Alim, A. A. Rezazadeh, C. Gaquiere, and **G. Crupi**, "Extrinsic capacitance extraction for GaAs and GaN FETs from low to high temperatures," *Semiconductor Science and Technology*, vol. 33, no. 8, pp. 1-5, August 2018.
- [J82] A. Caddemi, E. Cardillo, and **G. Crupi**, "Light activation of noise at microwave frequencies: A study on scaled GaAs HEMT's," *IET Circuits, Devices & Systems*, vol. 12, no. 3, pp. 242-248, May 2018.

- [J81] **G. Crupi**, A. Raffo, V. Vadalà, G. Avolio, D. M. M.-P. Schreurs, G. Vannini, and A. Caddemi, "Technology-independent analysis of the double current-gain peak in millimeter-wave FETs," *IEEE Microwave and Wireless Components Letters*, vol. 28, no. 4, pp. 326-328, April 2018.
- [J80] X. Bao, I. Ocket, **G. Crupi**, D. M. M.-P. Schreurs, J. Bao, D. Kil, B. Puers, and B. Nauwelaers, "A planar one-port microwave microfluidic sensor for microliter liquids characterization," *IEEE Journal of Electromagnetics, RF, and Microwaves in Medicine and Biology*, vol. 2, no. 1, pp. 10-17, March 2018.
- [J79] N. Boukortt, B. Hadri, S. Patanè, A. Caddemi, and **G. Crupi**, "Investigation on TG n-FinFET parameters by varying channel doping concentration and gate length," *Silicon*, vol. 9, no. 6, pp. 885-893, November 2017.
- [J78] **G. Crupi**, D. M. M.-P. Schreurs, and A. Caddemi, "Effects of gate-length scaling on microwave MOSFET performance," *Electronics*, vol. 6, no. 3, 62, September 2017 ([Feature Paper](#)).
- [J77] **G. Crupi**, R. Kaul, C. Li, and R. K. Gupta, "The 2017 MTT-S graduate student fellowship awards," *IEEE Microwave Magazine*, vol. 18, no. 5, pp. 110-114, July/August 2017 ([Education News](#)).
- [J76] **G. Crupi**, V. Vadalà, P. Colantonio, E. Cipriani, A. Caddemi, G. Vannini, and D. M. M.-P. Schreurs, "Empowering GaN HEMT models: The gateway for power amplifier design," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 30, no. 1, e2125, January/February 2017 ([Invited Paper](#)).
- [J75] V. Đorđević, Z. Marinković, **G. Crupi**, O. Pronić-Rančić, V. Marković, and A. Caddemi, "Wave approach for noise modeling of GaN HEMTs," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 30, no. 1, e2138, January/February 2017.
- [J74] N. Boukortt, B. Hadri, A. Caddemi, **G. Crupi**, and S. Patanè, "Temperature dependence of electrical parameters of silicon-on-insulator triple gate n-channel fin field effect transistor," *Transactions on Electrical and Electronic Materials*, vol. 17, no. 6, pp. 329-334, December 2016.
- [J73] **G. Crupi**, A. Caddemi, D. M. M.-P. Schreurs, and G. Dambrine, "The large world of FET small-signal equivalent circuits," *International Journal of RF and Microwave Computer-Aided Engineering*, vol. 26, no. 9, pp. 749-762, November 2016 ([Invited Paper](#)).
- [J72] **G. Crupi**, A. Raffo, G. Avolio, D. M. M.-P. Schreurs, G. Vannini, and A. Caddemi, "Temperature influence on GaN HEMT equivalent circuit," *IEEE Microwave and Wireless Components Letters*, vol. 26, no. 10, pp. 813-815, October 2016.
- [J71] A. Caddemi, E. Cardillo, and **G. Crupi**, "Comparative analysis of microwave low-noise amplifiers under laser illumination," *Microwave and Optical Technology Letters*, vol. 58, no. 10, pp. 2437-2443, October 2016.
- [J70] N. Boukortt, B. Hadri, S. Patanè, A. Caddemi, and **G. Crupi**, "Electrical characteristics of 8-nm SOI n-FinFETs," *Silicon*, vol. 8, no. 4, pp. 497-503, October 2016.
- [J69] **G. Crupi**, R. Kaul, C. Li, and R. K. Gupta, "The 2016 MTT-S graduate student fellowship awards," *IEEE Microwave Magazine*, vol. 17, no. 8, pp. 84-89, August 2016 ([Education News](#)).
- [J68] **G. Crupi** and P. Colantonio, "Guest editorial," *IEEE Transactions on Microwave Theory and Techniques*, vol. 64, no. 5, pp. 1349-1350, May 2016 ([Editorial Paper](#)).
- [J67] A. Caddemi, E. Cardillo, and **G. Crupi**, "Microwave noise parameter modeling of a GaAs HEMT under optical illumination," *Microwave and Optical Technology Letters*, vol. 58, no. 1, pp. 151-154, January 2016.
- [J66] **G. Crupi**, R. Kaul, C. Li, and R. K. Gupta, "2015 MTT-S graduate student fellowship awards," *IEEE Microwave Magazine*, vol. 16, no. 10, pp. 70-74, 81, November 2015 ([Education News](#)).
- [J65] S. Colangeli, W. Ciccognani, E. Limiti, A. Caddemi, **G. Crupi**, and G. Salvo, "Black-box noise modeling of GaAs HEMTs under illumination," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 28, no. 6, pp. 698-706, November/December 2015.
- [J64] A. Nalli, A. Raffo, **G. Crupi**, S. D'Angelo, D. Resca, F. Scappaviva, G. Salvo, A. Caddemi, and G. Vannini, "GaN HEMT noise model based on electromagnetic simulations," *IEEE Transactions on Microwave Theory and Techniques*, vol. 63, no. 8, pp. 2498-2508, August 2015.
- [J63] N. Boukortt, B. Hadri, A. Caddemi, **G. Crupi**, and S. Patanè, "3-D simulation of nanoscale SOI n-FinFET at a gate length of 8 nm using ATLAS SILVACO," *Transactions on Electrical and Electronic Materials*, vol. 16, no. 3, pp. 156-161, June 2015.
- [J62] Z. Marinković, **G. Crupi**, A. Caddemi, G. Avolio, A. Raffo, V. Marković, G. Vannini, and D. M. M.-P. Schreurs, "Neural approach for temperature dependent modeling of GaN HEMTs," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 28, no. 4, pp. 359-370, July/August 2015.
- [J61] **G. Crupi**, A. Raffo, A. Caddemi, and G. Vannini, "Kink effect in S_{22} for GaN and GaAs HEMTs," *IEEE Microwave and Wireless Components Letters*, vol. 25, no. 5, pp. 301-303, May 2015.
- [J60] **G. Crupi**, A. Caddemi, A. Raffo, G. Salvo, A. Nalli, and G. Vannini, "GaN HEMT noise modeling based on 50-ohm noise factor," *Microwave and Optical Technology Letters*, vol. 57, no. 4, pp. 937-942, April 2015.
- [J59] A. Caddemi, **G. Crupi**, and G. Salvo, "A link between noise parameters and light exposure in GaAs pHEMT's," *Solid-State Electronics*, vol. 105, pp. 16-20, March 2015.

- [J58] **G. Crupi**, A. Raffo, G. Avolio, G. Bosi, G. Sivverini, F. Palomba, A. Caddemi, D. M. M.-P. Schreurs, and G. Vannini, "Nonlinear modeling of GaAs pHEMTs for millimeter-wave mixer design," *Solid-State Electronics*, vol. 104, pp. 25-32, February 2015.
- [J57] C. Garripoli, M. Mercuri, P. Karsmakers, P. J. Soh, **G. Crupi**, G. A. E. Vandenbosch, C. Pace, P. Leroux, and D. M. M.-P. Schreurs, "Embedded DSP-based telehealth radar system for remote in-door fall detection," *IEEE Journal of Biomedical and Health Informatics*, vol. 19, no. 1, pp. 92-101, January 2015.
- [J56] **G. Crupi** and A. Raffo, "Guest editorial," *IEEE Transactions on Microwave Theory and Techniques*, vol. 62, no. 11, pp. 2497-2498, November 2014 ([Editorial Paper](#)).
- [J55] G. Avolio, A. Raffo, I. Angelov, V. Vadalà, **G. Crupi**, A. Caddemi, G. Vannini, and D. M. M.-P. Schreurs, "Millimetre-wave FET nonlinear modelling based on the dynamic-bias measurement technique," *IEEE Transactions on Microwave Theory and Techniques*, vol. 62, no. 11, pp. 2526-2537, November 2014.
- [J54] **G. Crupi**, D. M. M.-P. Schreurs, and A. Caddemi, "Guest editorial for the special issue on Modeling of high-frequency silicon transistors," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 27, no. 5-6, pp. 703-706, September/December 2014 ([Editorial Paper](#)).
- [J53] G. Bosi, **G. Crupi**, V. Vadalà, A. Raffo, A. Giovannelli, and G. Vannini, "Nonlinear modeling of LDMOS transistors for high-power FM transmitters," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 27, no. 5-6, pp. 780-791, September/December 2014.
- [J52] Z. Marinković, **G. Crupi**, D. M. M.-P. Schreurs, A. Caddemi, and V. Marković, "Microwave neural modeling for silicon FinFET varactor," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 27, no. 5-6, pp. 834-845, September/December 2014.
- [J51] **G. Crupi**, R. Kaul, C. Li, T. J. Brazil, and R. K. Gupta, "2014 MTT-S graduate student fellowship awards," *IEEE Microwave Magazine*, vol. 15, no. 5, pp. 118-121, July/August 2014 ([Education News](#)).
- [J50] G. Avolio, A. Raffo, I. Angelov, **G. Crupi**, A. Caddemi, G. Vannini, and D. M. M.-P. Schreurs, "Small-versus large-signal extraction for charge models of microwave FETs," *IEEE Microwave and Wireless Components Letters*, vol. 24, no. 6, pp. 394-396, June 2014.
- [J49] **G. Crupi**, R. Kaul, C. Li, and D. M. M.-P. Schreurs, "2013 MTT-S graduate student fellowship awards," *IEEE Microwave Magazine*, vol. 15, no. 4, pp. 154-158, June 2014 ([Education News](#)).
- [J48] **G. Crupi**, A. Raffo, Z. Marinković, G. Avolio, A. Caddemi, V. Marković, G. Vannini, and D. M. M.-P. Schreurs, "An extensive experimental analysis of the kink effects in S_{22} and h_{21} for a GaN HEMT," *IEEE Transactions on Microwave Theory and Techniques*, vol. 62, no. 3, pp. 513-520, March 2014.
- [J47] A. Caddemi, **G. Crupi**, E. Fazio, S. Patanè, and G. Salvo, "Remarks of an extensive investigation on the microwave HEMT behavior under illumination," *IEEE Microwave and Wireless Components Letters*, vol. 24, no. 2, pp. 102-104, February 2014.
- [J46] G. Avolio, D. M. M.-P. Schreurs, A. Raffo, **G. Crupi**, A. Caddemi, G. Vannini, and B. Nauwelaers, "Straightforward modeling of dynamic I-V characteristics for microwave FETs," *International Journal of RF and Microwave Computer-Aided Engineering*, vol. 24, no. 1, pp. 109-116, January 2014.
- [J45] A. Caddemi, **G. Crupi**, E. Fazio, S. Patanè, and G. Salvo, "A complete microwave characterization of GaAs HEMTs under optical illumination," *Microwave Review*, vol. 19, no. 2, pp. 112-118, December 2013.
- [J44] **G. Crupi**, A. Raffo, D. M. M.-P. Schreurs, G. Avolio, A. Caddemi, and G. Vannini, "Identification of the intrinsic capacitive core for GaAs HEMTs by investigating the frequency behavior of the impedance parameters," *Microwave and Optical Technology Letters*, vol. 55, no. 6, pp. 2137-2140, June 2013.
- [J43] **G. Crupi**, D. M. M.-P. Schreurs, and A. Caddemi, "Call for papers: Modeling of high-frequency silicon transistors," *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 26, no. 1, pp. 101, January/February 2013 ([Call for Papers](#)).
- [J42] **G. Crupi**, D. M. M.-P. Schreurs, J.-P. Raskin, and A. Caddemi, "A comprehensive review on microwave FinFET modeling for progressing beyond the state of art," *Solid-State Electronics*, vol. 80, pp. 81-95, February 2013 ([Review Paper](#)).
- [J41] **G. Crupi**, A. Raffo, D. M. M.-P. Schreurs, G. Avolio, A. Caddemi, and G. Vannini, "A clear-cut understanding of the current-gain peak in HEMTs: Theory and experiments," *Microwave and Optical Technology Letters*, vol. 54, no. 12, pp. 2801-2806, December 2012.
- [J40] S. Barker, R. Kaul, **G. Crupi**, and D. M. M.-P. Schreurs, "MTT-S graduate student fellowship awards," *IEEE Microwave Magazine*, vol. 13, no. 7, pp. 88-93, November/December 2012 ([Education News](#)).
- [J39] Z. Marinković, **G. Crupi**, D. M. M.-P. Schreurs, A. Caddemi, and V. Marković, "Multibias neural modeling of fin field-effect transistor admittance parameters," *Microwave and Optical Technology Letters*, vol. 54, no. 9, pp. 2082-2088, September 2012.
- [J38] **G. Crupi**, A. Raffo, A. Caddemi, and G. Vannini, "The kink phenomenon in the transistor S_{22} : A systematic and numerical approach," *IEEE Microwave and Wireless Components Letters*, vol. 22, no. 8, pp. 406-408, August 2012.
- [J37] **G. Crupi**, D. M. M.-P. Schreurs, A. Caddemi, A. Raffo, F. Vanaverbeke, G. Avolio, G. Vannini, and W. De Raedt, "In-deep insight into the extrinsic capacitance impact on GaN HEMT modeling at millimeter-wave band," *International Journal of RF and Microwave Computer-Aided Engineering*, vol. 22, no. 3, pp. 308-318, May 2012.

- [J36] G. Avolio, D. M. M.-P. Schreurs, A. Raffo, **G. Crupi**, G. Vannini, and B. Nauwelaers, "Waveforms only based nonlinear de-embedding in active devices," *IEEE Microwave and Wireless Components Letters*, vol. 22, no. 4, pp. 215-217, April 2012.
- [J35] Z. Marinković, **G. Crupi**, D. M. M.-P. Schreurs, A. Caddemi, and V. Marković, "Neural modeling of high-frequency forward transmission coefficient for HEMT and FinFET technologies," *Microwave Review*, vol. 17, no. 2, pp. 17-22, December 2011.
- [J34] G. Avolio, D. M. M.-P. Schreurs, A. Raffo, **G. Crupi**, I. Angelov, G. Vannini, and B. Nauwelaers, "Identification technique of FET model based on vector nonlinear measurements," *Electronics Letters*, vol. 47, no. 24, pp. 1323-1324, November 2011.
- [J33] **G. Crupi**, G. Avolio, A. Raffo, P. Barmuta, D. M. M.-P. Schreurs, A. Caddemi, and G. Vannini, "Investigation on the thermal behavior for microwave GaN HEMTs," *Solid-State Electronics*, vol. 64, no. 1, pp. 28-33, October 2011.
- [J32] Z. Marinković, **G. Crupi**, D. M. M.-P. Schreurs, A. Caddemi, and V. Marković, "Microwave FinFET modeling based on artificial neural networks including lossy silicon substrate," *Microelectronic Engineering*, vol. 88, no. 10, pp. 3158-3163, October 2011.
- [J31] D. Deschrijver, G. Avolio, D. M. M.-P. Schreurs, T. Dhaene, **G. Crupi**, and L. Knockaert, "Microwave small-signal modeling of FinFETs using multi-parameter rational fitting method," *Electronics Letters*, vol. 47, no. 19, pp. 1084-1086, September 2011.
- [J30] **G. Crupi**, D. M. M.-P. Schreurs, A. Caddemi, A. Raffo, F. Vanaverbeke, G. Avolio, G. Vannini, and W. De Raedt, "High-frequency extraction of the extrinsic capacitances for GaN HEMT technology," *IEEE Microwave and Wireless Components Letters*, vol. 21, no. 8, pp. 445-447, August 2011.
- [J29] **G. Crupi**, A. Raffo, D. M. M.-P. Schreurs, G. Avolio, V. Vadalà, S. Di Falco, A. Caddemi, and G. Vannini, "Accurate GaN HEMT non-quasi-static large-signal model including dispersive effects," *Microwave and Optical Technology Letters*, vol. 53, no. 3, pp. 692-697, March 2011.
- [J28] **G. Crupi**, A. Caddemi, D. M. M.-P. Schreurs, W. Wiatr, and A. Mercha, "Microwave noise modeling of FinFETs," *Solid-State Electronics*, vol. 56, no. 1, pp. 18-22, February 2011.
- [J27] A. Raffo, G. Avolio, D. Schreurs, S. Di Falco, V. Vadalà, F. Scappaviva, **G. Crupi**, B. Nauwelaers, and G. Vannini "On the evaluation of the high-frequency load line in active devices," *International Journal of Microwave and Wireless Technologies*, vol. 3, no. 1, pp. 19-24, February 2011.
- [J26] Z. Marinković, **G. Crupi**, A. Caddemi, and V. Marković, "Two neural approaches for small-signal modelling of GaAs HEMTs," *Journal of Automatic Control*, vol. 20, no. 1, pp. 39-44, December 2010.
- [J25] **G. Crupi**, D. M. M.-P. Schreurs, and A. Caddemi, "Theoretical and experimental determination of onset and scaling of non-quasi-static phenomena for interdigitated FinFETs," *IET Circuits, Devices & Systems*, vol. 5, no. 6, pp. 531-538, November 2010.
- [J24] **G. Crupi**, G. Avolio, D. M. M.-P. Schreurs, G. Paillancy, A. Caddemi, and B. Nauwelaers, "Vector two-tone measurements for validation of nonlinear microwave FinFET model," *Microelectronic Engineering*, vol. 87, no. 10, pp. 2008-2013, October 2010.
- [J23] Z. Marinković, **G. Crupi**, A. Caddemi, and V. Marković, "Comparison between analytical and neural approaches for multibias small signal modeling of microwave scaled FETs," *Microwave and Optical Technology Letters*, vol. 52, no. 10, pp. 2238-2244, October 2010.
- [J22] **G. Crupi**, D. M. M.-P. Schreurs, A. Caddemi, "Accurate silicon dummy structure model for nonlinear microwave FinFET modeling," *Microelectronics Journal*, vol. 41, no. 9, pp. 574-578, September 2010.
- [J21] A. Caddemi and **G. Crupi**, "On the noise measurements and modeling for on wafer HEMTs up to 26.5 GHz," *Microwave and Optical Technology Letters*, vol. 52, no. 8, pp. 1799-1803, August 2010.
- [J20] A. Raffo, V. Vadalà, D. M. M.-P. Schreurs, **G. Crupi**, G. Avolio, A. Caddemi, and G. Vannini, "Nonlinear dispersive modeling of electron devices oriented to GaN power amplifier design," *IEEE Transactions on Microwave Theory and Techniques*, vol. 58, no. 4, pp. 710-718, April 2010.
- [J19] **G. Crupi**, D. M. M.-P. Schreurs, A. Caddemi, A. Raffo, and G. Vannini, "Investigation on the non-quasi-static effect implementation for millimeter-wave FET models," *International Journal of RF and Microwave Computer-Aided Engineering*, vol. 20, no. 1, pp. 87-93, January 2010.
- [J18] M. Homayouni, D. M. M.-P. Schreurs, **G. Crupi**, and B. Nauwelaers, "Technology independent non-quasi-static table-based nonlinear model generation," *IEEE Transactions on Microwave Theory and Techniques*, vol. 57, no. 12, pp. 2845-2852, December 2009.
- [J17] **G. Crupi**, D. M. M.-P. Schreurs, A. Caddemi, I. Angelov, M. Homayouni, A. Raffo, G. Vannini, and B. Parvais, "Purely analytical extraction of an improved nonlinear FinFET model including non-quasi-static effects," *Microelectronic Engineering*, vol. 86, no. 11, pp. 2283-2289, November 2009.
- [J16] A. Caddemi, **G. Crupi**, and A. Macchiarella, "On wafer scaled GaAs HEMTs: Direct and robust small signal modelling up to 50 GHz," *Microwave and Optical Technology Letters*, vol. 51, no. 8, pp. 1958-1963, August 2009.
- [J15] **G. Crupi**, D. M. M.-P. Schreurs, and A. Caddemi, "On the small signal modeling of advanced microwave FETs: A comparative study," *International Journal of RF and Microwave Computer-Aided Engineering*, vol. 18, no. 5, pp. 417-425, September 2008.
- [J14] **G. Crupi**, D. M. M.-P. Schreurs, I. Angelov, A. Caddemi, and B. Parvais, "Non-linear FinFET modeling: Lookup table and empirical approaches," *International Journal of Microwave and Optical Technology*, vol. 3, no. 3, pp. 157-164, July 2008.

- [J13] **G. Crupi**, D. M. M.-P. Schreurs, M. Dehan, D. Xiao, A. Caddemi, A. Mercha, and S. Decoutere, "Analytical extraction of small and large signal models for FinFET varactors," *Solid-State Electronics*, vol. 52, no. 5, pp. 704-710, May 2008.
- [J12] **G. Crupi**, D. M. M.-P. Schreurs, A. Raffo, A. Caddemi, and G. Vannini, "A new millimeter wave small-signal modeling approach for pHEMTs accounting for the output conductance time delay," *IEEE Transactions on Microwave Theory and Techniques*, vol. 56, no. 4, pp. 741-746, April 2008.
- [J11] **G. Crupi**, D. M. M.-P. Schreurs, D. Xiao, A. Caddemi, B. Parvais, A. Mercha, and S. Decoutere, "Determination and validation of new nonlinear FinFET model based on lookup tables," *IEEE Microwave and Wireless Components Letters*, vol. 17, no. 5, pp. 361-363, May 2007.
- [J10] **G. Crupi**, D. M. M.-P. Schreurs, B. Parvais, A. Caddemi, A. Mercha, and S. Decoutere, "Scalable and multibias high frequency modeling of multi fin FETs," *Solid-State Electronics*, vol. 50, no. 10/11, pp. 1780-1786, November/December 2006.
- [J9] A. Caddemi, F. Catalfamo, **G. Crupi**, and N. Donato, "DC to microwave characterization and modeling of the cryogenic performance of low-noise HEMT's," *Microwave Review*, vol. 12, no. 2, pp. 17-28, November 2006.
- [J8] **G. Crupi**, D. Xiao, D. M. M.-P. Schreurs, E. Limiti, A. Caddemi, W. De Raedt, and M. Germain, "Accurate multibias equivalent circuit extraction for GaN HEMTs," *IEEE Transactions on Microwave Theory and Techniques*, vol. 54, no. 10, pp. 3616-3622, October 2006.
- [J7] A. Caddemi, **G. Crupi**, and N. Donato, "Microwave characterization and modeling of packaged HEMTs by a direct extraction procedure down to 30 K," *IEEE Transactions on Instrumentation and Measurement*, vol. 55, no. 2, pp. 465-470, April 2006.
- [J6] A. Caddemi, **G. Crupi**, and N. Donato, "Temperature effects on DC and small signal RF performance of AlGaAs/GaAs HEMTs," *Microelectronics Reliability*, vol. 46, no. 1, pp. 169-173, January 2006.
- [J5] A. Caddemi, **G. Crupi**, and N. Donato, "Impact of the self generated heat on the scalability of HEMTs," *Microelectronic Engineering*, vol. 82, no. 2, pp. 143-147, October 2005.
- [J4] M. Alvaro, A. Caddemi, **G. Crupi**, and N. Donato, "Temperature and bias investigation of self heating effect and threshold voltage shift in pHEMT's," *Microelectronics Journal*, vol. 36, no. 8, pp. 732-736, August 2005.
- [J3] A. Caddemi, **G. Crupi**, and N. Donato, "On the soft breakdown phenomenon in AlGaAs/InGaAs HEMT: An experimental study down to cryogenic temperature," *Solid-State Electronics*, vol. 49, no. 6, pp. 928-934, June 2005.
- [J2] A. Caddemi, N. Donato, and **G. Crupi**, "A robust approach for the direct extraction of HEMT circuit elements vs. bias and temperature," *Electronics*, vol. 8, no. 1, pp. 14-17, May 2004.
- [J1] A. Caddemi, **G. Crupi**, and N. Donato, "A robust and fast procedure for the determination of the small signal equivalent circuit of HEMTs," *Microelectronics Journal*, vol. 35, no. 5, pp. 431-436, May 2004.

INTERNATIONAL CONFERENCES

- [C102] **G. Crupi**, V. Vadalà, G. Bosi, G. Gugliandolo, X. Bao, R. Giofrè, A. Raffo, P. Colantonio, N. Donato, and G. Vannini, "An overview of the impact of the temperature on the small- and large-signal performance of 0.15- μm microwave GaN HEMTs," *IEEE MTT-S International Wireless Symposium (IEEE IWS)*, Beijing, China, 16-19 May 2024, pp. 1-3 ([Invited Talk](#)).
- [C101] Y. Yang, H. Yuan, L. Si, **G. Crupi**, L. Wang, G. Gugliandolo, N. Donato, H. Sun, and X. Bao, "Extraction of complex permittivity and complex permeability of liquids by using a grounded coplanar waveguide with upper shielding," *IEEE International Symposium on Medical Measurements and Applications (MeMeA)*, Eindhoven, The Netherlands, 26-28 June 2024, pp. 1-5.
- [C100] G. Bosi, A. Raffo, R. Giofrè, V. Vadalà, **G. Crupi**, P. Colantonio, and G. Vannini, "Experimental investigation on class-E and class-F¹ operation under square-waveform excitation," *IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC)*, Aveiro, Portugal, 8-10 November 2023.
- [C99] X. Tang, E. Liu, **G. Crupi**, and J. Cai, "A novel temperature-included CSWPL model for GaN HEMTs," *IEEE International Conference on Circuits and Systems (IEEE ICCS)*, Huzhou, China, 27-30 October 2023, pp. 85-89.
- [C98] J. Cai, G. Gugliandolo, Z. Marinkovic, M. Latino, E. Fazio, G. Bosi, A. Raffo, **G. Crupi**, and N. Donato, "GaN HEMT small-signal modeling using an optimization strategy based on gated recurrent unit networks," *IEEE International Conference on Metrology for eXtended Reality, Artificial Intelligence and Neural Engineering (IEEE MetroXRINE)*, Milano, Italy, 25-27 October 2023, pp. 422-426.
- [C97] S. Li, X. Bao, G. Gugliandolo, H. Yuan, J. Li, L. Shao, M. Du, N. Donato, Z. Marinkovic, **G. Crupi**, L. Fang, L. Si, and H. Sun, "Defect modeling during the SLM process for manufacturing microwave devices," *IEEE International Conference on Metrology for eXtended Reality, Artificial Intelligence and Neural Engineering (IEEE MetroXRINE)*, Milano, Italy, 25-27 October 2023, pp. 412-416.
- [C96] G. Gugliandolo, Z. Marinkovic, X. Bao, C. De Marchis, F. Battaglia, M. Latino, G. Campobello, **G. Crupi**, and N. Donato, "Artificial neural network modeling of microwave sensors for dielectric liquids characterization," *IEEE International Conference on Metrology for eXtended Reality, Artificial*

Intelligence and Neural Engineering (IEEE MetroXRaine), Milano, Italy, 25-27 October 2023, pp. 401-405.

- [C95] X. Tang, B. Liu, **G. Crupi**, and J. Cai, "An overview of nonlinear behavioral modeling approaches for microwave GaN power transistors," *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications* (TELSIKS), Nis, Serbia, 25-27 October 2023, pp. 43-49 ([Invited Talk](#)).
- [C94] G. Gugliandolo, **G. Crupi**, Z. Marinkovic, V. Vadalà, A. Raffo, N. Donato, and G. Vannini, "GaN HEMT current-gain peak: An insight into the effects of the bias condition," *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications* (TELSIKS), Nis, Serbia, 25-27 October 2023, pp. 66-69.
- [C93] G. Gugliandolo, A. Altadonna, A. Arena, M. Arena, L. Calabrese, G. Campobello, **G. Crupi**, D. Iannazzo, F. Passalacqua, F. Todesco, M. G. Xibilia, and N. Donato, "Microwave transducers for moisture content characterization of cultural heritage materials," *IEEE International Conference on Metrology for Archaeology and Cultural Heritage* (IEEE MetroArchaeo), Rome, Italy, 19-21 October 2023.
- [C92] G. Gugliandolo, **G. Crupi**, L. Calabrese, D. Iannazzo, M. Latino, A. Quattrocchi, and N. Donato, "Resonance-based microwave transducer for contactless salinity detection," *IEEE International Workshop on Metrology for the Sea* (IEEE MetroSea), Malta, Italy, 4-6 October 2023, pp. 284-288.
- [C91] **G. Crupi**, M. Latino, G. Gugliandolo, Z. Marinkovic, J. Cai, E. Fazio, and N. Donato, "GaN HEMT modeling versus bias point and gate width," *IEEE International Scientific Conference on Information, Communication and Energy Systems and Technologies* (ICEST), Niš, Serbia, 29 June - July 1 2023, pp. 1-4.
- [C90] G. Gugliandolo, A. Quattrocchi, G. Campobello, **G. Crupi**, and N. Donato, "On the development of a high-temperature superconducting band-pass filter," *15th International Workshop on High Temperature Superconductors in High Frequency and Fields* (HTSHFF), Giardini Naxos, Italy, 10-13 September 2023, pp. 1-2.
- [C89] S. Das, T. R. Lenka, F. A. Talukdar, **G. Crupi**, and H. P. T. Nguyen, "Design and performance analysis of electron blocking layer free GaN/AlInN/GaN nanowire deep-ultraviolet LED," *IEEE International Conference on Emerging Electronics* (ICEE), Bangalore, India, 11-14 December 2022, pp. 1-5.
- [C88] C. P. Rao, T. R. Lenka, R. Singh, H. P. T. Nguyen, N. El. I. Boukourt, and **G. Crupi**, "Breakdown characteristics study of III-nitride/ β -Ga₂O₃ nano-HEMT as a function of field-plate length & AlN nucleation layer thickness," *IEEE Calcutta Conference* (CALCON), Kolkata, India, 10-11 December 2022.
- [C87] G. Gugliandolo, X. Bao, H. Yuan, J. Li, J. Bao, **G. Crupi**, and N. Donato, "A split-ring resonator with interdigitated electrodes aimed at the dielectric characterization of liquid mixtures (Invited Paper)," *IEEE International Conference on Integrated Circuits, Technologies and Applications* (ICTA), Xi'an, Shaanxi, China, 28-30 October 2022, pp. 137-141 ([Invited Talk](#)).
- [C86] Z. Marinkovic, G. Gugliandolo, G. Campobello, **G. Crupi**, and N. Donato, "A combined approach using Lorentzian fitting and ANNs for microwave resonator modeling," *IEEE International Conference on Metrology for eXtended Reality, Artificial Intelligence and Neural Engineering* (IEEE MetroXRaine), Rome, Italy, 26-28 October 2022, pp. 608-612.
- [C85] X. Bao, Z. Wang, J. Bao, G. Gugliandolo, H. Yuan, Z. Zhao, J. Li, N. Donato, **G. Crupi**, B. Nauwelaers, and D. M. M.-P. Schreurs, "Salt content detection using a microwave sensor," *IEEE International Workshop on Metrology for the Sea* (IEEE MetroSea), Milazzo, Italy, 3-5 October 2022, pp. 479-483.
- [C84] G. Gugliandolo, A. Quattrocchi, M. Latino, **G. Crupi**, and N. Donato, "A low-cost measurement system for microplastic detection in marine environment: A proof of concept," *IEEE International Workshop on Metrology for the Sea* (IEEE MetroSea), Milazzo, Italy, 3-5 October 2022, pp. 23-27.
- [C83] S. Das, T. R. Lenka, F. A. Talukdar, R. T. Velpula, H. P. T. Nguyen, and **G. Crupi**, "Influence of prestrained graded InGa_N interlayer on the optical characteristics of InGa_N/Ga_N MQW-based LEDs," *International Conference on Numerical Simulation of Optoelectronic Devices* (NUSOD), Turin, Italy, 12-16 September 2022, pp. 91-92.
- [C82] G. Gugliandolo, A. Alimenti, K. Torokhtii, N. Pompeo, G. Campobello, **G. Crupi**, E. Silva, and N. Donato, "Design and test of an inkjet-printed microwave interdigital capacitor on flexible Kapton substrate," *IMEKO TC-4 International Symposium*, Brescia, Italy, 12-14 September 2022, pp. 346-351.
- [C81] L. Wang, X. Bao, Y. Wang, **G. Crupi**, and A. Zhang, "A localized and minimally invasive tumor treatment based on a frequency adjustable microwave ablation method," *IEEE International Symposium on Medical Measurements and Applications* (MeMeA), Giardini Naxos, Italy, 22-24 June 2022, pp. 1-6.
- [C80] Z. Marinkovic, G. Gugliandolo, A. Quattrocchi, G. Campobello, **G. Crupi**, and N. Donato, "Development and experimental validation of an artificial neural network model of a microwave microstrip resonator for humidity sensing," *IEEE International Symposium on Medical Measurements and Applications* (MeMeA), Giardini Naxos, Italy, 22-24 June 2022, pp. 1-6.
- [C79] G. Campobello, C. De Marchis, G. Gugliandolo, A. Giacobbe, **G. Crupi**, and N. Donato, "A simple and efficient near-lossless compression algorithm for surface electromyography signals," *IEEE International Symposium on Medical Measurements and Applications* (MeMeA), Giardini Naxos, Italy, 22-24 June 2022, pp. 1-6.

- [C78] G. Campobello, A. Quercia, G. Gugliandolo, A. Segreto, E. Tatti, M. F. Ghilardi, **G. Crupi**, A. Quartarone, and N. Donato, "Theoretical and experimental investigation of an efficient SVD-based near-lossless compression algorithm for multichannel EEG signals," *IEEE International Symposium on Medical Measurements and Applications (MeMeA)*, Giardini Naxos, Italy, 22-24 June 2022, pp. 1-6.
- [C77] G. Gugliandolo, G. Vermiglio, G. Cutroneo, G. Campobello, **G. Crupi**, and N. Donato, "Inkjet-printed capacitive coupled ring resonators aimed at the characterization of cell cultures," *IEEE International Symposium on Medical Measurements and Applications (MeMeA)*, Giardini Naxos, Italy, 22-24 June 2022, pp. 1-5.
- [C76] G. Gugliandolo, **G. Crupi**, G. Campobello, and N. Donato, "IoT powered detection and alarming system for hazardous gases in domestic environment," *IEEE International Workshop on Metrology for Living Environment (IEEE MetroLivEnv)*, Cosenza, Italy, 25-27 May 2022, pp. 247-251.
- [C75] V. Vadalà, **G. Crupi**, R. Giofrè, G. Bosi, A. Raffo, and G. Vannini, "mm-Wave GaN HEMT technology: Advances, experiments, and analysis," *IEEE Mediterranean Microwave Symposium (MMS)*, Pizzo Calabro, Italy, 9-13 May 2022, pp. 1-6.
- [C74] G. Gugliandolo, Z. Marinkovic, G. Campobello, **G. Crupi**, and N. Donato, "Microwave resonator for humidity detection applications: A comparative analysis between ANNs and Lorentzian fitting method," *IEEE Mediterranean Microwave Symposium (MMS)*, Pizzo Calabro, Italy, 9-13 May 2022, pp. 1-5.
- [C73] G. Gugliandolo, Z. Marinkovic, A. Quattrocchi, **G. Crupi**, and N. Donato, "Development of an inkjet-printed interdigitated device: CAD, fabrication, and testing," *IEEE International Conference on Integrated Circuits, Technologies and Applications (ICTA)*, Zhuhai, Guangdong, China, 24-26 November 2021, pp. 153-154.
- [C72] L. Wang, X. Bao, C. Liu, Y. Wang, **G. Crupi**, and A. Zhang, "An inexpensive coaxial balun-free antenna for microwave tumor treatment," *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS)*, Nis, Serbia, 20-22 October 2021, pp. 125-128.
- [C71] S. Das, T. R. Lenka, F. A. Talukdar, R. T. Velpula, B. Jain, H. P. T. Nguyen, and **G. Crupi**, "Effects of spontaneous polarization on luminous power of GaN/AlGaIn multi-quantum well UV-LED for light technology," *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS)*, Nis, Serbia, 20-22 October 2021, pp. 335-338.
- [C70] Z. Marinkovic, G. Gugliandolo, A. Quattrocchi, **G. Crupi**, and N. Donato, "Neural modeling of the surface acoustic wave resonator admittance parameters," *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS)*, Nis, Serbia, 20-22 October 2021, pp. 129-132.
- [C69] M. A. Alim, C. Gaquiere, and **G. Crupi**, "Experimental investigation on the bias and temperature dependence of the forward transmission coefficient for HEMT technologies," *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS)*, Nis, Serbia, 20-22 October 2021, pp. 70-73.
- [C68] N. Boukourt, A. M. Alamri, A. Garcia-Loureiro, Y. M. Abdulraheem, M. Seyyedhamzeh, and **G. Crupi**, "Effects of the gate dielectric material on the performance of a 14-nm SOI FinFET," *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS)*, Nis, Serbia, 20-22 October 2021, pp. 74-77.
- [C67] Z. Marinkovic, G. Gugliandolo, G. Campobello, **G. Crupi**, and N. Donato, "Extraction of the resonant parameters for surface acoustic wave resonators: ANNs versus Lorentzian fitting method," *IEEE International Conference on Microelectronics (MIEL)*, Nis, Serbia, 12-14 September 2021, pp. 281-284.
- [C66] Z. Marinkovic, G. Gugliandolo, G. Campobello, **G. Crupi**, and N. Donato, "Application of artificial neural networks for modeling of the frequency-dependent performance of surface acoustic wave resonators," *IEEE International Scientific Conference on Information, Communication and Energy Systems and Technologies (ICEST)*, Sozopol, Bulgaria, 16-18 June 2021, pp. 145-148.
- [C65] G. Campobello, A. Quercia, G. Gugliandolo, A. Segreto, E. Tatti, M. F. Ghilardi, **G. Crupi**, A. Quartarone, and N. Donato, "An efficient near-lossless compression algorithm for multichannel EEG signals," *IEEE International Symposium on Medical Measurements and Applications (MeMeA)*, Neuchâtel, Switzerland, 23-25 June 2021, pp. 1-6.
- [C64] G. Gugliandolo, G. Campobello, Z. Marinkovic, **G. Crupi**, A. Quartarone, G. Neri, and N. Donato, "Development of a multi-transduction system for breath analysis in neurodegenerative diseases," *IEEE International Symposium on Medical Measurements and Applications (MeMeA)*, Neuchâtel, Switzerland, 23-25 June 2021, pp. 1-6.
- [C63] G. Gugliandolo, D. Aloisio, G. Campobello, **G. Crupi**, and N. Donato, "Development and metrological evaluation of a microstrip resonator for gas sensing applications," *IMEKO TC-4 International Symposium*, Palermo, Italy, 14-16 September 2020, pp. 1-4.
- [C62] Z. Marinkovic, G. Gugliandolo, M. Latino, G. Campobello, **G. Crupi**, and N. Donato, "Artificial neural network modeling of interdigital capacitor sensor for oxygen detection," *IEEE International Scientific Conference on Information, Communication and Energy Systems and Technologies (ICEST)*, Niš, Serbia, 10-12 September 2020, pp. 195-198.
- [C61] G. Gugliandolo, M. Latino, G. Campobello, Z. Marinkovic, **G. Crupi**, and N. Donato, "On the gas sensing properties of microwave transducers," *IEEE International Scientific Conference on Information,*

Communication and Energy Systems and Technologies (ICEST), Niš, Serbia, 10-12 September 2020, pp. 191-194.

- [C60] G. Campobello, **G. Crupi**, and N. Donato, "Cryogenic electrical characterization and equivalent-circuit modeling of SAW resonators," *IEEE International Instrumentation and Measurement Technology Conference (I2MTC)*, Dubrovnik, Croatia, 25-28 May 2020, pp. 1-5.
- [C59] L. Boglione, J. Roussos, A. Caddemi, E. Cardillo, and **G. Crupi**, "Device noise parameter characterization: Towards extraction automation," *Automatic RF Techniques Group Conference (ARFTG)*, San Antonio, TX, USA, 26-29 January 2020, pp. 1-4.
- [C58] **G. Crupi**, A. Raffo, Z. Marinković, D. M. M.-P. Schreurs, and A. Caddemi, "A comprehensive and critical overview of the kink effect in S_{22} for HEMT technology," *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS)*, Nis, Serbia, 23-35 October 2019, pp. 13-20 ([Invited Talk](#)).
- [C57] **G. Crupi**, X. Bao, P. Barmuta, I. Ocket, D. M. M.-P. Schreurs, and B. Nauwelaers, "Microfluidic biosensor for bioengineering: High-frequency equivalent-circuit modeling of interdigital capacitor," *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS)*, Nis, Serbia, 23-35 October 2019, pp. 315-318.
- [C56] Z. Marinković, **G. Crupi**, V. Vadalà, A. Raffo, A. Caddemi, V. Marković, and D. M. M.-P. Schreurs, "Temperature dependent small-signal neural modeling of high-periphery GaN HEMTs," *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS)*, Nis, Serbia, 23-35 October 2019, pp. 33-36.
- [C55] Z. Marinković, **G. Crupi**, A. Caddemi, V. Marković, and D. M. M.-P. Schreurs, "Artificial neural networks for small-signal modeling of advanced microwave transistors: Does the device technology influence modeling?," *European Microwave Conference in Central Europe (EuMCE) Workshop on "Advances in Smart Modeling Techniques for Microwave Engineering"*, Prague, Czech Republic, 13-15 May 2019.
- [C54] A. Jarndal, A. S. Hussein, **G. Crupi**, and A. Caddemi, "Reliable PSO based noise modeling approach applied to GaN HEMTs," *IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC)*, Brive La Gaillarde, France, 5-6 July 2018, pp. 1-3.
- [C53] A. Caddemi, E. Cardillo, and **G. Crupi**, "HEMT sensitivity to optical radiation: Distinguishing microwave noise aspects," *International Symposium on SiO₂ Advanced Dielectrics and Related Devices (SiO₂)*, Bari, Italy, 11-13 June 2018 ([Invited Talk](#)).
- [C52] **G. Crupi**, Z. Marinković, D. M. M.-P. Schreurs, V. Marković, and A. Caddemi, "Multi-bias equivalent circuit for MOSFET modelling," *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS)*, Nis, Serbia, 18-20 October 2017, pp. 347-350.
- [C51] Z. Marinković, **G. Crupi**, D. M. M.-P. Schreurs, A. Caddemi, and V. Marković, "Neural procedure for microwave MOSFET modelling versus bias and gate length," *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS)*, Nis, Serbia, 18-20 October 2017, pp. 166-169.
- [C50] A. Petrocchi, **G. Crupi**, V. Vadalà, G. Avolio, A. Raffo, D. M. M.-P. Schreurs, A. Caddemi, and G. Vannini, "Thermal characterization of high-power GaN HEMTs up to 65 GHz," *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS)*, Nis, Serbia, 18-20 October 2017, pp. 162-165.
- [C49] Z. Marinković, **G. Crupi**, A. Caddemi, and V. Marković, "GaN HEMT small-signal modelling: Neural networks versus equivalent circuit," *IEEE International Conference on Microelectronics (MIEL)*, Nis, Serbia, 9-11 October 2017, pp. 153-156.
- [C48] N. Boukortt, B. Hadri, S. Patanè, A. Caddemi, **G. Crupi**, and E. Cardillo, "Electrical characteristic of SOI TG n-FinFET," *Materials for Advanced Metalization (MAM)*, Brussels, Belgium, 20-23 March 2016.
- [C47] N. Boukortt, A. Caddemi, E. Cardillo, **G. Crupi**, B. Hadri, and S. Patanè, "Inverse modeling of an AlGaAs/GaAs HEMT from DC and microwave measurements," *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS)*, Nis, Serbia, 14-17 October 2015, pp. 94-97.
- [C46] A. Caddemi, E. Cardillo, **G. Crupi**, and G. Salvo, "Performance analysis of a microwave low-noise amplifier under laser illumination," *IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS)*, Nis, Serbia, 14-17 October 2015, pp. 90-93.
- [C45] Z. Marinković, **G. Crupi**, G. Avolio, V. Marković, A. Caddemi, and D. M. M.-P. Schreurs, "Neural network modelling of GaAs pHEMTs suitable for millimeter-wave mixer design," *IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC)*, Taormina, Italy, 1-2 October 2015, pp. 1-3.
- [C44] A. Nalli, A. Raffo, **G. Crupi**, S. D'Angelo, D. Resca, F. Scappaviva, G. Salvo, A. Caddemi, and G. Vannini, "GaN HEMT modelling through 50- Ω NF measurements," *IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC)*, Taormina, Italy, 1-2 October 2015, pp. 1-3.

- [C43] A. Caddemi, **G. Crupi**, and G. Salvo, "Light sensitivity of GaAs pHEMT's: A close insight into the microwave noise behavior," *European Microwave Integrated Circuits Conference (EuMIC)*, Rome, Italy, 6-7 October 2014, pp. 214-217.
- [C42] A. Nalli, A. Raffo, **G. Crupi**, S. D'Angelo, D. Resca, G. Salvo, F. Scappaviva, A. Caddemi, and G. Vannini, "A scalable HEMT noise model based on FW-EM analyses," *European Microwave Integrated Circuits Conference (EuMIC)*, Rome, Italy, 6-7 October 2014, pp. 1420-1423.
- [C41] G. Avolio, A. Raffo, I. Angelov, V. Vadalà, **G. Crupi**, A. Caddemi, G. Vannini, and D. M. M.-P. Schreurs, "Nonlinear model for 40-GHz cold-FET operation," *IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC)*, Leuven, Belgium, 2-4 April 2014, pp. 1-3.
- [C40] Z. Marinković, **G. Crupi**, A. Raffo, G. Bosi, G. Avolio, V. Marković, A. Caddemi, D. M. M.-P. Schreurs, and G. Vannini, "A neural network approach for nonlinear modelling of LD MOSFETs," *IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC)*, Leuven, Belgium, 2-4 April 2014, pp. 1-3.
- [C39] **G. Crupi**, A. Raffo, D. M. M.-P. Schreurs, G. Avolio, A. Caddemi, and G. Vannini, "Modelling insight into the resonance frequencies of the microwave impedance parameters for GaAs HEMTs," *IEEE International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Service (TELSIKS)*, Nis, Serbia, 16-19 October 2013, pp. 184-187.
- [C38] A. Caddemi, **G. Crupi**, E. Fazio, S. Patanè, and G. Salvo, "Analysis of microwave noise parameters of scaled AlGaAs/GaAs HEMT's under light exposure," *IEEE International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Service (TELSIKS)*, Nis, Serbia, 16-19 October 2013, pp. 178-183 ([Invited Talk](#)).
- [C37] Z. Marinković, **G. Crupi**, D. M. M.-P. Schreurs, A. Caddemi, and V. Marković, "Artificial neural network modeling for transistors and varactors in FinFET technology," *IEEE International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Service (TELSIKS)*, Nis, Serbia, 16-19 October 2013, pp. 188-191.
- [C36] G. Avolio, A. Raffo, I. Angelov, **G. Crupi**, G. Vannini, and D. M. M.-P. Schreurs, "A novel technique for the extraction of nonlinear model for microwave transistors under dynamic-bias operation," *International Microwave Symposium (IMS)*, Seattle, Washington, USA, 2-7 June 2013.
- [C35] **G. Crupi**, A. Raffo, G. Sivverini, G. Bosi, G. Avolio, D. M. M.-P. Schreurs, A. Caddemi, and G. Vannini, "Non-linear look-up table modeling of GaAs HEMTs for mixer application," *IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC)*, Dublin, Ireland, 3-4 September 2012, pp. 1-3.
- [C34] G. Avolio, D. M. M.-P. Schreurs, A. Raffo, I. Angelov, **G. Crupi**, G. Vannini, and B. Nauwelaers, "Waveforms-based large-signal identification of transistor models," *International Microwave Symposium (IMS)*, Montreal, Canada, 17-22 June 2012, pp. 1-3.
- [C33] V. Vadalà, A. Raffo, G. Bosi, **G. Crupi**, and G. Vannini, "Transistor vector load-pull characterization for millimeter-wave power amplifier design," *Automatic RF Techniques Group Conference (ARFTG)*, Montreal, Canada, 22 June 2012, pp. 1-3.
- [C32] D. M. M.-P. Schreurs, G. Avolio, A. Raffo, G. Vannini, **G. Crupi**, and A. Caddemi, "Time-domain waveform based extraction of FinFET non-linear I-V model," *International Conference Mixed Design of Integrated Circuits and Systems (MIXDES)*, Wrocław, Poland, 21-26 May 2012, pp. 84-87.
- [C31] Z. Marinković, **G. Crupi**, D. M. M.-P. Schreurs, A. Caddemi, and V. Marković, "High-frequency multi-bias small-signal neural modeling for FinFET," *IEEE International Conference on Microelectronics (MIEL)*, Nis, Serbia, 13-16 May 2012, pp. 265-268.
- [C30] **G. Crupi**, D. M. M.-P. Schreurs, G. Avolio, A. Caddemi, A. Raffo, and G. Vannini, "De-embedding: linear versus non-linear," *European Microwave Week (EuMW) Workshop on "From De-embedding to Waveform Engineering"*, Manchester, UK, 9 October 2011, pp. 1-24.
- [C29] G. Avolio, A. Raffo, D. M. M.-P. Schreurs, **G. Crupi**, G. Vannini, and B. Nauwelaers, "Bias and frequency dispersion of dynamic I-V characteristics in microwave transistors," *European Microwave Integrated Circuits Conference (EuMIC)*, Manchester, UK, 10-11 October 2011, pp. 93-96.
- [C28] **G. Crupi**, A. Raffo, D. M. M.-P. Schreurs, G. Avolio, V. Vadalà, S. Di Falco, A. Caddemi, and G. Vannini, "GaN HEMT large-signal model accounting for both low-frequency dispersion and high-frequency non-quasi-static effects," *IEEE International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Service (TELSIKS)*, Nis, Serbia, 5-8 October 2011, pp. 234-237.
- [C27] D. M. M.-P. Schreurs, Z. Marinković, and **G. Crupi**, "Team projects for ICT master students: Evaluation and case studies," *IEEE International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Service (TELSIKS)*, Nis, Serbia, 5-8 October 2011, pp. 361-364.
- [C26] Z. Marinković, **G. Crupi**, D. M. M.-P. Schreurs, A. Caddemi, and V. Markovic, "Artificial neural network based modeling of FinFET forward transmission coefficient," *IEEE International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Service (TELSIKS)*, Nis, Serbia, 5-8 October 2011, pp. 238-241.
- [C25] Z. Marinković, **G. Crupi**, D. Schreurs, V. Markovic, and A. Caddemi, "Neural modeling of the Y_{21} parameter of microwave FinFETs," *Conference for Electronics, Telecommunications, Computers,*

- Automatic Control and Nuclear Engineering* (ETRAN), Banja Vrucica, Teslic, Bosnia and Herzegovina, 6-9 June, 2011, pp. MT3.21-1-MT3.21-4.
- [C24] P. Barmuta, G. Avolio, D. M. M.-P. Schreurs, A. Raffo, **G. Crupi**, K. Czuba, and G. Vannini “Temperature dependent vector large-signal measurements,” *IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits* (INMMiC), Vienna, Austria, 18-19 April 2011, pp. 21-24.
- [C23] G. Avolio, D. M. M.-P. Schreurs, A. Raffo, **G. Crupi**, G. Vannini, and B. Nauwelaers, “A de-embedding procedure oriented to the determination of FET intrinsic I-V characteristics from high-frequency large-signal measurements,” *Automatic RF Techniques Group Conference* (ARFTG), Clearwater, FL, USA, 30 November - 3 December 2010, pp. 1-6.
- [C22] G. Avolio, D. M. M.-P. Schreurs, A. Raffo, **G. Crupi**, G. Vannini, and B. Nauwelaers, “Non-linear measurement techniques for the low- and high-frequency characterization of microwave active devices,” *Automatic RF Techniques Group Conference* (ARFTG) *Workshop on “Nonlinear measurements to investigate memory effects of RF transistors and active devices”*, Clearwater, FL, USA, 30 November - 1 December 2010.
- [C21] **G. Crupi**, A. Caddemi, D. M. M.-P. Schreurs, A. Raffo, G. Avolio, M. Homayouni, and G. Vannini, “Non-quasi-static modeling of the intrinsic Y_{22} for GaN, Si, and GaAs mm-wave FET technologies,” *European Radar Conference* (EuRAD), Paris, France, 30 September - 1 October 2010, pp. 316-319.
- [C20] Z. Marinković, **G. Crupi**, A. Caddemi, and V. Marković, “Development of a neural approach for bias-dependent scalable small-signal equivalent circuit modeling of GaAs HEMTs,” *European Microwave Integrated Circuits Conference* (EuMIC), Paris, France, 27-28 September 2010, pp. 182-185.
- [C19] Z. Marinković, **G. Crupi**, A. Caddemi, and V. Marković, “On the neural approach for FET small-signal modelling up to 50 GHz,” *Symposium on Neural Network Applications in Electrical Engineering* (NEUREL), Belgrade, Serbia, 23-25 September 2010, pp. 89-92.
- [C18] D. M. M.-P. Schreurs, M. Homayouni, G. Avolio, **G. Crupi**, and A. Caddemi, “Capabilities and limitations of equivalent circuit models for modeling advanced Si FET devices,” *International Conference Mixed Design of Integrated Circuits and Systems* (MIXDES), Wrocław, Poland, 24-26 June 2010, pp. 70-74.
- [C17] W. Wiatr, **G. Crupi**, A. Caddemi, A. Mercha, and D. M. M.-P. Schreurs, “Source-pull characterization of FinFET noise,” *International Conference Mixed Design of Integrated Circuits and Systems* (MIXDES), Wrocław, Poland, 24-26 June 2010, pp. 425-430.
- [C16] M. Homayouni, D. M. M.-P. Schreurs, **G. Crupi**, G. Avolio, and B. Nauwelaers, “Evaluation of lookup table non-quasi-static nonlinear models at microwave and mm-wave frequencies,” *IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits* (INMMiC), Goteborg, Sweden, 26-27 April 2010, pp. 172-175.
- [C15] **G. Crupi**, D. M. M.-P. Schreurs, A. Caddemi, I. Angelov, R. Liu, W. De Raedt, and M. Germain, “Combined empirical and look-up table approach for non-quasi-static modelling of GaN HEMTs,” *IEEE International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Service* (TELSIKS), Nis, Serbia, 7-9 October 2009, pp. 40-43.
- [C14] A. Caddemi, **G. Crupi**, and A. Macchiarella, “Extraction and analysis of noise parameters of on wafer HEMTs up to 26.5 GHz,” *AIP Proceeding on the 20th International Conference on Noise and Fluctuations* (ICNF), Pisa, Italy, 14-19 June 2009, vol. 1129, pp. 615-618.
- [C13] D. M. M.-P. Schreurs, M. Myslinski, **G. Crupi**, D. Xiao, M. Homayouni, and G. Avolio, “Optimizing (non-)linear measurements for model construction and validation,” *International Microwave Symposium* (IMS) *Workshop on “Parameter Extraction Strategies for Compact Transistor Models”*, Boston, Massachusetts, USA, 7-12 June 2009, pp. 1-20.
- [C12] D. M. M.-P. Schreurs, **G. Crupi**, and A. Caddemi, “Microwave modelling of emerging device technologies,” *International Conference Semiconductor Dresden* (SCD), Dresden, Germany, 29-30 April 2009, pp. 1-4 (Invited Talk).
- [C11] M. Myslinski, **G. Crupi**, M. Vanden Bossche, D. M. M.-P. Schreurs, and B. Nauwelaers, “Using large-signal measurements for transistor characterization and model verification in a device modeling program,” *International MOS-AK Meeting*, San Francisco, CA, 13 December 2008, pp. 1-34.
- [C10] M. Homayouni, D. M. M.-P. Schreurs, **G. Crupi**, and B. Nauwelaers, “Non-quasi-static nonlinear model for FinFETs using higher-order sources,” *IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits* (INMMiC), Malaga, Spain, 24-25 November 2008, pp. 13-16.
- [C9] **G. Crupi**, D. M. M.-P. Schreurs, I. Angelov, A. Caddemi, M. Homayouni, and B. Parvais, “Direct extraction of table based non-linear device models,” *European Microwave Week* (EuMW) *Workshop on “Advances in Characterization and Modeling of Emerging Low-Power and High-Power Devices”*, Amsterdam, Netherlands, 27 October 2008, pp. 97-119.
- [C8] L. Pantisano, L. Trojman, J. Mitard, B. DeJaeger, S. Severi, G. Eneman, **G. Crupi**, T. Hoffmann, I. Ferain, M. Meuris, and M. Heyns, “Fundamentals and extraction of velocity saturation in sub-100 nm (110)-Si and (100)-Ge,” *IEEE Symposium on VLSI Technology*, Honolulu, Hawaii, 17-19 June 2008, pp. 52-53.
- [C7] **G. Crupi**, A. Caddemi, D. M. M.-P. Schreurs, M. Homayouni, I. Angelov, and B. Parvais, “Analysis of quasi-static assumption in nonlinear FinFET model,” *17th IEEE International Conference on*

Microwaves, Radar, and Wireless Communications (MIKON), Wroclaw, Poland, 19-21 May 2008, pp. 453-456.

- [C6] **G. Crupi**, D. M. M.-P. Schreurs, I. Angelov, A. Caddemi, and B. Parvais “Equivalent circuit based non-linear microwave model for FinFETs,” *11th International Symposium on Microwave and Optical Technology* (ISMOT), Monte Porzio Catone, Italy, 17-21 December 2007, pp. 99-102.
- [C5] A. Caddemi, **G. Crupi**, and D. Schreurs, “Analytical construction of nonlinear lookup table model for advanced microwave transistors,” *IEEE International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Service* (TELSIKS), Nis, Serbia, 26-28 September 2007, pp. 261-270 (Invited Talk).
- [C4] **G. Crupi** and D. M. M.-P. Schreurs, “Implementation of non-linear model based on lookup table approach,” *3rd TARGET Winter School on CAD Implementation of Non-Linear Device Model and Advanced Measurements*, Santander, Spain, 19-23 February 2007, pp. 1-51 (ISBN 978-84-8102-452-4).
- [C3] N. Donato, A. Caddemi, **G. Crupi**, and E. Calandra, “Microwave characterization and modeling of packaged HEMTs by a direct extraction procedure at cryogenic temperature,” *21st IEEE Instrumentation and Measurement Technology Conference* (IMTC), Como, Italy, 18-20 May 2004, vol. 3, pp. 2208-2211.
- [C2] **G. Crupi** and N. Donato, “Bias and temperature dependent modeling of on wafer HEMT’s by a direct and fast procedure,” *IEEE International Symposium on Industrial Electronics* (ISIE), Ajaccio, France, 4-7 May 2004, pp. 1543-1548.
- [C1] A. Caddemi, N. Donato, and **G. Crupi**, “A robust approach for the direct extraction of HEMT circuit elements vs. bias and temperature,” *IEEE International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Service* (TELSIKS), Nis, Serbia and Montenegro, 1-3 October 2003, vol. 2, pp. 557-560.

INTERNATIONAL BOOKS

- [B2] “Microwave wireless communications: From transistor to system level,” edited by A. Raffo and **G. Crupi**, Oxford:UK: *Elsevier Academic Press*, March 2016.
- [B1] “Microwave de-embedding: From theory to applications,” edited by **G. Crupi** and D. M. M.-P. Schreurs, Oxford:UK: *Elsevier Academic Press*, November 2013.

INTERNATIONAL BOOK CHAPTERS

- [BC4] A. Raffo and **G. Crupi**, “Preface,” in the book “Microwave wireless communications: From transistor system level,” edited by A. Raffo and G. Crupi, Oxford:UK: *Elsevier Academic Press*, 2016.
- [BC3] **G. Crupi**, A. Raffo, G. Avolio, A. Caddemi, D. M. M.-P. Schreurs, and G. Vannini, “Microwave transistor modelling,” Chapter 1 in the book “Microwave wireless communications: From transistor system level,” edited by A. Raffo and G. Crupi, Oxford:UK: *Elsevier Academic Press*, 2016.
- [BC2] **G. Crupi**, D. M. M.-P. Schreurs, and A. Caddemi, “A clear-cut introduction to the de-embedding concept: less is more,” Chapter 1 in the book “Microwave de-embedding: From theory to applications,” edited by G. Crupi and D. M. M.-P. Schreurs, Oxford:UK: *Elsevier Academic Press*, 2013.
- [BC1] D. M. M.-P. Schreurs, M. Myslinski, and **G. Crupi**, “Optimizing microwave measurements for model construction and validation,” Chapter 8 in the book “Nonlinear transistor model parameter extraction techniques,” edited by C. Fager, D. E. Root, and M. Rudolph, *Cambridge University Press*, 2011.