



Giovanni Crupi

CURRICULUM VITAE

17 May 2018

PERSONAL DATA

Birth's city	Lamezia Terme (Italy),
Birth's day	15 September 1978
Position held	Associate Professor
Affiliation	BIOMORF Department, University of Messina, Messina, ITALY
Phone	+39-090-3977327 (office), +39-090-3977388 (lab), +39-338-3179173 (mobile)
Fax	+39 090 391382
E-mail	crupig@unime.it
Skype name	giocrupi

EDUCATION

Dec. 2006	Ph.D. degree from the University of Messina, Italy Thesis's title: "Characterization and Modelling of Advanced GaAs, GaN and Si Microwave FETs" Advisors: Prof. Alina Caddemi (University of Messina, Italy) Prof. Dominique Schreurs (University of Leuven, Belgium)
Feb. 2004	Second Level University Master in "Microwave Systems and Technologies for Telecommunications"
Apr. 2003	M.S. degree in Electronic Engineering cum Laude (with Honors) from the University of Messina Thesis's title: "Microwave PHEMT characterization and small signal modeling by direct extraction procedures" (in italian) Advisors: Prof. Alina Caddemi (University of Messina, Italy)
Aug. 1997	"Diploma di maturità classica" with full grade 60/60 from the "Liceo classico-Ginnasio Pitagora" of Crotona, Italy

PROFESSIONAL EXPERIENCE

Dec. 2017 – Present	Associate Professor at BIOMORF Department, University of Messina
Jan. 2015 – Dec. 2017	Tenure Track Assistant Professor at BIOMORF Department, University of Messina
Feb. 2014	National scientific qualification to function as associate professor in Italian universities
Jun. 2013 – Dec. 2014	Untenured Assistant Professor at DICIEAMA Department, University of Messina
Mar. 2012 – May 2013	Research Contract with "Dipartimento di Fisica della Materia e Ingegneria Elettronica" University of Messina Scientific Supervisor: Prof. Alina Caddemi
Sep. 2011 – Feb. 2011	Research Contract with the "Engineering Department", University of Ferrara Scientific Supervisor: Prof. Giorgio Vannini
2010/2011	Contract Professor of "Microwave Electronics", Electronic Engineering, University of Messina
2009/2010	Contract Professor of "Optoelectronics", Electronic Engineering, University of Messina
Sep. 2007 – Sep. 2010	Research Contract with "Dipartimento di Fisica della Materia e Ingegneria Elettronica" University of Messina under the context of "IMT-ARSEL" project
Aug. 2006 - July 2007	Employment contract at the University of Leuven Research subject: small and large signal modeling of Fin transistors/varactors Scientific Supervisor: Prof. Dominique Schreurs
June 2009	Visiting scientist at Warsaw University of Technology, Warsaw, Poland Research subject: noise modeling of advanced microwave transistors Scientific Supervisor: Dr. Wiatr Wojciech
Mar. 2010 - May 2010 Nov. 2008	Visiting scientist at the University of Leuven and at the Interuniversity Microelectronics Center (IMEC), Leuven, Belgium
Jan. 2008 – Feb. 2008 Sep. 2007	Research subject: small and large signal modeling of advanced microwave transistors
Feb. 2006 - July 2006	Scientific Supervisor: Prof. Dominique Schreurs
Sep. 2005 - Dec. 2005	
May 2005 - June 2005	

TEACHING ACTIVITIES

2013 - 2014 2014 - 2015 2015 - 2016 2016 - 2017 2017 - 2018	Course title: “Bioengineering”, Bachelor Degree (Corso di Laurea Triennale) in Neurophysiopathology Techniques, University of Messina, 2013/2014, 2014/2015, 2015/2016, 2016/2017, 2017/2018.
2015 - 2016 2016 - 2017 2017 - 2018	Course title: “Laboratory of Wireless Technologies”, Master Degree (Corso di Laurea Magistrale) in Engineering and Computer Science, University of Messina, 2015/2016, 2016/2017, 2017/2018.
2017 - 2018	Course title: “Electronic and Informatics Bioengineering”, Bachelor Degree (Corso di Laurea Triennale) in Orthoptic and Ophthalmological Assistance, University of Messina, 2017/2018.
2014 - 2015 2015 - 2016 2016 - 2017	Course title: “Electronics”, School of Specialization in Nuclear Medicine, University of Messina, 2014/2015, 2015/2016, 2016/2017.
2014 - 2015	Course title: “Microwave Electronics”, Master Degree (Corso di Laurea Magistrale) in Electronic Engineering, University of Messina, 2014/2015.
Jun. 2013	Course title: “Design and Lab”, Master in “Micro and Nanotechnologies for Extra High Frequency – MINTEHF”, University of Messina, June 2013.
2010 - 2011	Course title: “Microwave Electronics”, Master Degree (Corso di Laurea Magistrale) in Electronic Engineering, University of Messina, 2010/2011.
2009 - 2010	Course title: “Optoelectronics”, Master Degree (Corso di Laurea Magistrale) in Electronic Engineering, University of Messina, 2009/2010.
Sep. 2007	Course title: “Fundamentals of Electronics”, Master in “Meccatronica per le nuove attività produttive – MECAP”, University of Messina, September 2007.
Feb. 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.

MEMBERSHIPS

Sep. 2012 – present	Chair of the IEEE MTT-S Graduate Fellowship Program
Sep. 2012 – present	IEEE MTT-S Education Committee Member
Oct. 2012 – present	IEEE Microwave Theory and Techniques Society (MTT-S) Member
Jul. 2013 – present	IEEE Senior Member
Oct. 2012 – Jul. 2013	IEEE Member
Jan. 2004 – Dec. 2004	IEEE Student Member

AWARDS

- June 2010** | Outstanding Paper Award for the contribution “Source-pull characterization of FinFET noise,” W. Wiatr, **G. Crupi**, A. Caddemi, A. Mercha, and 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.
- July 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 temperature,” A. Caddemi, **G. Crupi**, N. Donato, and F. Catalfamo, *Riunione annuale del Gruppo Elettronica (GE)*, Giardini Naxos (ME), Italy, 30 June - 2 July 2005.
- May 2004** | Student travel grant awarded by IES Student Activities Committee to participate to IEEE-ISIE 2004 for the contribution “Bias and temperature dependent modeling of on wafer HEMT’s by a direct and fast procedure,” **G. Crupi** and N. Donato, *IEEE International Symposium on Industrial Electronics (ISIE)*, Ajaccio, France, 4-7 May 2004, pp. 1543-1548.

EDITOR

- Oct. 2017 - present** | Associate Editor of *International Journal of RF and Microwave Computer-Aided Engineering*
- Sep. 2012 – present** | Associate Editor of *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*
- Oct. 2015 - present** | Member of the Editorial Board of *International Journal of RF and Microwave Computer-Aided Engineering*

AREAS OF EXPERTISE

- Analytical extraction of small signal models for advanced microwave devices
- Analytical extraction of large signal models for advanced microwave devices
- DC and microwave electrical characterization of advanced microwave devices
- Noise modeling of advanced microwave devices

GUEST EDITOR

- Guest Editor (with P. Colantonio), mini Special issue on “Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMIC) 2015”, *IEEE Transactions on Microwave Theory and Techniques*, May 2016.
- Guest Editor (with A. Raffo), mini Special issue on “Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMIC) 2014”, *IEEE Transactions on Microwave Theory and Techniques*, November 2014.
- Guest Editor (with D. M. M.-P. Schreurs, and A. Caddemi), Special issue on “Modeling of high-frequency silicon transistors”, *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, September/December 2014.

REVIEWER FOR JOURNALS

- IEEE - Transactions Microwave Theory and Techniques
- IEEE - Microwave and Wireless Components Letters
- IEEE - Transactions on Electron Devices
- IEEE - Electron Device Letters
- IEEE - Transactions on Instrumentation and Measurement
- IEEE - Transactions on Circuits and Systems II
- IEEE - Transactions on Computer-Aided Design of Integrated Circuits and Systems
- IEEE - IEEE Transactions on Nanotechnology
- Wiley - International Journal of RF and Microwave Computer-Aided Engineering
- Wiley - International Journal of Numerical Modelling: Electronic Networks, Devices and Fields
- Elsevier - Solid-State Electronics
- Elsevier - Microelectronic Engineering
- Elsevier - Microelectronics Journal
- Elsevier - Superlattices and Microstructures
- Elsevier - Integration, the VLSI Journal
- Elsevier - Materials Science in Semiconductor Processing
- Elsevier - Engineering Science and Technology, an International Journal
- IET - Electronics Letters
- IET - Circuits, Devices & Systems
- IET - Microwaves, Antennas & Propagation
- Cambridge University Press - International Journal of Microwave and Wireless Technologies
- Taylor & Francis - Journal of Electromagnetic Waves and Applications
- Taylor & Francis - IETE Technical Review
- Springer - Journal of Infrared, Millimeter, and Terahertz Waves
- Springer - Analog Integrated Circuits and Signal Processing
- IOP Publishing Ltd.: Semiconductor Science and Technology
- 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
- Serbia and Montenegro IEEE MTT-S Chapter - Microwave Review
- Hindawi - International Journal of Microwave Science and Technology
- Hindawi - Journal of Sensors

REVIEWER FOR BOOKS

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

CONFERENCE ORGANIZATION AND CHAIRING

- Member of the Steering Committee of the IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC).
- Permanent member of the Technical Programme Committee of the IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS).
- Chair of the TPC of the IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC), Taormina, Italy, 2015.
- Chair of the TPC of the IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC), Leuven, Belgium, 2014.

- Component of the jury for the Best Student Paper Award supported by the GAAS Association at IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC), Leuven, Belgium, 2014.
- Chair of the Poster Session at the IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC), Leuven, Belgium, 2014.
- Organizer of the European Microwave Week (EuMW) Workshop on “From De-embedding to Waveform Engineering”, Manchester, UK, 2011.
- Session chair at the European Microwave Week (EuMW) Workshop on “Advances in Characterization and Modeling of Emerging Low-Power and High-Power Devices”, Amsterdam, Netherlands, 2008.
- Session co-chair at the 8th IEEE International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Service (TELSIKS), Nis, Serbia, 2007.

PROJECT MANAGEMENT

- 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.
- Involved with several European and Italian projects: network TARGET “Top Amplifier Research Groups in a European Team” under contract IST-1-507893-NOE, “Nano-RF” project under contract IST-027150, PON “PANREX” (budget assigned to the University of Messina: 1.208.400 euro), FIRB “IMT-ARSEL” project prot. RBIP06R9X5 with financial support by Italian MIUR (budget assigned to the University of Messina: 309.000 euro), and “CMOGAN” project through the contribution of the Italian Ministero degli Affari Esteri, Direzione Generale per la Promozione e la Cooperazione Culturale (budget assigned to the University of Messina: 50.000 euro), “TEMPUS” project for the “Development of Master study programmes in Telecommunications and Control” at the University of Nis, Serbia (budget assigned to the University of Messina: 30.000 euro).

MISCELLANEOUS INFORMATION

- External expert reviewer for the Romanian National Research Council (CNCS), though Executive Agency for Higher Education, Research, Development and Innovation Funding, (UEFISCDI).
- 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.
- Recognized member of the “Golden List” of Reviewers for:
 - IEEE Transactions on Electron Devices in 2011, 2014, 2015, 2016, and 2017.
 - IEEE Electron Device Letters in 2015 and 2017.
- Outstanding Reviewer Awards for Semiconductor Science and Technology in 2017.
- Member of the of the steering committee of the international Ph.D. course in “Cyber Physical Systems”, University of Messina, Italy (from 2017).
- Member of the teaching board of the Ph.D. course in “Civil, Environmental, and Security Engineering”, Mediterranea University of Reggio Calabria, University of Messina, and Kore University of Enna, Italy (from 2014 until 2017).
- Recipient of the 2017 FFABR national research grant by the Italian Ministry of Education, University and Research (MIUR).

PUBLICATION SUMMARY

International Journals: 84 (3 EDITORIAL, 2 INVITED, 1 REVIEW)

- Microwave and Optical Technology Letters: 10
- IEEE Transactions on Microwave Theory and Techniques: 9
- IEEE Microwave and Wireless Components Letters: 9
- Solid-State Electronics: 8
- International Journal of Numerical Modelling: Electronic Networks, Devices and Fields: 8
- IEEE Microwave Magazine: 7
- International Journal of RF and Microwave Computer-Aided Engineering: 5
- Microelectronic Engineering: 4
- Microelectronics Journal: 3
- Microwave Review: 3
- Electronics Letters: 2
- IET Circuits, Devices & Systems: 2
- IEEE Transactions on Power Electronics: 1
- IEEE Journal of Biomedical and Health Informatics: 1
- IEEE Journal of Electromagnetics, RF, and Microwaves in Medicine and Biology: 1
- IEEE Transactions on Instrumentation and Measurement: 1
- Microelectronics Reliability: 1
- International Journal of Microwave and Wireless Technologies: 1
- Transactions on Electrical and Electronic Materials: 2
- Silicon: 2
- International Journal of Microwave and Optical Technology: 1
- MDPI Electronics: 1
- Journal of Automatic Control: 1
- Electronics: 1

International Conferences: 54 (4 INVITED)

- IEEE International Conference on Advanced Technologies, Systems and Services in Telecommunications (TELSIKS): 14
- IEEE International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits (INMMiC): 9
- European Microwave Integrated Circuits Conference (EuMIC): 4
- International Conference Mixed Design of Integrated Circuits and Systems (MIXDES): 3
- International Microwave Symposium (IMS): 2
- IEEE Automatic RF Techniques Group Conference (ARFTG) : 2
- International Conference on Microelectronics (MIEL): 2
- IEEE Symposium on VLSI Technology: 1
- IEEE Instrumentation and Measurement Technology Conference (IMTC): 1
- IEEE International Symposium on Industrial Electronics (ISIE): 1
- IEEE International Conference on Microwaves, Radar, and Wireless Communications (MIKON): 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 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
- 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

SCOPUS

- Author ID: 7004038061
- Citations and H-index: 1137 and 20
- ORCID-ID: 0000-0002-6666-6812

INTERNATIONAL JOURNALS

- [IJ84] **G. Crupi**, R. Kaul, C. Li, and R. K. Gupta, "The 2018 MTT-S Graduate Student Fellowship Awards," accepted for publication in *IEEE Microwave Magazine*.
- [IJ83] G. Bosi, A. Raffo, F. Trevisan, V. Vadalà, **G. Crupi**, and G. Vannini, "Nonlinear-embedding design methodology oriented to LDMOS power amplifiers," published online EarlyView in *IEEE Transactions on Power Electronics*.
- [IJ82] 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.
- [IJ81] **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.
- [IJ80] 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.
- [IJ79] 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.
- [IJ78] **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.
- [IJ77] **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.
- [IJ76] **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," invited paper *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 30, no. 1, e2125, January/February 2017.
- [IJ75] 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.
- [IJ74] 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.
- [IJ73] **G. Crupi**, A. Caddemi, D. M. M.-P. Schreurs, and G. Dambrine, "The large world of FET small-signal equivalent circuits," invited paper *International Journal of RF and Microwave Computer-Aided Engineering*, vol. 26, no. 9, pp. 749-762, November 2016.
- [IJ72] **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.
- [IJ71] 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.
- [IJ70] 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.
- [IJ69] **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.
- [IJ68] **G. Crupi** and P. Colantonio, "Guest editorial," editorial paper on *IEEE Transactions on Microwave Theory and Techniques*, vol. 64, no. 5, pp. 1349-1350, May 2016.
- [IJ67] 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.

- [IJ66] **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.
- [IJ65] 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.
- [IJ64] 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.
- [IJ63] 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.
- [IJ62] 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.
- [IJ61] **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.
- [IJ60] **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.
- [IJ59] 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.
- [IJ58] **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.
- [IJ57] 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.
- [IJ56] **G. Crupi** and A. Raffo, “Guest editorial,” editorial paper on *IEEE Transactions on Microwave Theory and Techniques*, vol. 62, no. 11, pp. 2497-2498, November 2014.
- [IJ55] 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.
- [IJ54] **G. Crupi**, D. M. M.-P. Schreurs, and A. Caddemi, “Guest editorial for the special issue on Modeling of high-frequency silicon transistors,” editorial paper on *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol. 27, no. 5-6, pp. 703-706, September/December 2014.
- [IJ53] 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.
- [IJ52] 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.
- [IJ51] **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.

- [IJ50] 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.
- [IJ49] **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.
- [IJ48] **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.
- [IJ47] 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.
- [IJ46] 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.
- [IJ45] 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.
- [IJ44] **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.
- [IJ43] **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.
- [IJ42] **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," [review paper](#) on *Solid-State Electronics*, vol. 80, pp. 81-95, February 2013.
- [IJ41] **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.
- [IJ40] 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.
- [IJ39] 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.
- [IJ38] **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.
- [IJ37] **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.
- [IJ36] 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.
- [IJ35] 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.
- [IJ34] 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.

- [IJ33] **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.
- [IJ32] 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.
- [IJ31] 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.
- [IJ30] **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.
- [IJ29] **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.
- [IJ28] **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.
- [IJ27] 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.
- [IJ26] 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.
- [IJ25] **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.
- [IJ24] **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.
- [IJ23] 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.
- [IJ22] **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.
- [IJ21] 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.
- [IJ20] 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.
- [IJ19] **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.
- [IJ18] 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.
- [IJ17] **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.

- [IJ16] 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.
- [IJ15] **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.
- [IJ14] **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.
- [IJ13] **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.
- [IJ12] **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.
- [IJ11] **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.
- [IJ10] **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.
- [IJ9] 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.
- [IJ8] **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.
- [IJ7] 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.
- [IJ6] 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.
- [IJ5] 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.
- [IJ4] 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.
- [IJ3] 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.
- [IJ2] 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.
- [IJ1] 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

- [IC54] A. H. 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, 3 p..

- [IC53] 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).
- [IC52] **G. Crupi**, Z. Marinković, D. M. M.-P. Schreurs, V. Marković, and A. Caddemi, “Multi-bias equivalent circuit for MOSFET modelling,” *International Conference on Advanced Technologies, Systems and Services in Telecommunications* (TELSIKS), Nis, Serbia, 18-20 October 2017, pp. 347-350.
- [IC51] 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,” *International Conference on Advanced Technologies, Systems and Services in Telecommunications* (TELSIKS), Nis, Serbia, 18-20 October 2017, pp. 166-169.
- [IC50] 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,” *International Conference on Advanced Technologies, Systems and Services in Telecommunications* (TELSIKS), Nis, Serbia, 18-20 October 2017, pp. 162-165.
- [IC49] Z. Marinković, **G. Crupi**, A. Caddemi, and V. Marković, “GaN HEMT small-signal modelling: Neural networks versus equivalent circuit,” *International Conference on Microelectronics* (MIEL), Nis, Serbia, 9-11 October 2017, pp. 153-156.
- [IC48] 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.
- [IC47] 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,” *International Conference on Advanced Technologies, Systems and Services in Telecommunications* (TELSIKS), Nis, Serbia, 14-17 October 2015, pp. 94-97.
- [IC46] A. Caddemi, E. Cardillo, **G. Crupi**, and G. Salvo, “Performance analysis of a microwave low-noise amplifier under laser illumination,” *International Conference on Advanced Technologies, Systems and Services in Telecommunications* (TELSIKS), Nis, Serbia, 14-17 October 2015, pp. 90-93.
- [IC45] 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, 3 p..
- [IC44] 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, 3 p..
- [IC43] 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.
- [IC42] 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.
- [IC41] 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, 3 p..
- [IC40] 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, 3 p..
- [IC39] **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.
- [IC38] 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).
- [IC37] 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.
- [IC36] 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.
- [IC35] **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, 3 p..
- [IC34] 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, 3 p..
- [IC33] 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, 3 p..
- [IC32] 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.
- [IC31] Z. Marinković, **G. Crupi**, D. M. M.-P. Schreurs, A. Caddemi, and V. Marković, “High-frequency multi-bias small-signal neural modeling for FinFET,” *International Conference on Microelectronics (MIEL)*, Nis, Serbia, 13-16 May 2012, pp. 265-268.
- [IC30] **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.
- [IC29] 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.
- [IC28] **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.
- [IC27] 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.
- [IC26] 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.
- [IC25] 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.

- [IC24] 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.
- [IC23] 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, 6 p..
- [IC22] 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.
- [IC21] **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.
- [IC20] 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.
- [IC19] 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.
- [IC18] 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.
- [IC17] 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.
- [IC16] 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.
- [IC15] **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.
- [IC14] 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.
- [IC13] 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, 20 p..
- [IC12] 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, 4 p. (INVITED TALK).
- [IC11] 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, 34 p..
- [IC10] 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.

- [IC9] **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.
- [IC8] 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.
- [IC7] **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.
- [IC6] **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.
- [IC5] A. Caddemi, **G. Crupi**, and D. Schreurs, "Analytical construction of nonlinear lookup table model for advanced microwave transistors," *8th IEEE International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Service (TELSIKS)*, Nis, Serbia, 26-28 September 2007, pp. 261-270 (INVITED TALK).
- [IC4] **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.
- [IC3] 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.
- [IC2] **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.
- [IC1] A. Caddemi, N. Donato, and **G. Crupi**, "A robust approach for the direct extraction of HEMT circuit elements vs. bias and temperature," *6th 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.

NATIONAL JOURNALS

- [NJ1] Caddemi, F. Catalfamo, **G. Crupi**, and N. Donato, "Tecniche di caratterizzazione criogenica per componenti di LNA in applicazioni avanzate alle iperfrequenze," *Quaderni della Società Italiana di Elettromagnetismo*, vol. 2, no. 2, pp. 31-39, March 2006.

NATIONAL CONFERENCES

- [NC3] A. Caddemi and **G. Crupi**, "Caratterizzazione e modellistica a microonde di transistori avanzati," *XXV Congresso Nazionale dell'Associazione Italiana "Gruppo Misure Elettriche ed Elettroniche"* (GMEE), Monte Porzio Catone (RO), September 2008, pp. 175-176.
- [NC2] A. Caddemi, F. Catalfamo, **G. Crupi**, and N. Donato, "Tecniche di caratterizzazione criogenica per componenti di LNA in applicazioni avanzate alle iperfrequenze," *Atti della XI Giornata di Studio sull'Ingegneria delle Microonde "Tecnologie Elettroniche ed Elettromagnetiche per lo Spazio"*, Orvieto (TR), April 2005, pp. 31-34.

- [NC1] A. Caddemi, F. Catalfamo, **G. Crupi**, and N. Donato, “Tecniche di caratterizzazione criogenica per dispositivi avanzati alle iperfrequenze,” *Atti del XXII Congresso Nazionale dell’Associazione Italiana “Gruppo Misure Elettriche ed Elettroniche”* (GMEE), Altavilla Milicia (PA), September 2005, pp. 151-152.

INTERNATIONAL BOOKS

- [IB2] “Microwave wireless communications: From transistor to system level,” edited by A. Raffo and **G. Crupi**, Oxford:UK: *Academic Press*, March 2016.
- [IB1] “Microwave de-embedding: From theory to applications,” edited by **G. Crupi** and D. M. M.-P. Schreurs, Oxford:UK: *Academic Press*, November 2013.

INTERNATIONAL BOOK CHAPTERS

- [IBC4] 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: *Academic Press*, 2016.
- [IBC3] **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: *Academic Press*, 2016.
- [IBC2] **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: *Academic Press*, 2013.
- [IBC1] 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.