Curriculum vitae in English (last update June 2026)

Biography

Alessandro Chini was born in Rovereto, Italy, in 1975. He graduated in electronics engineering at the University of Padova, Italy, in 1999 working on the characterization of impact ionization phenomena in InP based pnp heterojunction bipolar transistors. In 2001 he was at the University of California Santa Barbara, working on the fabrication and characterization of GaN-based HEMTs. In 2003 he received the Ph.D. degree in electrical and telecommunication engineering from the University of Padova working on the fabrication, characterization, and reliability of GaN-based HEMTs for microwave power applications. From 2003 until 2004, he was an Assistant Research Engineer at the Department of Electrical and Computer Engineering, University of California Santa Barbara working on the fabrication and development of GaN HEMTs for microwave power applications focusing on the development of passivation techniques for improving the device output power and reliability as well as developing field-plated devices for higher output power densities. Since 2004 he has been with the Department of Engineering "Enzo Ferrari" of the University of Modena and Reggio Emilia, where he is currently a Full Professor of Electronics.

Research Activities

Research activities are focused on the following topics: development of high voltage breakdown devices based on gallium nitride materials with the aim of numerical simulations and the improvement of device fabrication processes; development of switch-mode measurement setups for the characterization of degradation mechanisms in wide-band-gap semiconductor devices; large- and small-signal RF characterization of HEMT devices; development and characterization of low-power energy-harvesting circuits.

Bibliometrics

Since 2000 he authored or coauthored more than 150 papers in journals and conference proceedings indexed by Scopus database (scopus id: 7003514476) with more than 5000 total citations and an h-index of 34. He also coauthored more than 20 patent applications on the field of semiconductor devices for power applications.

Projects

PRIN2003 2003093798_004 "Caratterizzazione e modellistica degli effetti dei livelli profondi in FET a eterostruttura in tecnologia GaN per sistemi di telecomunicazioni e larga banda", with the role of principal investigator of the research unit of the University of Modena and Reggio Emilia; 2005.

PRIN2007 2007MNJWH2_004 "Affidabilità a radiofrequenza e simulazioni numeriche di dispositivi GaN HEMT avanzati e standard per applicazioni di potenza a microonde e ad onde millimetriche", with the role of principal investigator of the research unit of the University of Modena and Reggio Emilia; 2008-2010.

FIRB RBIP068LNE_005 "Tecnologie abilitanti, caratterizzazione e modellistica per componenti elettronici integrati riconfigurabili a banda larga per alta frequenza", with the role of principal investigator of the research unit of the University of Modena and Reggio Emilia; 2007-2011.

EU-FP7-JTI E2COGAN "Energy Efficient Converters using GaN Power Devices", with the role of principal investigator of the research unit of the University of Modena and Reggio Emilia within the IUNET consortium; 2013-2016.

PRIN2017 2017FL8C9N_005 "Empowering GaN-on-SiC and GaN-on-Si technologies for the next challenging millimeter-wave applications (GANAPP)" with the role of principal investigator of the research unit of the University of Modena and Reggio Emilia; 2020-2024.

EU-H2020-ECSEL REACTION “First and European SiC eigth inches pilot line”, with the role of principal investigator of the research unit of the University of Modena and Reggio Emilia within the IUNET consortium; 2018-2022.

EU-H2020-ECSEL GaN4AP “GaN for Advanced Power Applications”, with the role of principal investigator of the research unit of the University of Modena and Reggio Emilia within the IUNET consortium as well as workpackage leader of the WP number 4 “Device modeling, characterization and reliability evaluation”; 2021-2025.

HORIZON-JU-RIA WBGPilotLine “WBG Pilot Line”, with the role of principal investigator of the research unit of the University of Modena and Reggio Emilia within the IUNET consortium as well as task leader of task number 7.6 “Advanced devices electrical characterization and reliability”; 2025-2030.