

PERSONAL INFORMATION

Damiano Giubertoni

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WORK EXPERIENCE

From July 2021 to present

Research Scientist, Senior role

Fondazione Bruno Kessler, Trento, Italy

Nanofabrication: focused ion beam, electron beam lithography and setting up of nanofabrication laboratories.

▪ *Scientific and technological Research*

From Apr. 2016 to Nov. 2016

Visiting Scientist

IMB-CNM, Instituto de Microelectrónica de Barcelona – Centro Nacional de Microelectrónica - CSIC, Barcelona, Spain

Electron Beam Lithography and Nanofabrication.

▪ *Scientific and technological Research*

From June 2004 to June 2021

Research Scientist

Fondazione Bruno Kessler, Trento, Italy

SIMS-Secondary Ion mass Spectrometry specialist and surface analysis planning, research activity coordinator, semiconductor technology

▪ *Scientific and technological Research*

From July 2001 to Sept. 2001

Visiting Scientist

NEC Silicon Systems Research Laboratories in Sagamihara, Japan

Research Experience for European Graduate Students in Science and Technology program grant of Japan International Science & Technology Exchange Center).

▪ *Semiconductor Industry*

From June 2001 to May 2004

Junior Research Scientist

Fondazione Bruno Kessler, Trento, Italy

SIMS engineer, surface analysis, chemistry and composition.

▪ *Scientific and technological Research*

From May 2000 to May 2001

Consultant

STMicroelectronics, Agrate Brianza (MB), Italy

SIMS analyst for STMicroelectronics analytical service

▪ *Semiconductor Industry*

EDUCATION AND TRAINING

from Nov. 1992 to March 1999

Master Degree in Physics (Summa cum Laude)

University of Modena and Reggio Emilia, Italy

EQF level 7

PERSONAL SKILLS

Mother tongue(s)

Italian

Other language(s)

English, proficiency Level: C2;

French, proficiency Level: B2;

Spanish, proficiency Level: B2;

Bibliographic indicators Author or co-author of 119 papers in international refereed journals.
 Total number of citations (Scopus) 1045
 h-index (Scopus) 18

Project related expertise • Nanofabrication techniques, in particular Focused Ion Beam and Electron Beam Lithography and ancillary processes, in particular for integration of nanostructures on microelectronic devices.
 • Ion beam – solid interactions: ion implantation, crystal defect engineering, fabrication of color centers in diamond by ion implantation
 • Material characterization by surface analysis techniques: secondary ion mass spectrometry, x-ray photoelectron spectroscopy, scanning electron microscopy.

ADDITIONAL INFORMATION RELEVANT TO QUANTUM SCIENCE AND TECHNOLOGY

Projects *2023-2026 “Qu-Pilot, Experimental production capabilities for quantum technologies in Europe” Call HORIZON-CL4-2022-QUANTUM-06-SGA, ID: 101113983, FBK coordinator for WP5- Diamond Platform, fabrication of colour centres in diamond.*

2022-2025 “NQSTI-National Quantum Science and Technology Institute” project of the Piano Nazionale di Ripresa e Resilienza (PNRR), Partenariato esteso 04: Scienze e Tecnologie Quantistiche (PE 0023). Spoke 4, Photonic Platform for Quantum Technologies, and Spoke 8, Technology Transfer

2021-2024 “Detector Array Readout with Traveling Wave Amplifiers, DARTWARS” Dartwars, EU-H2020 Grant agreement ID: 101027746. Superconductor devices for quantum

2022-2023 Q@TN - “Piattaforme Tecnologiche” Project: GeVlon-Q, GeV color centers by Ion implantation for Quantum Applications

2018-2020 Italian Space Agency (ASI) project: “LESSO - A solid-state hetero-integrated laser based for optical traps”, grant number ASI_n._2018-1-U.0

Recent Research products *L. Fasolo et al., “Experimental Characterization of RF-SQUIDS Based Josephson Traveling Wave Parametric Amplifier Exploiting Resonant Phase Matching Scheme” in IEEE Transactions on Applied Superconductivity 34(3), 2024, 1-6, doi: 10.1109/TASC.2024.3359163.*

*J. Rodríguez-Álvarez, A. Labarta, J. C. Idrobo, R. Dell’Anna, A. Cian, **D. Giubertoni**, X. Borrísé, A. Guerrero, Francesc Perez-Murano, A. Fraile, X. Batlle, “Imaging of Antiferroelectric Dark Modes in an Inverted Plasmonic Lattice”, ACS Nano 17 (9), 2023, 8123; <https://doi.org/10.1021/acsnano.2c11016>.*

*E. Scattolo, A. Cian, L. Petti, P. Lugli, **D. Giubertoni** and G. Paternoster, “Near Infrared Efficiency Enhancement of Silicon Photodiodes by Integration of Metal Nanostructures Supporting Surface Plasmon Polaritons”, Sensors 23(2), 2023, 856; <https://doi.org/10.3390/s23020856>*

*D. Chowdhury, S. Mondal, M. Secchi, M. C. Giordano, L. Vanzetti, M. Barozzi, M. Bersani, **D. Giubertoni** and F. Buatier de Mongeot, “Omnidirectional and broadband photon harvesting in self-organized Ge columnar nanovoids”, Nanotechnology 33 (30), 2022, 305304, <https://doi.org/10.1088/1361-6528/ac64ae>.*