

PERSONAL INFORMATION

Damiano Giubertoni



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🌐 [State personal website\(s\)](#)

Sex M | *Nationality* Italian

WORK EXPERIENCE

From July 2015 to present

Research Scientist, Senior role

Fondazione Bruno Kessler, Trento, Italy

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

Business or sector: 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.

Business or sector: Research.

From June 2004 to June 2015

Research Scientist

Fondazione Bruno Kessler, Trento, Italy

- SIMS-Secondary Ion mass Spectrometry (Cameca Wf/Sc-Ultra) specialist and surface analysis planning, research activity coordinator, semiconductor technology .

Business or sector: Research

From July 2001 to Sept. 2001

Visiting Scientist

NEC Silicon Systems Research Laboratories in Sagamihara, Japan

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

- Organic low-k material study and development for copper interconnects on ULSI devices..

Business or sector: Semiconductor Industry

From June 2001 to May 2004

Junior Research Scientist

Fondazione Bruno Kessler, Trento, Italy

- SIMS engineer (Cameca 4f and Wf/Sc-Ultra), surface analysis, chemistry and composition, especially for semiconductor industry..

Business or sector: Research

From May 2000 to May 2001

Consultant

STMicroelectronics, Agrate Brianza (MB), Italy

- SIMS (Cameca 4f) analyst at ITC-irst for STMicroelectronics analytical service

Business or sector: Research

EDUCATION AND TRAINING

Nov. 1992 – March 1999

Master Degree in Physics (110/ 110 cum Laude)

University of Modena and Reggio Emilia, Italy

- Applied Physics, Material Science for Semiconductors, Analytical Techniques.

- Thesis title: "Solid State Reaction in Titanium-Silicon Bilayer" (In Italian), with Prof. G. Ottaviani: measurements of resistivity in situ, RBS, XRD, AES, collaboration with STMicroelectronics srl, Agrate Brianza (MB).

PERSONAL SKILLS

Mother tongue(s)	Italian
Other language(s)	English (Proficient); French (Independent); Spanish (Independent); Russian (Basic).
Job-related skills	<ul style="list-style-type: none"> ▪ Ability on nanofabrication processes based on focused ion beam (Raith Velion) and on electron beam lithography (Raith 150TWO and Tescan tools) and ancillary cleanroom fabrication techniques. ▪ Ability to work on CAMECA SIMS instruments and other characterization techniques, x-ray photoelectron spectroscopy and scanning electron microscopy (Zeiss and TESCAN). ▪ Reviewer for publications on several scientific journals: Surface Science, Journal of Vacuum Science and Technology B, Nuclear Instruments and Methods B, Applied Surface Science.
Digital skills	Windows (OS and Office); Microcal Origin, Gwyddion, ImageJ. User of integrated circuit design softwares like K-layout or L-EDIT package
Other skills	<ul style="list-style-type: none"> ▪ Ability to work in a research team gained through the experience at FBK. ▪ Good communication skills developed presenting data and results to technical audiences. ▪ Adaptability to multicultural environment developed in international projects and abroad experiences.

ADDITIONAL INFORMATION

Recent Publications	<p>J. Rodríguez-Álvarez, A. Labarta, J. C. Idrobo, R. Dell'Anna, A. Cian, <u>D. Giubertoni</u>, X. Borrísé, A. Guerrero, Francesc Perez-Murano, A. Fraile, X. Battle, "Imaging of Antiferroelectric Dark Modes in an Inverted Plasmonic Lattice", ACS Nano 17 (9), 2023, 8123; https://doi.org/10.1021/acsnano.2c11016.</p> <p>E. Scattolo, A. Cian, L. Petti, P. Lugli, <u>D. Giubertoni</u> 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.</p> <p>F. Filippone, S. Younis, G. Mattioli, M. Felici, E. Blundo, A. Polimeni, G. Pettinari, <u>D. Giubertoni</u>, E. Sterzer, K. Volz, D. Fekete, E. Kapon, A. Amore Bonapasta, "Selective Effects of the Host Matrix in Hydrogenated InGaAsN Alloys: Toward an Integrated Matrix/Defect Engineering Paradigm" Adv. Funct. Mater. 2021, 2108862. https://doi.org/10.1002/adfm.202108862.</p> <p>E. Scattolo, A. Cian, <u>D. Giubertoni</u>, G. Paternoster, L. Petti, P. Lugli, "Optimization of Focused Ion Beam Patterning Parameters for Direct Integration of Plasmonic Nanostructures on Silicon Photodiodes" Eng. Proc. 2021, 10, 2. https://doi.org/10.3390/ecsa-8-11259.</p> <p><u>D. Giubertoni</u>, G. Paternoster, F. Acerbi, X. Borrísé, A. Cian, A. Filippi, A. Gola, A. Guerrero, F. Perez Murano, F. Romanato, E. Scattolo, P. Bellutti, "Plasmonic Enhanced Photodetectors for Near Infra-red Light Detection," 43rd International Convention on Information, Communication and Electronic Technology (MIPRO), 2020, 1876, doi: 10.23919/MIPRO48935.2020.9245437.</p> <p>R. Dell'Anna, C. Masciullo, E. Iacob, M. Barozzi, <u>D. Giubertoni</u>, R. Böttger, M. Cecchini, G. Pepponi, "Multiscale structured germanium nanoripples as templates for bioactive surfaces" RSC Adv., 2017, 7, 9024. https://doi.org/10.1039/C6RA28531G.</p>
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Trento, August 7, 2023