

PERSONAL INFORMATION

Maurizio Boscardin



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- Google scholar profile <https://scholar.google.com/citations?user=fCGG4WUAAAAJ&hl=it>
- Scopus <https://www.scopus.com/authid/detail.uri?authorId=7006486954>

Sex Male | Date of birth 23/06/1960 | Nationality Italian

Enterprise	University	EPR
<input type="checkbox"/> Management Level	<input type="checkbox"/> Full professor	<input type="checkbox"/> Research Director and 1st level Technologist / First Researcher and 2nd level Technologist / Principal Investigator
<input checked="" type="checkbox"/> Mid-Management Level	<input type="checkbox"/> Associate Professor	<input type="checkbox"/> Level III Researcher and Technologist
<input type="checkbox"/> Employee / worker level	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

***in accordance with the call, the criteria for the admissibility of expenses are provided for by DPR No. 22/2018. With reference to personnel expenses, the DPR provides that, if the beneficiary is not included in the University category or in the EPR category, it is always included in the Business category, regardless of the legal nature and even if it is not a company.

Indicate SSD (settore scientifico disciplinare)

WORK EXPERIENCE

From 2022 to now	Scouting of R&D activity on Radiation Sensors in CRS FBK Management of FBK activity in AIDA innova; Management of production of Si3D and planar pixel for ATLAS ITK, management of production of Si3D for CMS ITK.
From 2014 to end 2021	Scouting of R&D activity of MNF Development of LGAD technology for application in HEP (in partnership with ATLAS and CMS) and for low energy X ray imaging (in partnership with PSI). Development of Si-3D optimized for timing; Management of the production of Si3D and pixel for ATLAS Inner Tracking
From 2010 to 2014	Manager of R&D activity of MTLab Coordination of the activity in the agreement between INFN and FBK for the development of silicon detectors; Development of radiation detector based on a Schottky diode on SiC; Development of Edgeless Radiation Detectors for CERN (Atlas and CMS experiments); Development of a chip cooling based on DRIE technique; Production of Silicon Microstrip for CSES satellite; Development of Development of bio inspired silicon surface (control of wettability); Development of silicon tools for the "chip cooling";
From 2008 to 2010	Manager of Micro technology lab of MTLab FBK CNM FBK Trento: Coordination of the activity of the lab and Developments of technology platform
From 2001 to 2008	Manager of the "SRD Silicon Radiation Detector" project Developments of radiations detectors with monolithic integration of preamplifier based on Jfet technology for applications on ambient radiation monitoring; Development of Silicon Photo Multiplier (SiPM); Development of PAD detectors used for clinic dosimeter in partnership with INFN Firenze and Ospedale Carrugi, applications in Nuclear Physics

From May 1989 to present **Researcher at Microsystems Division of ITC-IRST Trento**
 experiment in partnership with INFN Legnaro
 Development of double sided microstrip detectors on high resistivity silicon for applications in HEP experiments as ALICE Cern, Babar Slac, AMS; Project leader for the realization of microstrip detectors for AMS experiment; Project leader for the realization of Pixel detectors for ALICE experiment

From February 1988 to May 1989 **Fellow at the Microsystems Division of ITC-IRST Trento**
 Micro fabrication process

Business or sector developments of micro fabrications process for silicon radiations detectors and detectors for HEP and MEMS

EDUCATION AND TRAINING

July 1986 degree in Physics, University of Trento, Italy

WORK ACTIVITIES

Main projects Management of production of SI-3D and pixel planar for ATLAS ITK, Managements of the collaboration agreement between FBK and INFN for the R&D activity in the field of Radiation Sensors;

- Patents**
- Method for the production of a 3D solid-state radiation detector; EP2256810A1 • 2010-12-01 •
 - Junction field effect transistor and method of fabricating the same EP0907208A1 (B1) • 1999-04-07 •
 - SEMICONDUCTOR DETECTOR, RADIATION DETECTOR AND RADIATION DETECTION APPARATUS US10094939B2 (A1) • 2018-10-09 •
 - SENSOR FOR DETECTION OF BIOMOLECULES IN A BIOLOGICAL FLUID VIA CHEMILUMINESCENCE REACTION EP3850344A1 • 2021-07-21 •
 - PARTICLE DETECTOR CAPABLE OF SEPARATING IN-TIME SIGNALS FROM OUT-OF-TIME SIGNALS US10811555B2 (A1) • 2020-10-20 •
 - Method and apparatus for analyzing an object EP2154516A1 (B1) • 2010-02-17 •
 - PROCEDIMENTO PER LA REALIZZAZIONE DI UN RIVELATORE DI RADIAZIONI IONIZZANTI A STATO SOLIDO. ITTO20040901A1 • 2005-03-23 •
 - RIVELATORE DI PARTICELLE ALFA ITMI 20121547A1 • 2014-03-19 •

ADDITIONAL INFORMATION

Publications Total number of publications in peer-review journals 305
 Total number of citations 2922
 H index (Scopus) 26
 Total number of publications in journals belonging to the first Scopus quartile (or in A class)

Loi, A., Contu, A., Mendicino, R., Forcolin, G.T., Lai, A., Dalla Betta, G.F., Boscardin, M., Vecchi, S. *Timing optimization for 3D silicon sensors* (2020) Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 958, art. no. 162491 .

Arcidiacono, R., Borghi, G., Boscardin, M., Cartiglia, N., Costa, M., Dalla Betta, G.F., Fausti, F., Ferrero, M., Ficorella, F., Mandurrino, M., Mazza, S.M., Olave, E.J., Pancheri, L., Paternoster, G., Sadrozinski, H.-F.W., Sola, V., Staiano, A., Seiden, A., Siviero, F., Tornago, M., Zhao, Y. *State-of-the-art and evolution of UFSD sensors design at FBK* (2020) Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 978, art. no. 164375 .

Paternoster, G., Borghi, G., Arcidiacono, R., Boscardin, M., Cartiglia, N., Centis Vignali, M., Dalla Betta, G.F., Ferrero, M., Ficorella, F., Mandurrino, M., Pancheri, L., Siviero, F., Sola, V., Tornago, M. *Novel strategies for fine-segmented Low Gain Avalanche Diodes* (2021) Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 987, art. no. 164840 .

Terzo, S., Boscardin, M., Carlotto, J., Dalla Betta, G.-F., Darbo, G., Dorholt, O., Ficorella, F., Gariano, G., Gemme, C., Giannini, G., Grinstein, S., Heggelund, A., Huiberts, S., Kok, A., Koybasi, O., Lapertosa, A., Lauritzen, M.E., Manna, M., Mendicino, R., Oide, H., Pellegrini, G., Povoli, M., Quirion, D., Rohne, O.M., Ronchin, S., Sandaker, H., Abdulla Samy, M.A., Stugu, B., Vannoli, L. *Novel 3D Pixel Sensors for the Upgrade of the ATLAS Inner Tracker* (2021) Frontiers in Physics, 9, art. no. 624668

Calderini, G., Bagolini, A., Bomben, M., Boscardin, M., Bosisio, L., Chauveau, J., Giacomini, G., La Rosa, A., Marchiori, G., Zorzi, N. *Development of edgeless silicon pixel sensors on p-type substrate for the ATLAS high-luminosity upgrade* (2014) Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 765, pp. 146-150.

C. Piemonte et al., "Characterization of the First Prototypes of Silicon Photomultiplier Fabricated at ITC-irst," in IEEE Transactions on Nuclear Science, vol. 54, no. 1, pp. 236-244, Feb. 2007, doi: 10.1109/TNS.2006.887115

- According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV

Trento 11/10/2024

Maurizio Boscardin