

# Prof. Martino Marisaldi - Curriculum vitae with track record

## Personal information

First name, Surname:	Martino, Marisaldi
Nationality:	Italian
ORCID:	<a href="https://orcid.org/0000-0002-4000-3789">https://orcid.org/0000-0002-4000-3789</a>
URL for personal website:	<a href="https://www.uib.no/en/persons/Martino.Marisaldi">https://www.uib.no/en/persons/Martino.Marisaldi</a>

## Positions - current and previous

Year	Job title – Employer - Country
2021–now	Professor, Department of Physics and Technology, University of Bergen, Norway
2016–2021	Associate Professor, Department of Physics and Technology, University of Bergen, Norway
2011–2016	Staff Research Scientist (permanent position), National Institute for Astrophysics, Bologna, Italy
2007–2011	Researcher, National Institute for Astrophysics, Bologna, Italy
2004–2007	Postdoc, National Institute for Astrophysics, Bologna, Italy
1999–2001	Device Engineer, ST Microelectronics, Milano, Italy

## Education

Year	Faculty/department - University/institution - Country
2004	PhD, Department of Physics, University of Bologna, Italy
1998	Master, Department of Physics, University of Bologna, Italy

Member of the American Geophysical Union (AGU) and the European Geosciences Union (EGU) since 2009.

### • RESEARCH EXPERIENCE

After the completion of my PhD in 2004, on the development of novel scintillation detectors for next generation gamma-ray telescopes, I joined the Team of the AGILE mission, a small satellite of the Italian Space Agency (ASI) dedicated to gamma-ray astrophysics. As a young postdoc I contributed to the design, construction, integration and calibration of the Mini-Calorimeter (MCAL) onboard AGILE, dedicated to the detection of Gamma-ray Bursts and other high-energy transients. The MCAL instrument proved also to be one of the few instruments capable to detect Terrestrial Gamma-ray Flashes (TGFs), in addition to cosmic sources. These first observations raised my interests towards this topic and in the following years I became the lead scientist on the subject within the AGILE team and provided key contributions to the field. In the meanwhile, I continued R&D activity on high-energy detectors, mostly along two lines: 1) the application of Single Photon Avalanche Diodes (SPADs) for very high-

time resolution (picoseconds) measurements, and 2) the application of large-area Silicon Drift Detectors (SDDs) coupled to inorganic scintillators for high-resolution X and gamma-ray spectroscopy. In 2016 I joined the Birkeland Centre for Space Science, a Norwegian center of excellence established in 2013, and accepted a position as Associate Professor at the Department of Physics and Technology of the University of Bergen, Norway. This is giving me the chance to exploit my data analysis capabilities, technical skills, creative thinking and science management abilities by co-leading one of the world largest teams dedicated to high-energy atmospheric physics studies. Since September 2021 I am Full Professor at the Department of Physics and Technology of the University of Bergen, Norway.

- **TRACK-RECORD**

I am co-author of **133 refereed publications, 12 as first author** in the field of energetic radiation from thunderstorm and lightning, terrestrial gamma-ray flashes (TGF), high-energy astrophysics, and instrumentation for high-energy physics. My **H-index is 36** and the total number of citations is 6126, excluding self-citations (source: Web of Science, accessed 30 May 2022). I presented my activity in more than 50 contributions to International Conferences and Workshops, as main author or co-author.

- **SHORT LIST OF KEY PUBLICATIONS**

The following list of 10 selected publications, most recent first, summarizes the most relevant personal achievements of my scientific career. Publications in Nature and Science are marked in bold. PhD Students I have supervised are underlined. Number of citations from Web of Science (May 2022).

1. A. Castro-Tirado, et al. (2021), Very-high-frequency oscillations in the main peak of a magnetar giant flare, *Nature* 600 (7890) , pp.621-+ [DOI10.1038/s41586-021-04101-1](https://doi.org/10.1038/s41586-021-04101-1) (1 citation)
2. A. Lindanger, **M. Marisaldi**, et al. (2020), Spectral Analysis of Individual Terrestrial Gamma-Ray Flashes Detected by ASIM, *J. Geophys. Res. (Atmospheres)* 126, <https://doi.org/10.1029/2021JD035347> (1 citation)
3. C. Maiorana, **M. Marisaldi**, et al. (2020), Observation of Terrestrial Gamma-Ray Flashes at Mid Latitude, *J. Geophys. Res. (Atmospheres)* 125, <https://doi.org/10.1029/2020JD034432> (4 citations)
4. A. Lindanger, **M. Marisaldi**, et al. (2020), The 3rd AGILE Terrestrial Gamma Ray Flash catalog. Part I: Association to lightning sferics, *J. Geophys. Res. (Atmospheres)* 125, <https://doi.org/10.1029/2019JD031985> (9 citations)
5. T. Neubert, et al. (2019), A terrestrial gamma-ray flash and ionospheric ultraviolet emissions powered by lightning, *Science* 367, 6474, p.183, <https://doi.org/10.1126/science.aax3872> (34 citations)
6. **M. Marisaldi**, et al. (2019), On the high-energy spectral component and fine time structure of terrestrial gamma-ray flashes, *J. Geophys. Res. (Atmospheres)*, 124. <https://doi.org/10.1029/2019JD030554> (12 citations)
7. **M. Marisaldi**, et al. (2015), Enhanced detection of terrestrial gamma-ray flashes by agile. *Geophys. Res. Lett.*, 42(21):9481–9487, <https://doi.org/10.1002/2015GL066100> (41 citations)
8. **M. Marisaldi**, et al. (2010), Gamma-Ray Localization of Terrestrial Gamma-Ray Flashes. *Physical Review Letters*, 105(12):128501, <https://doi.org/10.1103/PhysRevLett.105.128501> (36 citations)
9. **M. Marisaldi**, et al. (2010), Detection of terrestrial gamma ray flashes up to 40 MeV by the AGILE satellite. *J. Geophys. Res. (Space Physics)*, 115:0, <https://doi.org/10.1029/2009JA014502> (156 citations)
10. C. Labanti, **M. Marisaldi**, et al. (2009), Design and construction of the Mini-Calorimeter of the AGILE satellite. *Nucl. Instrum. and Meth. in Phys. Res. A*, 598:470–479, <https://doi.org/10.1016/j.nima.2008.09.021> (71 citations)