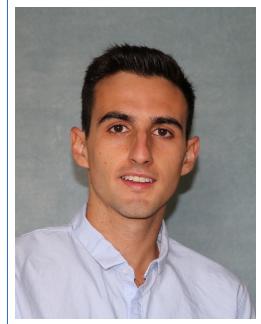


# Nicolas De Angelis

## Curriculum Vitae

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Languages: French, Italian  
Born 05 November 1997



### Research Experience

- Feb 2024 – **Post-doctoral researcher, Istituto di Astrofisica e Planetologia Spaziali (IAPS), National Institute for Astrophysics (INAF), Rome, Italy.**  
Development of experiments for X and Gamma Ray Astronomy from space for the CUSP, SWIPE, PRIN MIUR 2020 Hype-X, IXPE, eXTP and HERMES projects  
Outreach activities: IAPS Open Days 2024, Nights of Research Rome 2024
- Sept 2019 – Dec 2023 **PhD in high energy astrophysics, Département de Physique Nucléaire et Corpusculaire (DPNC), University of Geneva, Geneva, Switzerland.**  
PhD thesis: Development of the Next Generation Space-based Compton Polarimeter and Energy Resolved Polarization Analysis of Gamma-Ray Bursts Prompt Emission – <https://doi.org/10.13097/archive-ouverte/unige:173869>  
Development of the next generation Compton polarimeter POLAR-2: SiPM characterization, Optical characterization and Geant4 simulation, data acquisition with ASIC/FPGA-based electronics, Space qualification campaigns (irradiation, vibration and shock, thermal vacuum cycling), Mechanical assembly/design, Gamma-ray detector calibration  
Gamma-Ray Burst polarization data analysis with the POLAR data  
Involved in the development of other future space-based experiments: eXTP, LEAP  
Research work published in peer-reviewed journals and presented in international conferences/workshops  
Doctoral lectures: Gas detectors, Semi-conductor detectors, Bayesian statistics, Bayesian methods applied to astrophysics, High energy astrophysics, Advanced scientific computing  
Outreach activities: Nuit de la Science 2018, Nuit de la Science 2022, Young Researchers Day 2023
- Sept 2019 – June 2023 **Teaching Assistant, Section de Physique, University of Geneva, Geneva, Switzerland.**  
Teaching experimental laboratory of physics (classical mechanics, thermodynamics, optics, electronics, nuclear physics) to biology students - 8 hours per week (2019-2020)  
Teaching general physics (classical mechanics, thermodynamics, electrodynamics, hydrodynamics, elasticity) to biology, geology, pharmacy, and IT students - 4 hours per week (2020-2023)
- Apr 2018 – July 2019 **Master Thesis, Département de Physique Nucléaire et Corpusculaire (DPNC), University of Geneva, Geneva, Switzerland.**  
Studies of readout electronics and optical elements for a gamma-ray telescope (CTA SST-1M) – <https://cds.cern.ch/record/2683289>  
Work presented at the CTA Consortium meeting of Lugano in June 2019
- Sept-Dec 2018 **Research and Teaching Assistant, Département de Physique de la Matière Quantique (DQMP), University of Geneva, Geneva, Switzerland.**  
Teaching experimental laboratory of physics to biology students - 4 hours per week
- Summer 2017 **Internship at CERN in the group of Prof. Iacobucci (ATLAS collaboration), European Organization for Nuclear Research, Geneva, Switzerland.**  
Finite element simulation of hybrid HV-CMOS cross coupling

## Education and Training

- 2017–2019 **Master's degree in Nuclear and Particle Physics**, *Département de Physique Nucléaire et Corpusculaire (DPNC)*, University of Geneva, Geneva, Switzerland.
- 2014–2017 **Bachelor's degree in Physics**, University of Geneva, Geneva, Switzerland.
- 2011–2014 **French Baccalaureat in Science (A-Level equivalent) with Honours, major in engineering sciences and mathematics**, Lycée Charles Poncet, Cluses, France.

## Relevant Skills

Software	$\text{\LaTeX}$ ; Matlab; Mathematica; Cadence PSpice; LabView; COMSOL Multiphysics; Solid-Works; Catia; mecaflux Heliciel; Igor Pro; Maple; Adobe Illustrator/Lightroom; Gimp; Microsoft Office Suite
Programming language	Python; C; C++; ROOT; Geant4; Bash; basic knowledge of R and C#
Experimental	Work in Clean Room; Radioactive Sources (alpha, beta, gamma, neutron); Synchrotron Facilities; X-Ray Tubes; Radiation Protection; Instrument Design and Development, Assembly, and Calibration; Space Qualification: Irradiation, Thermal Vacuum Cycling, Vibration and Shock Test, UV irradiation, Outgassing; Optical Characterization
Simulation	Geant4 Radiation Simulation; Geant4 Optical Simulation; Electronics PSpice Simulation; Multi-Physics Simulation; Monte Carlo Simulation
Data Analysis	Forward Folding; threeml; Multi-Likelihood Analysis; Spectro-Polarimetric analysis; Bayesian Analysis; Signal Processing
Teaching, Outreach, Supervision	Teaching General Physics Bachelor-level Courses; Teaching Astrophysics/Instrumentation Master-level Courses; Teaching Bachelor Physics Laboratory Courses; Presenting Research at Public Events; Development of Animations and Figures for Outreach; Supervision of Engineering internship students; Supervision of Physics Summer Student from CERN

## Languages

French	Mother Tongue
English	Fluent
Italian	Fluent
German	Basic
Russian	Basic

*Basic words and phrases only*

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## Interests

- Amateur Astronomy, Photography and Astrophotography
- Sport: Running, Climbing, Yoga, Badminton, Hiking, Swimming, Cycling
- Space exploration, Science & Engineering



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Nicolas De Angelis,  
17<sup>th</sup> July 2024