

# Gabrijela Zaharijas

Vipavska 13 SI-5000 Nova Gorica, Slovenija, <http://www.ung.si/~gzaharijas/>

## Education

- Ph.D. in Physics (September 26, 2005), **New York University**, Department of Physics. Thesis: Alternative Approaches to the Dark Matter Puzzle. Advisor: Prof. Glennys R. Farrar
- Master of Science (January 28, 2002), **New York University**, Department of Physics.
- Bachelor in Science (October 28, 1998), **University of Belgrade**. Advisor: Prof. Aleksandar Bogojević

## Employment

- 2024 - present Full Professor of Physics - Center for Astrophysics and Cosmology (CAC), University of Nova Gorica (UNG), Slovenia
- 2019 – 2024 Associated Professor at CAC, UNG
- 2014 - 2019, Assistant Professor at CAC, UNG
- 2012 - 2014, Postdoc - International Centre for Theoretical Physics (ICTP), Trieste, Italy
- 2009 - 2011, Postdoc - Institut de Physique Théorique, CEA-Saclay, France
- 2008 - 2009, Postdoc - Oskar Klein Center, Stockholm University, Sweden
- 2007 - 2008, Assistant Physicist - Argonne National Laboratory, Argonne (IL), USA
- 2006 - 2007, Visiting Scientist - Center for Particle Astrophysics, Fermi National Accelerator Laboratory, Batavia (IL), USA

## Research areas

- indirect search for dark matter (with the focus on gamma rays, but also cosmic rays, studies of dark matter clustering on small scales, N-body simulations)
- gamma-ray astrophysics (diffuse gamma-ray emission and physics of Galactic cosmic rays)
- machine learning application to high-energy astrophysics

## International experimental collaborations

- Vera C. Rubin Dark Energy Science Collaboration (DESC): member since 2020
- CTA collaboration: member since 2014, coordinator of the DMFP working group (2018-20)
- Fermi-LAT: member since 2008, coordinator of the DMNP working group (2017-19)

## Management and organizational roles

- Project manager of the COFUND MSCA project SMASH: Machine learning for science and humanities (2023-2028). Project employs 50 postdoctoral fellows.
- Fellow of the European Coalition for AI in Fundamental physics (EUCAIF), since 2023 and coordinator of the working group on FAIR and Sustainable AI. Duties include scientific organization

of EUCAIF conferences.

- Member of the SOC for the organization of CTA Summer Schools, since 2023
- Slovenian representative in the council of the European Consortium for Astroparticle Theory (EuCAPT)
- Member of the executive Board of the International Doctorate Network in Particle Physics, Astrophysics and Cosmology (IDPASC), member since 2020
- Director of Graduate studies in Physics at the UNG, since 2019
- Convener at ICRC 2023 Conference, at European CR conference 2023

## Prices, Fellowships & Grants

- COFUND Marie Grant, SMASH, PI, 2023-2028 (10 million euros)
- Lorenz Center grant, for organization of the workshop "Accelerating Astrophysical Discovery with Foundation Models ", 2026 (30k)
- ERASMUS + KA grant for exchange with the University of Chicago, 2022-2025 (20k)
- Prize "Apple of inspiration" awarded by the President of the Republic of Slovenia Borut Pahor, in 2019
- ARRS Research Project (Small Basic Project), Preparing for dark matter search with the Cherenkov Telescope Array using machine learning, 2019-2021 (100k)
- Bilateral grants: Slovenia - USA, 2018-2020, Slovenia-France (PROTEUS), 2017-2018; Slovenia-Serbia, 2016-2017

## Student mentoring

- PhD supervisor
  - Francesco Xotta (2023- present)
  - Nina Bavdac (2023- present)
  - V. Vodeb (2019-2023)
  - C. Eckner (2016-2020)
- Master student supervisor
  - Zoja Rokaves (2024)
- Co-advisor of MS Students: N. Ivkovic and I. Batkovic (Un. of Rijeka, 2020), V. Vodeb (Un. of Ljubljana, 2018), V. Buran (Un. of Trieste, 2016), J. Petrovic (Un. of Novi Sad, 2015)
- Co-advisor of BSc Thesis project, of Ilaria Marini (Un. of Trieste, 2017).

## Invited Lectures (since 2020)

- Latin-American School on CTA Science, ICTP-SAIFR, Sao Paolo, Brazil, March 27-31, 2023
- IDPASC School, Granada, 18-28 September 2023

- Otranto School, 3–10 Jun 2022
- Lecturer at the European Doctorate School: International School on AstroParticle Physics (ISAPP), Madrid, June 2021.

## Selected recent review & plenary talks at international meetings

since 2020, in addition to about 40 contributions to international meetings and about 25 invited seminars

- Plenary talk at TeVPA2025, Valencia
- Plenary talk at the CTA Symposium, Bologna, 2024
- Invited talk at Cosmo2023, Madrid, 11-15 September 2023
- Invited talk at the FlipPhysics, Valencia, 21-25 March 2022.
- Invited talk at DarkMatters, ULB, Brussels, November 30 - December 2, 2022
- Invited talk at 1st Pan-African Astro-Particle and Collider Physics Workshop (PACP2022), 21-23 March 2022.
- Invited talk at IFT Xmass Workshop, Madrid, 2021
- Invited talk at TAUP, 30 August -3 September 2021