Milena Crnogorčević
Cirruculum Vitæ

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Professional Appointments

August 2023 – August 2026 **Postdoctoral Fellow at the Oskar Klein Centre for Cosmoparticle Physics, Stockholm University,**
Advisor: Prof. Timothy Linden

Education

August 2023 **Doctor of Philosophy, University of Maryland**, Department of Astronomy
- Thesis Title: *New Messengers & New Physics: A Survey of the High-energy Universe*

December 2019 **Master of Science, University of Maryland**, Department of Astronomy
- Thesis Title: *Axion-like Particles and Where to Find Them: Searching for ALP-induced Core-collapse Supernovae with Fermi*

May 2017 **Bachelor of Arts, Middlebury College**, major in physics and minor in mathematics
- Honors Thesis: *Probing into quasar/galaxy co-evolution using the OSIRIS data*
- *magna cum laude* with high honors

May 2013 **Bi-lingual International Baccalaureate Diploma, Li Po Chun United World College of Hong Kong**

Research Experience

April 2018 – July 2023 **NASA Goddard Space Flight Center,**
Graduate Research Assistant. Advisor: Dr. R. Caputo
- Member of the *Fermi*-LAT Collaboration. Affiliated with the *Fermi*-GBM and *Swift*-BAT Teams.

September 2016 – May 2017 **Department of Physics, Middlebury College,**
Undergraduate Research Assistant. Advisor: Prof. E. Glikman, *honors thesis*
- Investigating the co-evolution of post-merger galaxies and dust-reddened quasars using integral-field spectrography.

May 2016 – August 2016 **Department of Physics, Middlebury College,**
Undergraduate Research Assistant. Advisor: Prof. N. Graham
- Computing edge-correction coefficients to the proximity force approximation for the Casimir energy of an oblate spheroid facing a plane.

May 2015 – August 2015 **Department of Physics, Middlebury College,**
Undergraduate Research Assistant. Advisor: Prof. E. Glikman
- Spectral analysis of red and obscured quasars in SDSS Stripe 82.

Grants, Honors, & Awards

2024 HEAD Dissertation Prize Finalist ($1.5k)
2022 Fermi GI Program Cycle 15: Principal Investigator ($50k)
Light at the end of the Tunnel: Search for ALP dark matter in precursor emission of long GRBs
2022 Andrew S. Wilson Prize for Excellence in Research, Department of Astronomy, University of Maryland
2022 Department Service Award, Department of Astronomy, University of Maryland
Honoring exceptional contributions to the department through service.
2022 Best Poster Award: The High Energy Astrophysics Division (HEAD), 19th Divisional Meeting of HEAD
2022 Outstanding Graduate Research Assistant Award, University of Maryland
Recognized as among the top 2% Graduate Assistants in a given year at the University of Maryland.
2021 Award for the best talk promotion video, Kashiwa Dark Matter Symposium
2021 Price Prize nomination, Center for Cosmology and Astroparticle Physics at The Ohio State University
2020 John Mather Nobel Scholar ($3k)
2019–20 College of Computer, Mathematical, and Natural Sciences Dean's Fellowship ($5k)
2017–18 Graduate School Dean's Fellowship ($10k)
2013–17 Davis UWC Scholar ($20k per annum)
2011–13 Li Po Chun UWC, full merit-based scholarship ($30k per annum)
2009 Junior Balkan Mathematical Olympiad, bronze medal

Publication List

First and second author:

8. **M. Crnogorčević**, 2025, PoS(ICRC2025)1424, invited rapporteur.
The Dark Matters at ICRC 2025
7. **M. Crnogorčević**, T. Linden, A.H.G. Peter, 2025, accepted in *PRD*.
Are X-Ray Detected Active Galactic Nuclei in Dwarf Galaxies Gamma-Ray Bright?
6. **M. Crnogorčević**, C. Blanco, T. Linden, 2025, *JCAP* 10, 009.
Looking for the γ-Ray Cascades of the KM3-230213A Neutrino Source
5. **M. Crnogorčević**, M. Sten Delos, Nadia Kuritzén[1], T. Linden, 2025, *PRD* 112, 103001.
Gamma-Ray Observations of Galaxy Clusters Strongly Constrain Dark Matter Annihilation in Prompt Cusps
4. **M. Crnogorčević**, T. Linden, 2024, *PRD* 109, 083018.
Strong Constraints on Dark Matter Annihilation in Ursa Major III/UNIONS 1
3. C. Fletcher et al. (Fermi-GBM), **M. Crnogorčević** et al. (Swift-BAT), and the LVK Collaboration, 2024, *ApJ* 964, 149. *A Joint Fermi-GBM and Swift-BAT Analysis of Gravitational-Wave Candidates from the Third Gravitational-wave Observing Run*
2. M. Negro, **M. Crnogorčević**, E. Burns, E. Charles, L. Marcotulli, R. Caputo, 2023, *ApJ* 951, 83.
Search for Spatial Correlation Between IceCube Neutrino Events and the Fermi-LAT Unresolved Gamma-Ray Sky
1. **M. Crnogorčević**, R. Caputo, M. Meyer, N. Omodei, M. Gustafsson, 2021, *PRD* 104, 103001.
Searching for Axion-like Particles from Core-Collapse Supernovae with Fermi-LAT's Low-Energy Technique

N-th author:

14. The *Fermi*-LAT, HAWC, H.E.S.S., MAGIC, and VERITAS Collaborations, incl. **M. Crnogorčević**, 2025, *submitted to JCAP.*
Combined dark matter search towards dwarf spheroidal galaxies with Fermi-LAT, HAWC, H.E.S.S., MAGIC, and VERITAS
13. T. Linden, J.T. Li, B. Zhou, I. John, **M. Crnogorčević**, A.H.G. Peter, J.F. Beacom, 2025, *PRD* 112 10, 103001.
First Observations of Solar Halo Gamma Rays Over a Full Solar Cycle
12. M. Axelsson and 153 co-authors, incl. **M. Crnogorčević**, 2025, *ApJS* 277 1, 24.
GRB 221009A: the B.O.A.T Burst that Shines in Gamma Rays
11. S. Lesage and 139 co-authors, incl. **M. Crnogorčević**, 2023, *ApJL* 952 L42.
Fermi-GBM Discovery of GRB 221009A: An Extraordinarily Bright GRB from Onset to Afterglow
10. D. Smith and 159 co-authors, incl. **M. Crnogorčević**, 2023, *ApJ* 958 2, 191.
The Third Fermi Large Area Telescope Catalog of Gamma-ray Pulsars

[1]High school student at The Viktor Rydberg Schools Foundation and Viktor Rydberg Gymnasium Odenplan; co-advised by M. Crnogorčević. Nadia is currently a physics undergraduate student at Princeton University.

9. S. Abdollahi and 112 co-authors, incl. **M. Crnogorčević**, 2023, *ApJS* 265 31.
   The Fermi-LAT Lightcurve Repository
8. M. Ajello and 100 co-authors, incl. **M. Crnogorčević**, 2022, *ApJS* 263 24.
   The Fourth Catalog of Active Galactic Nuclei Detected by the Fermi Large Area Telescope—Data Release 3
7. S. Abdollahi and 118 co-authors, incl. **M. Crnogorčević**, 2022, *ApJ*, 933, 204.
   Search for New Cosmic-Ray Acceleration Sites within the 4FGL Catalog Galactic Plane Sources
6. Y. Liu and 132 co-authors, incl. **M. Crnogorčević**, 2022, *Science*, 376, 521–523.
   A gamma-ray pulsar timing array constrains the nanohertz gravitational wave background
5. S. Abdollahi and 139 co-authors, incl. **M. Crnogorčević**, 2022, *ApJS*, 260, 53.
   Incremental Fermi Large Area Telescope Fourth Source Catalog
4. I. Mereu and 114 co-authors, incl. **M. Crnogorčević**, 2021, *ApJS*, 256, 13.
   Catalog of Long-Term Transient Sources in the First 10 Years of Fermi-LAT Data
3. M. Ajello and 108 co-authors, incl. **M. Crnogorčević**, 2021, *Nature Astronomy*, 5, 385-391.
   High-energy emission from a magnetar giant flare in the Sculptor galaxy
2. M. Ajello and 123 co-authors, incl. **M. Crnogorčević**, 2019, *ApJ*, 878, 52.
   A Decade of Gamma-Ray Bursts Observed by Fermi-LAT: The Second GRB Catalog
1. E. Glikman and 13 co-authors incl. **M. Crnogorčević**, 2018, *ApJ*, 861, 37.
   Luminous WISE-selected Obscured, Unobscured, and Red Quasars in Stripe 82

White papers:

1. R. Caputo et al. incl. **M. Crnogorčević**, *Snowmass2021* Letter of Interest
   Light Dark Matter Candidates with MeV gamma-ray signatures

Invited Talks, Colloquia, & Panels

Upcoming:

- [plenary] "TBA: Experimental Astroparticle Physics," plenary talk at @FlipPhysics Workshop, Valencia, Spain (May, 2026)

Past:

- [talk] "On the State of Dark Matter" guided discussion, Pontificia Universidad Católica de Chile, online (November, 2025)
- [seminar] "Dark Matter from the Littlest Galaxies: Gamma-ray Insights from Ultra-Faint Dwarfs and IMBHs," The Erlangen Centre for Astroparticle Physics, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany (October, 2025)
- [rapporteur] Dark Matter Rapporteur Talk, ICRC, Geneva, Switzerland (July, 2025)
- [panel] "Envisioning the Future of Gamma-Ray Astronomy in Space: Overview of NASA's FIG SAG Effort," ICRC, Geneva, Switzerland (July, 2025)
- [plenary] "Gamma-ray Windows into the Axion Landscape: Current Status and Future Prospects," Axions in Stockholm 2025, Stockholm, Sweden (July, 2025)
- [colloquium] "A Gamma-ray Window into the Dark Matters of the Universe: Establishing *Fermi*-LAT's Legacy," Oskar Klein Centre, Stockholm University, Sweden (March, 2025)
- [seminar] "The Dark Matters of the Universe with *Fermi*-LAT," Sydney Consortium for Particle Physics and Cosmology (Sydney-CPPC), online (February, 2025)
- [plenary] "*Fermi* Listens for WISPers: Past, Present, and Future of *Fermi*'s Axion-like Particle Searches," 11th International Fermi Symposium, College Park, MD (September, 2024)
- [talk] "WISPs, WIMPs, and Gammas: Searches for New Physics with the *Fermi* Large Area Telescope," 2nd General Meeting of COST Action COSMIC WISPers, Istanbul, Turkey (August, 2024)
- [seminar] "The Dark Matters of the Universe with *Fermi*-LAT," **seminar**, Sydney Consortium for Particle Physics and Cosmology (Sydney-CPPC), online (May 2024) — *canceled due to unforeseen personal circumstances*.
- [colloquium] "WISPs, WIMPs, and Gammas: Searches for New Physics with the *Fermi* Large Area Telescope," COSMIC WISPers, online (April, 2024)
- [plenary] "Astrophysical Probes of Dark Matter: Past, Present, and Future of Gamma-ray Observations," Dark Matter Beyond the Weak Scale II workshop, Durham University, UK (March, 2024)
- [talk] "New Messengers & New Physics: A Survey of the High-energy Universe," 21st Divisional Meeting of HEAD, Dissertation Award Finalist, Horseshoe Bay, TX (April, 2024)
- [seminar] "Beyond the Visible: New Messengers and New Physics," Center for Neutrino Physics Seminar, Virginia Tech, Blacksburg, VA (April, 2023)

- [SEMINAR] "Beyond the Visible: New Messengers and New Physics," SED Director's Seminar, NASA Goddard Space Flight Center, Greenbelt, MD (February, 2023)
- [SEMINAR] "Light at the End of the Tunnel: Searching for Axion-like Particles in Gamma-ray Energies," HEP Seminar, Columbia University, New York City, NY (December, 2022)
- [SEMINAR] "Light at the End of the Tunnel: Searching for Axion-like Particles in Gamma-ray Energies," SLAC Theory Group Seminar, Stanford University, Stanford, CA (October, 2022)
- [SEMINAR] "New Physics through a Multimessenger Lens: an Exploration of the High-energy Universe," CCAPP Seminar Series, The Ohio State University, Columbus, OH (September, 2022)
- [SEMINAR] "Astrophysical searches for axion-like particles in gamma-ray energies & multimessenger studies of the high-energy Universe," Department of Physics/WIPAC Seminar Series, University of Wisconsin, Madison, WI (September, 2022)
- [SEMINAR] "Catching the next wave: Searching for gamma-ray counterparts to gravitational-wave events with Fermi-GBM and Swift-BAT," NASA Marshall Space Flight Center & University of Alabama, Huntsville, AL (July, 2022)
- [SEMINAR] "Astrophysical searches for axion-like particles in gamma-ray energies & multimessenger studies of the high-energy Universe," THEAPA Seminar, IoA, Cambridge, UK (June, 2022)
- [SEMINAR] "Searching for Axion-like Particles from Core-Collapse Supernovae with Fermi LAT's Low Energy Technique," CCAPP Seminar Series, The Ohio State University, Columbus, OH (November, 2021)
- [SEMINAR] "Searching for Axion-like Particles from Core-Collapse Supernovae with Fermi LAT's Low Energy Technique," NASA Astroparticle Physics Seminar Series, Greenbelt, MD (August, 2021)

Invited Talks on Equity, Diversity, Inclusion, and Accessibility

- [PANEL] "DEI Work in Science Positions," DEIA-themed Weekly Analysis Meeting, *Fermi*-LAT Collaboration; online (September, 2023)
- [SEMINAR] "*Fermi* Mentoring Program: lessons learned from near and far," Community Round Table, Department of Physics, Columbia University, New York City, NY (December, 2022)
- [PANEL] "Picture a Scientist," ICRC 2021 Diversity session, online (July, 2021)
- [SEMINAR] "Equity, Diversity, and Inclusion Initiatives at the University of Maryland Astronomy Department," Multimessenger Diversity Network, online (October, 2020)

Teaching Experience

Upcoming:

[LECTURES] "TBA: Lectures on Dark Matter," The International school of Cosmic Ray Astrophysics, Erice, Italy (July–August 2026)

Past:

Teaching Assistant for Introductory Astronomy, College Park, MD — September 2017–May 2018
Astronomical observations and history of astronomy, Solar system, stellar evolution, galaxy morphology and evolution, cosmology ● Instructors: Prof. Suvi Gezari (Fall 2017), Prof. Alberto Bolatto (Spring 2018)

Astronomy Outreach & Telescope Operator, Middlebury, VT — September 2015–May 2017
Conducting observatory events and operating telescopes at the Mittelman Observatory ● Advisor: Jonathan Kemp

Tutor at the Center for Teaching, Learning, and Research, Middlebury, VT — January 2014–May 2017
Newtonian Physics, Electricity and Magnetism

Teaching Assistant for Applied Mathematics to Physical Sciences, Middlebury, VT — September 2015–May 2016
Complex numbers and functions, sequences and series, ODE's, Fourier analysis, multi-variable calculus, special functions, and vector calculus ● Instructor: Prof. Stephen J. Ratcliff

Laboratory Assistant for Newtonian Physics, Middlebury, VT — January–May 2015
Demonstrating techniques and instruments used in the experiments pertaining to classical mechanics: inertia, force, Newton's laws of motion, work and energy, linear momentum, collisions, gravitation, rotational motion, torque, angular momentum, and oscillatory motion ● Instructor: Prof. Richard Wolfson

Teaching Assistant for Electricity and Magnetism, Middlebury, VT — September–December 2014
Practical topics from electricity and magnetism, voltage, current, resistance, capacitance, inductance, and AC and DC circuits ● Instructor: Prof. Noah Graham

Teaching Assistant for Newtonian Physics, Middlebury, VT — January–May 2014
Introductory level classical mechanics ● Instructor: Prof. Anne Goodsell

Service & Outreach

- Guest Editor, Journal of High Energy Astrophysics — 2025–now
- Founder and organizer, ArXiv Daily Roast at Oskar Klein Centre — 2024–now
- Team Lead, ScientiFika — 2024–now
- Meeting co-organizer, Beyond the Standard Model Working Group — 2024–now
- Co-chair of Future Innovations in Gamma rays Science Analysis Group, FIG SAG — 2023–now
- Journal reviewer for Physical Review Letters, Physical Review D, Journal of Cosmology and Astroparticle Physics, The Astrophysical Journal — 2022–now
- Science coordinator of Dark Matter & New Physics working group, *Fermi*-LAT — 2022–2023
- Mentoring Program founder & organizer, *Fermi*-LAT/GBM Collaborations — 2020–2023
- DEI Committee Member, *Fermi*-LAT — 2020–2023
- Gamma-ray Burst Advocate, ∼10 week-long shifts/year, *Fermi*-LAT — 2018–2023
- GRAD-MAP Team co-lead, University of Maryland — 2019–2022
- BANG! Seminar lead organizer, University of Maryland — 2019–2021
- EDI Committee member, Department of Astronomy, University of Maryland — 2017–2021
- Fermi-LAT Reddit Ask Me Anything — August 2020
- ACE (formerly known as AGN) mentor to undergraduate students, University of Maryland — 2018–2019
- Equity Constellation, The Access Network member, University of Maryland — 2017–2018
- Women in Physics luncheon co-founder, Middlebury College — 2016–2017

I served on a number of short-term initiatives, including but not limited to conducting graduate student interviews, participating in faculty searches, organizing the UMD Astronomy peer mentoring program, organizing and participating in a number of panels (e.g. applying to graduate school, GSFC/UMD connection, etc.), organizing visits to GSFC for prospective students, acting as a point person for the Department of Astronomy Mental Health Survey, organizing virtual check-in spaces during the Covid-19 pandemic, etc.

In the News

- First Observations of γ-rays from the Solar Halo, *astrobites*, June 2025
- Brightest-Ever Space Explosion Reveals Possible Hints of Dark Matter, *Quanta Science Podcast*, March 2023
- Brightest ever space explosion could help explain dark matter, *Quanta Magazine*, October 2022
- Early-career Scientist Spotlight at NASA Goddard: Milena Crnogorčević, June 2022

Summer Schools, Workshops, and Competitions

- Summer School in Astrostatistics and Astroinformatics, Center for Astrostatistics at the Pennsylvania State University (June, 2022)
- SSI 2020 "The Almost Invisibles: Exploring the Weakly Coupled Universe," SLAC Summer Institute (August 2020)
- *Fermi* Summer School, Lewes, DE (June, 2018)
- The Access Network Assembly, Denver, CO (May, 2018)
- Four-time participant of the Mathematics Program at the Petnica Scientific Center, Petnica, Serbia (2010)
- Member of the Montenegrin National Team and a two-time participant of the Junior Balkan Mathematical Olympiad (JMBO)

Computing Skills

Programming	Highly proficient in Python, MATLAB, XSPEC, Wolfram Mathematica, LaTeX; proficient in Bash, Git, PyRAF, IDL, Adobe Illustrator, TOPCAT, DS9; beginner in C, HTML/CSS.
Operating Systems	macOS, Linux, Windows

General Information

Membership:	American Astronomical Society (AAS), American Physical Society (APS), European Astronomical Society (EAS)
Languages:	Serbo-Croatian (native), English (C2/bilingual), Italian (C1/professional working proficiency), Spanish and German (A2/elementary proficiency)

Curriculum Vitæ last time updated on February 12, 2026.