Milena Crnogorčević

Curriculum Vitae updated April 2020

Personal Information

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Languages: Serbian (native), English (fluent), Italian (intermediate)
Citizenship: Montenegrin
Preferred pronouns: she/her/hers

Education

University of Maryland, College Park (2019 –) College Park, MD

- PhD, Astronomy (expected 2023)
- CMNS Dean's Fellowship, $5k (2019 – 2020)

University of Maryland, College Park (2017 – 2019) College Park, MD

- MSc, Astronomy
- Graduate School Dean's Fellowship, $5k (2017 – 2018)
- Master Thesis: *Axion-like Particles and Where to Find Them: Searching for ALP-induced Core-collapse Supernovae with Fermi.* Grade: Excellent/Excellent (written & oral project report)
- Advisors: Dr. Regina Caputo (NASA/GSFC), Dr. Manuel Meyer (Stanford University/KIPAC), Dr. Massimo Ricotti (University of Maryland)
- Coursework: Radiative Processes, Stellar Structure and Evolution, Astronomical Instrumentation and Techniques, Galaxies, Cosmology, Planetary Science, Interstellar Medium and Gas Dynamics, High Energy Astrophysics, Practical Astrostatistics (pass/fail), Computational Astrophysics (audit)

Middlebury College (2013 – 2017) Middlebury, VT

- Bachelor of Arts (BA), *Magna Cum Laude.* Major: Physics, *High Honors.* Minor: Mathematics
- GPA: 3.74/4.00. College Scholar (four semesters), Dean's List (two semesters)
- Davis UWC Scholar, $20k per annum (2013 – 2017)

Li Po Chun United World College (2011 – 2013) Hong Kong

- Full merit-based scholarship; Bi-lingual International Baccalaureate Diploma

SMŠ „Ivan Goran Kovačić" (2009 – 2011) Herceg-Novi, Montenegro

- Distinguished Academic Award for representing school and country on National and International Mathematics Competitions with excellence (2011)

Research Experience

- Department of Astronomy, University of Maryland College Park, MD
  & NASA Goddard Space Flight Center Greenbelt, MD
  Research Assistant to Dr. Regina Caputo (May 2018 –)
  Research interests: high-energy astroparticle physics, γ-ray astronomy, indirect dark-matter searches, transients
  Member of the Fermi GRB Group and DMNP Group. Fermi-LAT Burst Advocate
- Department of Physics, Middlebury College Middlebury, VT
  Senior Thesis (September 2016 – May 2017)
  Advisor: Dr. Eilat Glikman. Grade: A, High Honors
  Thesis topic: *Probing into the quasar/galaxy co-evolution using the OSIRIS data*

- Department of Physics, Middlebury College Middlebury, VT
  Research Assistant to Dr. Noah Graham (June 2016 – August 2016)
  Computing edge-correction coefficients to the proximity force approximation for the Casimir energy of an oblate spheroid facing a plane
- Department of Physics, Middlebury College Middlebury, VT
  Research Assistant to Dr. Eilat Glikman (June 2015 – August 2015)
  Analyzing new selection criteria for red and obscured quasars in SDSS Stripe 82

Work Experience

- Department of Astronomy, University of Maryland College Park, MD
  Teaching Assistant for Introductory Astronomy (September 2017 – May 2018)
  Organizing and facilitating discussion sections; grading homework assignments and exams. Topics covered include introductory level discussion of astronomical observations and history of astronomy, the Solar system, stellar evolution, galaxy morphology and evolution, cosmology
- Department of Physics, Middlebury College Middlebury, VT
  Astronomy Outreach Event Assistant (September 2015 – May 2017)
  Conducting observatory events and operating the telescopes at the Mittelman Observatory
- Center for Teaching, Learning, and Research, Middlebury College Middlebury, VT
  Tutor for Newtonian Physics and Electricity and Magnetism (February 2014 – May 2017)
  Running one-on-one tutoring sessions for interested undergraduate students
- Department of Physics, Middlebury College Middlebury, VT
  Teaching Assistant for Applied Mathematics to Physical Sciences (February 2016 – May 2016)
  Grading homework assignments and running group help sessions. Topics covered include complex numbers and functions, sequences and series, ODE's, Fourier analysis, multi-variable calculus, special functions, and vector calculus
- Department of Physics, Middlebury College Middlebury, VT
  Laboratory Teaching Assistant for Newtonian Physics (September 2015 – December 2015)
  Demonstrating techniques and instruments used in the experiment and assisting students during laboratory periods
- Department of Physics, Middlebury College Middlebury, VT
  Teaching Assistant for Electricity and Magnetism (September 2014 – May 2014)
  Grading homework assignments and running group help sessions at an introductory level
- Department of Physics, Middlebury College Middlebury, VT
  Teaching Assistant for Newtonian Physics (January 2014 – May 2014)
  Grading homework assignments and running help sessions at an introductory level

Computing Skills

Operating Systems

- Mac OS, Unix/Linux, Windows

Languages and Software

- Highly proficient in MATLAB, Python, XSPEC, *GtBurst*, Wolfram Mathematica, LaTeX; proficient in PyRAF, IDL, Adobe Illustrator, TOPCAT, DS9. Beginner in HTML/CSS and C

Additional Information

Publications

- Axion-like Particles from Core-collapse Supernovae: Investigating *Fermi*'s Sensitivity, M. Crnogorčević, R. Caputo, M. Meyer, and N. Omodei, in prep.
- A Decade of Gamma-Ray Bursts Observed by Fermi-LAT: The Second GRB Catalog, M. Ajello and 123 co-authors, incl. M. Crnogorčević. 2019, ApJ.
- Luminous WISE-selected Obscured, Unobscured, and Red Quasars in Stripe 82, E. Glikman and 13 co-authors incl. M. Crnogorčević. 2018, ApJ.

Presentations

- "Axion-like Particles from Core-collapse Supernovae: Investigating Fermi's Sensitivity," oral presentation at the virtual *Fermi* Colaboration Meeting (March, 2020)
- "Axion-like Particles from Core-collapse Supernovae: Investigating Fermi's Sensitivity," poster presentation at UCLA Dark Matter 2020, Los Angeles, CA (March, 2020)—*canceled due to the COVID-19 outbreak.*
- "ALP-induced Core-collapse Supernovae," oral presentation at *Fermi* Colaboration Meeting, Santa Cruz, CA (September, 2019)
- "Axion-like Particles and Where to Find Them," oral presentation at *Fermi* Summer School, Lewes, DE (June, 2018)
- "Quasar/Galaxy Co-evolution with OSIRIS," oral presentation at Undergraduate Spring Research Symposium, Middlebury College (April, 2017)
- "Edge Expansion of Scalar Casimir Energies," oral presentation at APS Conference for Undergraduate Women in Physics, Harvard University (January, 2017)
- "Edge Expansion of Scalar Casimir Energies," poster presentation at Undergraduate Summer Research Symposium, Middlebury College (August, 2016)
- "New Selection Criteria for Red and Obscured Quasars in Stripe 82," poster presentation at APS Conference for Undergraduate Women in Physics, Syracuse University (January, 2016)
- "New Selection Criteria for Red and Obscured Quasars in Stripe 82," presentation at Keck Northeast Astronomy Consortium Undergraduate Symposium on Research in Astronomy, Williams College (October, 2015)
- "New Selection Criteria for Red and Obscured Quasars in Stripe 82," Keck Northeast Astronomy Consortium Undergraduate Research in Astronomy Journal (October, 2015)
- "Hilbert's Theorem 90", presentation at the IX Conference of Scientific Research Center Petnica, Belgrade (September, 2010)
- "Hilbert's Theorem 90," publication in "Petničke sveske," Belgrade (September, 2010)

Participations in Camps and Awards

- *Fermi* Summer School, Lewes, DE (June, 2018)
- Four-time participant of the Mathematics Program at Petnica Scientific Center (2010)
- Member of the Montenegrin National Team and a two-time participant of the Junior Balkan Mathematical Olympiad (JMBO); bronze medal winner (JMBO 2009)

Outreach

- GRAD-MAP team co-lead, University of Maryland (September 2019 –). Member (September 2017 –)
- BANG! Seminar Organizing Committee coordinator, University of Maryland (June 2019 –)
- EDI Committee member, University of Maryland. (September 2017 –)
- AGN (currently known as ACE) mentor to undergraduate students, University of Maryland. (September 2018 – September 2019)
- Women in Physics, luncheon co-founder, Middlebury College (September 2016 – May 2017)

Membership

American Astronomical Society (AAS), American Physical Society (APS)

Hobbies

US Masters Swimming member, IM Volleyball player (member of the departmental team *Dirty Snowballs*), spoken-word poetry, creative writing, chess, fencing, getting lost in DC.