Nazar Budaiev

Email:	nbudaiev@ufl.edu	Ukrainian - native
Linkedin:	nbudaiev	English - fluent
GitHub:	bazarsen	Russian - fluent
Website:	bazarsen.github.io	German - basic

Education

Ph.D. in Astronomy, University of Florida — Expected 2025

B.A. in Astronomy and Physics, Boston University — May 2020

Research Experience

Graduate Student, University of Florida — Fall 2020 - present

- Catalog prestellar cores in a star forming cloud Sagittarius B2 using ∼400 AU resolution ALMA data. Derive source masses and obtain Core Mass Function (CMF) and Cluster Formation Efficiency (CFE).

- Catalog water masers in Sagittarius B2 using VLA data.

Research Assistant, B.U. Astronomy Department — Fall 2018 - Summer 2020

- Developed IDL code to analyze performance of new VEGAS receiver on Green Bank Telescope when measuring high energy level transitions.

- Examined and tested IDL code for modeling HI clouds in Milky Way interstellar medium.

Summer Student, Green Bank Observatory — Summer 2019

- Crafted a 5 GHz continuum map of inner Galactic Plane with IDL and Python using data from the GBT Diffuse Ionized Gas Survey (GDIGS).

Teaching Experience

Graduate student instructor, Astronomy Laboratory, University of Florida — Fall 2020 - Spring 2021

- Taught an undergraduate non-major laboratory course. Recorded videos of labs to facilitate remote learning.

Teaching Assistant, Stellar and Galactic Astrophysics, Boston University — Spring 2020

- Assisted students in an IDL programming heavy course.

Teaching Assistant, Project Accelerate, Boston University — Fall 2018 - Spring 2020

- Lead lab section of Advanced Placement physics course for underserved students. Developed and organized review sheets for each module of the course as a personal project.

Summer Camp Mentor, Physics Inspiring the Next Generation, Green Bank Observatory — Summer 2019

- Mentored 9th graders from underrepresented groups that worked on a research project for 2 weeks.

Learning Assistant, General Physics I, Boston University — Fall 2017 - Spring 2018

- Facilitated students in various activities to succeed in introductory physics courses.

Course Leader, Olympiad Mathematics, Lyceum 208, Ukraine — Summer 2016

- Designed and led a mathematics course for 8th graders interested in math competitions.

Awards

Student Observing Support (SOS) ALMA Cycle 8, **$34,955** Fall 2021

Undergraduate Research Award, for the work studying the physical properties and global distribution of diffuse ionized gas in the interstellar medium of the Milky Way Galaxy. May 2020

Dean's List 2017, Fall 2018

Gold Medal, awarded for exceptional academic performance, Lyceum 208, Ukraine 2009 - 2016

Outreach

Webinar Writer, Website Editor, AstroSandbox Summer 2020 - present

- Compose study materials for Ukrainian students interested in astronomy. Promote and improve the level of astronomy education in Ukraine. Maintain English version of the website.

Pen Pal, Letters to a Pre-Scientists Fall 2021 - present

- Correspond with a high-school student via physical mail throughout a year.

Mentor, Ukraine Global Scholars Spring 2020 - present

- Assist promising Ukrainian students to get into the world's best universities.

Visiting astronomer, Littlewood Elementary Fall 2021

Co-organizer and Judge, Astronomy Fights August 2020, 2021

- Served as a judge in an astrophysics team competition with 50 participants from 15 regions of Ukraine.

Demo Officer, Society of Physics Students Boston University Chapter Fall 2019 - Spring 2020

- Prepared and conducted engaging demos and experiments for weekly meetings.

Computer Skills

Python, IDL - proficient

Emacs, CASA, CARTA, DS9, LaTeX, Aladin, Montage

MacOS, Linux, Windows

Other

Star Formation School, Granada, Spain Fall 2021

GBT remote observer certification, Green Bank Observatory Fall 2021

Single Dish School, GBO Fall 2021

Admissions Ambassador, B.U. Admissions Office Spring 2018 - Fall 2018

- Led campus tours and engaged with prospective students to inform about available facilities.

Music School, piano 2007 - 2016

Publications

Talks and Posters

"A 5 GHz Continuum Map of the Inner Galactic Plane with the Green Bank Telescope," Poster. AAS 235th Meeting, Hawaii, January 2020.

"A 5 GHz Continuum Map of the Inner Galactic Plane with the Green Bank Telescope," Talk. Astronomy Undergraduate Research Symposium, Boston University, October 2019.

"Simulation Proposal for Fluids Lab." Poster. Learning Assistant Poster Session, Boston University, December 2017.

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