

NIKOO HOSSEININEJAD

Ph.D. student in Astrophysics - City University of New York

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🌐 nikoo-hosseinezhad

👤 Nikoohn

EDUCATION

Ph.D. in Physics

City University of New York, NY, USA

📅 August 2022 – Present

Supervisor: Dr. K. Bell

M.Sc. in Cosmology and Gravitational Physics

Shahid Beheshti University, Tehran, Iran

📅 September 2018 – February 2021

Thesis title: Model independent analysis of dark energy equation of state using CMB power spectrum and Hubble parameter data

Supervisor: Dr. M. Farhang

B.Sc. in Physics

Kharazmi University, Tehran, Iran

📅 September 2014 – June 2018

TEACHING EXPERIENCES

- **Instructor - General Physics I Lab (34221)** (2024)
CUNY Queens College
- **Instructor - General Physics I Lab (34225)** (2024)
CUNY Queens College
- **Instructor - Lab Explorations in Astronomy** (2024)
CUNY Hunter College
- **Instructor - General Physics I Lab (23216)** (2023)
CUNY Queens College
- **Instructor - General Physics I Lab (23217)** (2023)
CUNY Queens College
- **Teaching Assistant-Statistical Analysis of Cosmic Fields school** (2021)
Shahid Beheshti University
- **Teaching Assistant-Laboratory of Physics II** (2021)
Dr. M. Farhang-Shahid Beheshti University
- **Research Assistant** (2018-2019)
Dr. M. Farhang-Shahid Beheshti University

PUBLICATIONS

📄 Journal Article

- Di Valentino, Eleonora and Hosseinejad, Nikoo et al. (2022). "Cosmology Intertwined: A Review of the Particle Physics, Astrophysics, and Cosmology Associated with the Cosmological Tensions and Anomalies". In: *Journal of High Energy Astrophysics*.

👥 Conference Proceedings

SELECTED COURSES

- Stellar Physics A+ Dr. K. Bell (2024)
- Computational methods in physics A- Dr. J. Goldberg (2023)
- Quantum Mechanics A- Dr. G. Ossola (2023)
- Analytical Dynamics A- Dr. S. Franco (2022)
- Advanced Electrodynamics: 20/20 Dr. H. Sepangi (2020)
- Advanced Quantum Mechanics: 18.5/20 Dr. S. Gousheh (2020)
- Seminar and Research Methodology 20/20 Dr. M. Mohseni (2019)
- Advanced Astrophysics s II 18/20 Dr. S. Nasiri (2019)
- Advanced Astrophysics I 17/20 Dr. S. Nasiri (2018)
- Advanced Cosmology: 17/20 Dr. M. Farhang (2018)

COMPUTER SKILLS

- Proficient in **Python** and its major Scientific, Data Analysis & Visualization libraries
NumPy, SciPy, pandas, scikit-learn, Astropy, Matplotlib, Seaborn
- Casually using:
 - **LaTeX**(professional)
 - Fortran (Intermediate)
 - CAMB cosmological code (Intermediate)
 - Mathematica (Intermediate)
- Others:
 - C++ (Intermediate)
 - C (basic)
 - Basic (basic)
 - QBasic (basic)
 - HTML (basic)

SOME ATTENDED WORKSHOPS AND CONFERENCES

- TESS Science Conference III)
MIT, 2024
- Sagan Exoplanet Summer Workshop
Caltech, 2024
- NVIDIA Training Summer Workshop
Flatiron Institute, 2024
- New York Area Exoplanets Meeting (NYAEM)
Flatiron Institute, 2024
- SDSS-V Collaboration Meeting (online)
New Mexico University, 2024
- EXO-NYC
Flatiron Institute, 2023
- TASC7
Hawaii University, 2023
- Assessing Uncertainties in Hubble's Constant Across the Universe (online)
European Southern Observatory (ESO) , 2020
- Advanced Quantum Mechanics Workshop series (online)
Shahid Beheshti University (SBU), 2020


- Hosseininejad, Nikoo and Farhang marzieh (2021). "Model Independent Analysis of Dark Energy Equation of State Using CMB Power Spectrum and Hubble Parameter Data". In: *Proceedings of The 28th IPM Physics Spring Conference, (sc28), Tehran, Iran, May 2021*. IPM.
- Vafaei Sadr, Alireza and Hosseininejad, Nikoo et al. (2020). "Machine Learning Approach in the Photometric Data Analysis of PLAsTiCC Astronomical challenge". In: *Proceedings of The National Conference on Gravity and Cosmology-University of Tehran, Iran, January 2020*. UT.

Poster


- Hosseininejad, Nikoo and Keaton J Bell (2025). *TESS CROWDSAP Errors from White Dwarf Observations*. American Astronomical Society .
- Hosseininejad, Nikoo and Keaton J Bell (2024). *Detecting Distant Outer Planets Around White Dwarfs from Transit Timing Variations*. Sagan Exoplanet Summer Workshop .
- Hosseininejad, Nikoo, Keaton J Bell, et al. (2024). *TESS CROWDSAP Errors from White Dwarf Observations*. TESS Science Conference III .
- Vafaei Sadr, Alireza and Hosseininejad, Nikoo et al. (2019). *Classification of LSST Telescope's Time-Series data with Machine Learning Methods*.

CURRENT RESEARCH AND ACADEMIC PROJECTS

TESS CROWDSAP Errors from White Dwarf Observations (Journal Paper)

 Ready to submit

Crowding Systematics in TESS Light Curve Data Products (Journal Paper)

 Ready to Submit

Careful frequency analysis of all TESS pulsating WDs)

 Two Years Project  NASA grant

LANGUAGES

- Persian (native)
- English (advanced)

- National Conference on Gravity and Cosmology University of Tehran, Iran, 2020
- National conference on Iran's Observatories Kharazmi University, Iran, 2019
- Data Science Workshop Series Institute for Research in Fundamental Sciences (IPM), Iran, 2019
- Machine Learning in Physics: Applications in Astronomy and Cosmology Workshop Shahid Beheshti University (SBU), 2019
- International Conference for Baryons in Galaxies and Beyond Institute for Research in Fundamental Sciences (IPM), Iran, 2019
- national Conference on Gravity and Cosmology Institute for Research in Fundamental Sciences (IPM), Iran, 2019
- Conference on fundamental Particles Shahid Beheshti University (SBU), Iran, 2018

REFEREES

Dr. Keaton Bell

- @ City University of New York, New York, USA
- ✉ Keaton.Bell@qc.cuny.edu
- Assistant Professor of Physics, CUNY

Dr. Marzieh Farhang

- @ Shahid Beheshti University, Tehran, Iran
- ✉ m_farhang@sbu.ac.ir
- Assistant Professor of Physics, SBU