# ATTILA VARGA

Rochester, NY

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## RESEARCH INTERESTS

Low mass Stars and Brown Dwarfs. Young stars near the Sun, early stellar evolution, low mass stellar activity, X-ray imaging and spectroscopy, exoplanet evolution, exoplanet atmospheres, NASA archival research, multi-wavelength observations.

## EDUCATION

**Ph.D Astrophysical Sciences and Technology** 12/2022 - Anticipated Summer 2025
Rochester Institute of Technology, Rochester, NY
**Thesis:** *High-Energy and On the Move: Exploring the Kinematic and X-ray Properties of Young Stars near Earth with Gaia, Chandra, and eROSITA*

**M.S Astrophysical Sciences and Technology** 09/2020 - 12/2022
Rochester Institute of Technology, Rochester, NY
**Thesis:** *New and Unique Members of the Epsilon Chamaeleontis Moving Group: A Kinematic and Multi-Wavelength Analysis*

**B.S Physics, Minor in Math** 09/2014 - 06/2018
Oregon State University, Corvallis, OR
**Thesis:** *The effect of a resolved star on beating modes of a protoplanetary disk*

## PUBLICATIONS

**Varga, A.**, Kastner, J, K., Binks, A., Gagné, J., *"X-rays from Nearby, Young Stars: First Results from ERASS Data Release 1".* **In preparation for AAS journals**

**Varga, A.**, Kastner, J, K., Binks, A., *"Chandra X-ray Observations of Candidate Young Stars near Earth".* **In preparation for AAS journals**

**Varga, A.**, Kastner, J, K., Binks, A., Guenther, H, M., Murphy, S., *"The Age and High Energy Environment of the Very Young Transiting Exoplanet TOI-1227b".* **Accepted May 2025**

**Varga, A.**, Kastner, J, K., Dickson-Vandervelde, A, D., Binks, A., **Published:** November 12, 2024, *"Walking the Line: Young Stars on the Boundary of the Epsilon Cha and Lower Centaurus-Crux Associations".* **The Astronomical Journal 168 251**, http://arxiv.org/abs/2409.17521

Hadley, K. Z., Dumas, W., Imamura, J, N., Keever, E., Tumblin, R., **Varga, A.**, *"Nonaxisymmetric Instabilities and Star-Disk Coupling I. Moderate Mass Disks".* Astrophysics and Space Science, Vol. 364, No. 8, id. 119, 22 pp.

## TELESCOPE TIME AWARDED

Chandra X-ray Observatory 12/2023
Co-I of 20 ks award to observe the very young exoplanet host star TOI-1227 with HRC-I

## TALKS AND POSTERS

*"The Age and High Energy Environment of the Very Young Transiting Exoplanet Host Star TOI-1227".* **Contributed Talk.** New York Area Exoplanets Meeting, New York, NY, 2024. **Attila Varga**, Joel Kastner, Alexander Binks, Hans Moritz Guenther, Simon J. Murphy.

*"Exciting new members of the Epsilon Cha Association with Gaia EDR3".* **Poster.** 241st American Astronomical Society Meeting, Seattle, WA, 2023. **Attila Varga**, Joel Kastner, Dorothy Dickson-Vandervelde, Simon Murphy, Alexander Binks, Marc Kuchner.

*"Exciting new members of the Epsilon Cha Association with Gaia EDR3"* **Contributed talk.** The 21st Cambridge Workshop on Cool Stars, Stellar Systems, and the Sun, Toulouse, France, 2022. **Attila Varga**, Joel Kastner, Simon Murphy, Alexander Binks.

*"Bright in the UV but Faint in X-rays: Young Late-type Stars, or Main Sequence Imposters?".* **Contributed talk.** XMM-Newton Virtual Workshop, 2021 "A High-Energy View of Exoplanets and Their Environments". **Attila Varga**, Joel Kastner

*"Observed Beating in Modes of Hydrodynamic Simulations of Protoplanetary Star-disk Systems".* **Contributed talk.** 231st American Astronomical Society Meeting, Washington DC, January 2018. **Attila Varga**, Kathyrn Hadley, James Imamura.

*"Fourier Analysis of Beating Modes in Protoplanetary Disks".* **Poster.** College of Science Faculty Awards Event, Corvallis, OR, September 2017. **Attila Varga**, Kathryn Hadley, James Imamura.

*"Self Gravitation of Deferentially Rotating Resolved Stars in Protostellar Systems".* **Poster.** 18th Annual American Physical Society Northwest Section Meeting, Forest Grove, OR, June 2017. **Attila Varga**, Kathryn Hadley, James Imamura.

## SKILLS

Programming Languages: Python, C++, Fortran, BASH, Matlab, Mathematica
Software Analysis: HEASARC Packages, SAO Image DS9, CIAO (Chandra), PIMMS, IRAF, XSPEC, SAS (XMM), eSASS (eROSITA), Astropy

## PROFESSIONAL EXPERIENCE

**Graduate Research Assistant** 09/2020 - Current
Rochester Institute of Technology, Rochester, NY

Kinematic and multi-wavelength analysis of nearby young moving groups. X-ray imaging and spectroscopy of protoplanetary disks, young stars, and young exoplanets. Modeling exoplanet atmosphere evolution. Advisor: Dr. Joel Kastner

**Graduate Teaching Assistant** 09/2020 - 08/2021
Rochester Institute of Technology, Rochester, NY

Graded and assisted in the instruction of undergraduate physics courses.

**Undergraduate Research Assistant** 03/2016 - 06/2018
Oregon State University, Corvallis, OR

Linear and non-linear hydrodynamic modeling of protostellar disks using high performance computing. Fourier analysis. Advisor: Dr. Kathryn Hadley

**Undergraduate Teaching Assistant** 09/2016 - 06/2018
Oregon State University, Corvallis, OR

Graded and assisted in the instruction of undergraduate physics courses.

## AWARDS AND SCHOLARSHIPS

Summer Undergraduate Research Experience Scholarship Award (SURE) Summer 2017

Awarded a stipend to conduct research with faculty advisor Dr. Kathryn Hadley over the summer.