Ellen M. Price

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Appointments

University of Chicago, Chicago, IL, USA — expected Sep 2021
51 Pegasi b Postdoctoral Fellow

Education

Harvard University, Cambridge, MA, USA — expected May 2021
Doctor of Philosophy in Astronomy and Astrophysics

Harvard University, Cambridge, MA, USA — May 2018
Master of Arts in Astronomy and Astrophysics

California Institute of Technology, Pasadena, CA, USA — June 2015
Bachelor of Science in Astrophysics
Graduation with Honor

Research Experience

Lawrence Livermore National Laboratory HEDP internship — 2019
Summer internship studying neutron statistics with kernel density estimation

Harvard University, graduate researcher — 2015 – present
Research combining chemistry and dynamics in protoplanetary disks

Space Telescope Science Institute summer intern — 2014
Summer internship optimizing the `cloud-kepler` software

Caltech Carolyn Ash SURF Fellow — 2013
Summer internship studying Kepler Objects of Interest orbiting A stars

Caltech Robert and Delpha Noland Summer Fellow — 2012
Summer internship at NASA Marshall Space Flight Center studying cosmic ray transport

Relevant Skills

Proficient in C, C++, Python, and LaTeX

Proficient in symbolic computation with SymPy and *Mathematica*

Moderate experience with MPI, OpenMP, TBB, and ISPC parallelization tools

Some experience with high-performance computing (Chicago Midway cluster)

Moderate experience with git version control

Extensive scientific visualization

Open Source Software and Contributions

benzaiten: Automatic differentiation of abstract functions in C++20

`cloud-kepler`: Pipeline for processing *Kepler* lightcurves and search for signals of planets/flares

First-Author Publications

1. **Price, E. M.** and Rogers, L. A. (2020). Tidally-Distorted, Iron-Enhanced Exoplanets Closely Orbiting Their Stars. ApJ, 894, 1. https://iopscience.iop.org/article/10.3847/1538-4357/ab7c67
2. **Price, E. M.**, Cleeves, L. I., and Öberg, K. I. (2020). Chemistry Along Accretion Streams in a Viscously Evolving Protoplanetary Disk. ApJ, 890, 154. https://iopscience.iop.org/article/10.3847/1538-4357/ab5fd4
3. **Price, E. M.**, Rogers, L. A., Johnson, J. A., and Dawson, R. I. (2015). How Low Can You Go? The Photoeccentric Effect for Planets of Various Sizes. ApJ, 799, 17. http://iopscience.iop.org/0004-637X/799/1/17
4. **Price, E. M.** and Rogers, L. A. (2014). Transit Light Curves with Finite Integration Time: Fisher Information Analysis. ApJ, 794, 92. http://iopscience.iop.org/0004-637X/794/1/92

Selected Presentations

1. **Price, E. M.**, Rogers, L. A. (2020). Tidally Distorted, Iron-enhanced Exoplanets Closely Orbiting Their Stars. Contributed poster at the Exoplanets III conference.
2. **Price, E. M.**, Cleeves, L. I., Öberg, K. I. (2020). Chemistry Along Accretion Streams in Protoplanetary Disks. Contributed talk at the Astrochemical Frontiers conference.
3. **Price, E. M.**, Cleeves, L. I., Öberg, K. I. (2019). Applications of PETSc to Open Questions in Planet Formation Theory. Invited talk at the PETSc User Meeting 2019.
4. **Price, E. M.**, Cleeves, L. I., Öberg, K. I. (2018). Coupling Dynamics and Chemistry in Viscously-Evolving, Accreting Protoplanetary Disks. Poster presentation at the Astrochemistry: Past, Present, and Future conference hosted by the California Institute of Technology.
5. **Price, E. M.**, Cleeves, L. I., and Öberg, K. I. (2017). Coupling Dynamics and Chemistry in Viscously-Evolving, Accreting Protoplanetary Disks. Poster presentation at the GRC Origins of Solar Systems conference hosted by Mount Holyoke College.
6. **Price, E. M.**, Cleeves, L. I., and Öberg, K. I. (2017). Coupling Dynamics and Chemistry in Accreting Protoplanetary Disks. Poster presentation at the 332$^{\text{nd}}$ International Astronomical Union Symposium in Puerto Varas, Chile.
7. **Price, E. M.**, Rogers, L. A., Johnson, J. A., Shporer, A., Morton, T., Crepp, J. R., Swift, J., Muirhead, P. S. (2015). Characterizing the "Hot" Kepler Objects of Interest. Poster presentation at the 225$^{\text{th}}$ American Astronomical Society Meeting in Seattle, WA.
8. **Price, E. M.**, Rogers, L. A., Johnson, J. A., and Dawson, R. I. (2014). How Low Can You Go? The Photoeccentric Effect for Planets of Various Sizes. Poster presentation at the 223$^{\text{rd}}$ American Astronomical Society Meeting in Washington, DC.
9. **Price, E. M.**, Rogers, L. A., Shporer, A., Morton, T., Crepp, J. R., Swift, J., Muirhead, P. S., Johnson, J. A. (2013). Characterizing the "Hot" Kepler Objects of Interest. Poster presentation at the *Kepler* Science Conference II at Ames Research Center.

Teaching and Leadership

Teaching Fellow, ASTRON218: Radio Astronomy	Harvard, Fall 2017
Teaching Fellow, ASTRON16: Stellar and Planetary Astronomy	Harvard, Spring 2017
Head Teaching Assistant, CS2: Introduction to Programming Methods	Caltech, Winter 2015
Head Teaching Assistant, CS2: Introduction to Programming Methods	Caltech, Winter 2014
Teaching Assistant, CS2: Introduction to Programming Methods	Caltech, Winter 2013