Ruth Angus

RuthAngus@gmail.com

Assistant Curator of Astrophysics at the American Museum of Natural History, Associate Research Scientist at the Center for Computational Astrophysics at the Flatiron Institute, and Assistant Adjunct Professor at Columbia University.

Positions held and Education

October 2018 - Present: Assistant Curator of Astrophysics, American Museum of Natural History, Division of Physical Sciences, Central Park West & 79th St, New York, NY 10024.

October 2018 - Present: Associate Research Scientist, Flatiron Institute, Center for Computational Astrophysics, 162 5th Avenue, New York, NY, 10010.

October 2018 - Present: Assistant Adjunct Professor of Astronomy, Columbia University, Department of Astronomy, Pupin Hall, New York, NY, 10027.

October 2016 - October 2018: Simons Junior Postdoctoral Fellow, Department of Astronomy, Columbia University, 550 W 120th St, New York, NY 10027.

D. Phil (Ph.D.) June 2016, Subdepartment of Astrophysics, University of Oxford. Advisor: Professor Suzanne Aigrain.

Predoctoral fellowship 2015, Harvard-Smithsonian Center for Astrophysics. Advisor: Professor John Asher Johnson.

MPhys Physics with Astrophysics 2012, Department of Physics, University of Southampton, UK. Advisor: Dr David Latham (Harvard-Smithsonian Center for Astrophysics).

Grants and Awards

K2 guest observer grant awarded for "A novel approach to age analysis for Kepler M dwarfs", Co-Investigator, July 2018.

NASA Astrophyics Data Analysis Program (ADAP) grant awarded for "Stellar Rotation Periods from the K2 Spacecraft", Co-Investigator, September 2017

Simons Fellowship (2016-2019).

Predoctoral Fellowship, Harvard-Smithsonian Center for Astrophysics (2014-2015).

Leverhulme Trust award (2013-2014).

Science and Technologies Facilities Council award (2012-2013).

Highest score in third year Physics undergraduate studies, University of Southampton (2011).

Highest overall score in Physics undergraduate studies, University of Southampton (2012).

Astronomical Community Service

Review panel member for NASA ADAP grants (2018). Review panel member for Neural Information Processing Systems workshop "Machine learning for the physical sciences", 2017. Referee for Nature, The Astrophysical Journal, The Astrophysical Journal Letters Monthly Notices of the Royal Astronomical Society and The Journal of Open Source Software.

Recent talks and tutorials

An introduction to Bayesian Inference, tutorial, Astro hack week, Lorentz Centre, Leiden,

Netherlands, August 2018.

The ages of exoplanet hosts, contributed talk, Cool stars 20 conference, Boston, July 2018.

Inferring stellar ages, invited talk, BayesComp conference, Barcelona, April 2018.

Planetary systems across space and time, Astronomy Colloquium, University of Delaware, March 2018.

An introduction to Gaussian Processes, K2 clusters workshop, Boston University, January 2018.

Recent public outreach and engagement

Keynote speaker, Science research symposium, Tenafly High School, May 2018.

Planetary systems across time and space, Greenwich Astronomical Society, Greenwich, CT, April 2018.

NPR All things considered, Scientific expert, April 2018.

Bad science in movies, public talk at Science Exclamation Point, Caveat, NY, February 2018.

Journey to an exoplanet, immersive performance at Caveat, NY, December 2017.

Undead spacecraft, public talk at Astronomy on Tap, the Way Station, Brooklyn, NY, October 2017.

First Author Publications

Angus, R., Morton, T., Aigrain, S., Foreman-Mackey, D., Rajpaul, V., *Inferring probabilistic stellar rotation periods using Gaussian processes*, 2017, Monthly Notices of the Royal Astronomical Society 474, 2094.

Angus, R. & Kipping, D. *Probabilistic Inference of Basic Stellar Parameters: Application to Flickering Stars*, 2016, The Astrophysical Journal Letters, 823, 9.

Angus, R., Foreman-Mackey, D., Johnson, A., J., *Systematics-insensitive Periodic Signal Search with K2*, 2016, The Astrophysical Journal, 818, 109.

Angus, R., Aigrain, S., Foreman-Mackey, D., McQuillan, A., *Calibrating Gyrochronology using Kepler Asteroseismic Targets*, 2015, Monthly Notices of the Royal Astronomical Society, 225, 112.

Co-authored Publications

Ness, M. K. & others including **Angus, R.**, *Inference of stellar parameters from brightness variations*, arXiv:1805.04519

Foreman-Mackey, D., Agol, E., Ambikasaran, S., & **Angus, R.**, *Fast and scalable Gaussian process modeling with applications to astronomical time series*, The Astronomical Journal, 154, 220.

Vanderburg, A., & others including **Angus, R.**, *A disintegrating minor planet transiting a white dwarf*, 2015, Nature, 526, 7574, 546.

Vanderburg, A., & others including **Angus, R.**, *Characterizing K2 Planet Discoveries: A Super-Earth Transiting the Bright K Dwarf HIP 116454*, 2015, The Astrophysical Journal, 800, 59.

Parviainen, H., & others including **Angus, R.**, *Transiting exoplanets from the CoRoT space mission. XXV. CoRoT-27b: a massive and dense planet on a short-period orbit*,

2014, Astronomy & Astrophysics, 562, 140.

Coe, M. J., **Angus, R.**, Orosz, J. A., Udalski, A. *A detailed study of the modulation of the optical light from Sk160/SMC X-1*, 2013, Monthly Notices of the Royal Astronomical Society, 433, 746.

Non-refereed Publications

LSST Science Collaboration & others, including **Angus, R.**, *Science-Driven Optimization of the LSST Observing Strategy*, 2017, arXiv:1708.04058

Najita, J., & others, including **Angus, R.**, *Maximizing Science in the Era of LSST: A Community-Based Study of Needed US Capabilities*, 2016, arXiv:1610.01661

Hawley, S. L., **Angus, R.**, Buzasi, D., Davenport, J., R., A., Giampapa, M., Kashyap, V., Meibom, S., *Maximizing Science in the Era of LSST, Stars Study Group Report: Rotation and Magnetic Activity in the Galactic Field Population and in Open Star Clusters*, 2016, arxiv:1607.04302

Aigrain, S., & others including **Angus, R.**, *Monitoring young associations and open clusters with Kepler in two-wheel mode*, 2013, arxiv:1309.0737

Montet, B. T., & others including **Angus, R.**, *Maximizing Kepler science return per telemetered pixel: Searching the habitable zones of the brightest stars*, 2013, arxiv:1309.0654

Hogg, D., W., & others including **Angus, R.**, *Maximizing Kepler science return per telemetered pixel: Detailed models of the focal plane in the two-wheel era*, 2013, arxiv:1309.0653