

# Prof. Rory Kevin Barnes

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## EMPLOYMENT

Associate Professor, Astronomy Dept. & Astrobiology Program, U. of Washington, 09/2020 – present  
Affiliate Professor, eScience Institute, U. of Washington, 04/2017 – present  
Assistant Professor, Astronomy Dept. & Astrobiology Program, U. of Washington, 12/2013 – 09/2020  
Research Scientist, Astronomy Dept., U. of Washington 11/2010 - 11/2013  
VPL/IGERT Postdoctoral Research Associate to Victoria Meadows, Astronomy Dept. and Astrobiology Program, U. of Washington, 01/2009 - 10/2010  
Postdoctoral Research Associate to Richard Greenberg, Lunar and Planetary Laboratory/Dept. of Planetary Science, U. of Arizona, 12/2004 - 01/2009

## EDUCATION

Ph.D. Astronomy, University of Washington, 2004  
Dissertation: Dynamics of the Initial Planetesimal Disk  
Adviser: Thomas R. Quinn  
M.S. Astronomy, University of Washington, 1999  
B.S. Astronomy, University of Arizona, 1998  
B.S. Physics, University of Arizona, 1998

## SELECTED PUBLICATIONS (110 total, students/post-docs underlined)

**Barnes, R.**, *et al.* (2020) VPlanet: The Virtual Planet Simulator. *Proc. Astron. Soc. Pac.*, 132:024502.  
Fleming, D., *et al.* (2020) On the XUV Luminosity Evolution of TRAPPIST-1. *Astrophys. J.*, 891:155.  
Deitrick, R., *et al.* (2018) Exo-Milankovitch Cycles. II. Climates of G-dwarf Planets in Dynamically Hot Systems. *Astron. J.*, 155:266.  
**Barnes, R.** (2017) Tidal Locking of Habitable Exoplanets. *Cel. Mech. Dyn. Astron.*, 129:509–536.  
**Barnes, R.**, Meadows, V.S. & Evans, N. (2015) Comparative Habitability of Transiting Exoplanets. *Astrophys. J.*, 814:91.  
Driscoll, P.E. & **Barnes, R.** (2015) Tidal Heating of Earth-like Exoplanets Around M Stars: Thermal, Magnetic, and Orbital Evolutions. *AsBio*, 15:739–760.  
**Barnes, R.**, *et al.* (2015) Long-lived Chaotic Orbital Evolution of Exoplanets in Mean Motion Resonances with Mutual Inclinations. *Astrophys. J.*, 801:101.  
Luger, R. & **Barnes, R.** (2015) Extreme Water Loss and Abiotic O<sub>2</sub> Buildup On Planets Throughout the Habitable Zones of M Dwarfs. *AsBio*, 15:119–143.  
**Barnes, R.**, *et al.* (2013) Tidal Venuses: Triggering a Climate Catastrophe via Tidal Heating. *AsBio*, 13:225–248.  
**Barnes, R.**, & Heller, R. (2013) Habitable Planets Around White and Brown Dwarfs: The Perils of a Cooling Primary. *AsBio*, 13:279–293.  
Heller, R. & **Barnes, R.** (2013) Exomoon Habitability Constrained by Illumination and Tidal Heating. *AsBio*, 13:18–54.  
*Formation and Evolution of Exoplanets.* (2010) ed. **R. Barnes**, Wiley-VCH Publishing, Berlin.  
**Barnes, R.**, *et al.* (2009) N-Body Simulations of Growth from 1 km Planetesimals at 0.4 AU. *Icarus*, 203:626–643.  
Jackson, B., Greenberg, R., & **Barnes, R.** (2008) Tidal Evolution of Close-in Extrasolar Planets. *Astrophys. J.*, 678:1396–1406.  
**Barnes, R.**, & Greenberg, R. (2006) Stability Limits in Extrasolar Planetary Systems. *Astrophys. J. Lett.*, 647:L163–L166.  
**Barnes, R.**, & Quinn, T.R. (2004) The (In)stability of Planetary Systems. *Astrophys. J.*, 611:494–516.