

TAMARA M. ROGERS

Department of Planetary Sciences, Lunar Planetary Lab,
The University of Arizona, Tucson AZ 85721
(520) 626 3338
tami@lpl.arizona.edu
www.solarphysicist.com

Professional Employment

- Assistant Professor, Department of Planetary Sciences, University of Arizona, 2008-present
- NSF Astronomy and Astrophysics Postdoctoral Fellow, High Altitude Observatory, NCAR, Boulder CO, 2006-2008
- Postdoctoral Scholar, Department of Earth and Planetary Sciences, University of California, Santa Cruz, 2006-2006
- Graduate Research Fellow, University of California, Santa Cruz, 1999-2006
- Graduate Research Fellow, Lawrence Livermore National Laboratory, 1999, 2000

Education

- Ph.D, Department of Astronomy & Astrophysics, 2006
University of California Santa Cruz Santa Cruz, CA
- B.S. Physics & Astronomy, 1999 *Magna Cum Laude*
University of Arizona Tucson, AZ

Fellowships and Awards

- National Academy of Sciences, Frontiers of Science Fellow 2011
- National Science Foundation, Astronomy and Astrophysics Postdoctoral Fellow 2006-2008
- National Physical Sciences Consortium Fellow 1999-2005
- Phi Beta Kappa, Member 1999

Teaching

- **Instructor, PTYS 505A, Principles of Planetary Physics**
Core graduate course covering kinetic theory, hydrodynamics and magnetohydrodynamics. Department of Planetary Sciences, University of Arizona, Fall 2011
- **Instructor, ASTR596B, Methods in Computational Astrophysics**
Taught computational fluid mechanics half of graduate course on numerical methods in astrophysics. Department of Astronomy, University of Arizona, Spring 2011
- **Instructor, NATS 102, Universe and Humanity, Origin and Destiny**
General education undergraduate course on planetary science and astronomy. Department of Planetary Sciences, University of Arizona 2009-2010, 2012, 2013

Service

- NSF Panel Reviewer 2012, NASA Panel Reviewer 2012
- NAS Research Associateship Program Reviewer, 2011-present
- NSF Teragrid Supercomputer Allocation Committee, 2008-2011
- UA Physics Department Academic Program Review, committee member, 2011
- Reviewer For: Astronomy and Astrophysics, Monthly Notices of the Royal Astronomical Society, Geophysical and Astrophysical Fluid Dynamics, New Astronomy
- Reviewer For: SHINE Postdoctoral Fellowship, NASA Heliospheric Theory Program, NASA Origins Program
- UA LPL committee member: colloquium committee, recruitment committee, graduate advising and admissions committee, curriculum committee and computer committee
- Founder and Organizer, UA LPL Journal Club
- Session Chair AGU Fall Meeting 2009

Outreach

- Science Cafe, University of Arizona Book Fair 2013
- UA College of Science, Scitini, Introducing Scientists and Journalists 2013
- Saddlebrook Astronomy Club Lecture 2012
- Sun City Vistoso Astronomy Club Lecture 2012
- LPL Public Lecture Series 2012
- UA Spotlight on Science, Sunspot Science, Flandrau Planetarium 2010-present
- LPL Solar "Sun Day", 2010
- Arizona Assurance Mentor, 2008-2010
- NCAR SOARS mentor 2007
- Wonders of Science, Ask an Astronomer, Boulder 2007
- Lecturer, Solar Physics Summer School, National Solar Observatory 2006-2009
- Johns Hopkins University Talented Youth, University of California, Santa Cruz 2001
- Expanding Your Horizons in Math and Engineering, University of California, Santa Cruz 2001

Grants

- **Numerical Simulations of Magnetism in Hot Jupiters**
NASA, Astrophysics Theory Program, Rogers, PI, Showman, CoI, 368k, 2013-2015
- **Numerical Simulations of Solar Interior Dynamics**
NASA, Solar and Heliosphere Program, Rogers, PI, Glatzmaier, CoI, 330k, 2012-2014
- **Collaborative Research: Formation and Early Evolution of Exo-Planets**
NSF, Lin, PI, Rogers, CoI, Glatzmaier, CoI, Li, CoI, 2M, under review
- **The role of wave dynamics on the origin and evolution of hot Jupiters**
NASA Origins of the Solar System Rogers, CoI, Lin CoI, 435k, under review
- **Internal Gravity Waves in Intermediate and Massive Stars**
NASA Astrophysics Theory Program Rogers, PI, Lin CoI, 431k, under review

Refereed Publications

- *Internal Gravity Waves in Massive Stars I: Angular Momentum Transport*
Rogers, T.M., Lin, D.N.C, McElwaine, J.N. and Lau, H.H.B 2013, 772, 21
- *On Tidal Dissipation of Obliquity*
Rogers, T.M. and Lin, D.N.C 2013 ApJL, 769, L10
- *Internal Gravity Waves Modulate the Apparent Misalignment of Exoplanets around Hot Stars*
Rogers, T.M., Lin, D.N.C and Lau, H.H.B 2012 ApJL, 758, L6
- *Toroidal Field Reversals and the Axisymmetric Tayler Instability*
Rogers, T.M. 2011 ApJ, 735, 100
- *On Limiting the Thickness of the Solar Tachocline*
Rogers, T.M. 2011 ApJ, 733, 12
- *Reflection and Ducting of Gravity Waves Inside the Sun*
MacGregor, K.B. & Rogers, T.M. 2011 Sol. Physics, 270, 417
- *On the interaction of internal gravity waves with a magnetic field -II. Convective Forcing*
Rogers, T.M. & MacGregor, K.B. 2011 MNRAS, 410, 946
- *On the interaction of internal gravity waves with a magnetic field -I. Artificial wave forcing*
Rogers, T.M. & MacGregor, K.B. 2010 MNRAS, 401, 191
- *Differential Rotation in Giant Planets Maintained by density-stratified Turbulent Convection*
Glatzmaier, G.A., Evonuk, M. & Rogers, T.M. 2009, Geophys. Astrophys. Fluid Dyn., 103, 31
- *Non-linear dynamics of gravity wave driven flows in the solar radiative interior*
Rogers, T.M., K.B. MacGregor & Glatzmaier, G.A. 2008, MNRAS, 387, 616
- *Numerical Simulations of Penetration and Overshoot in the Sun*
Rogers, T.M. & Glatzmaier, G.A. 2006, ApJ 653, 765
- *Angular Momentum Transport by waves in the Solar Interior*
Rogers, T.M. & Glatzmaier, G.A. 2006, ApJ, 653, 756
- *Gravity Waves in the Sun*
Rogers, T.M. & Glatzmaier, G.A. 2005, MNRAS, 364, 1135
- *Penetrative Convection within the Anelastic Approximation*
Rogers, T.M. & Glatzmaier, G.A. 2005, ApJ 620, 432
- *Simulations of two-dimensional Turbulence in a Density-Stratified Fluid.*
Rogers, T.M., Glatzmaier, G.A. & Woosley 2003, Physical Rev. E. 67, 6315
- *A Test for the Nature of the Type IA Supernova Explosion Mechanism.*
Pinto, P.A., Eastman, R.G. & Rogers, T.M. 2001, ApJ 551, 231