**Personal Information**
Name: Tamara Rogers
DOB: November 21, 1974
Nationality: US
Website: www.solarphysicist.com

**Education**:

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| 1999-2006 | Ph.D. Astronomy & Astrophysics, University of California, Santa Cruz, USA, "Numerical Simulations of Convection, Overshoot and Waves in the Sun", Advisor: Prof. Gary Glatzmaier |
| 1995-1999 | B.S. Astronomy & Physics, The University of Arizona, Tucson, USA, Magna Cum Laude |

**Current Appointment:**

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| 2015-present | Lecturer, Department of Mathematics and Statistics, Newcastle University, UK |
| 2015-present | Research Scientist, Planetary Science Institute, Tucson, AZ, USA |

**Previous Appointments:**

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| 2008-2015 | Assistant Professor, Department of Planetary Sciences, University of Arizona, Tucson, USA |
| 2006-2008 | NSF Astronomy & Astrophysics Postdoctoral Fellow, High Altitude Observatory, NCAR, Boulder, USA |

**PhD Student Supervision**
8/13-present Tad Komacek, Magnetism in Hot Jupiter Atmospheres, University of Arizona
8/12-1/15 Jess Vriesema, Dynamics of the Solar Interior, University of Arizona

**Teaching:**

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| 2015 | Lecturer: Turbulence (part of *Instabilities, Turbulence and Scaling* for third year Maths students) |
| 2009-2014 | Lecturer: *Universe and Humanity, Origin and Destiny*<br>General education course on basic astronomy and planetary science. Typically has 100-160 students. |
| 2011 | Lecturer: *Methods in Computational Astrophysics*<br>Graduate course on computational methods in fluid dynamics. |
| 2011-2013 | Lecturer: *Principles of Planetary Physics*<br>Graduate course covering kinetic theory, basic fluid dynamics, magnetohydrodynamics and basic computational fluid dynamics. |

**Organization of Scientific Meetings:**
2014 Organizer, Dynamics of Planetary and Stellar Interiors, San Diego, USA
2009 AGU Session Chair, San Francisco, USA

**Institutional Responsibilities:**
2015 Member of the Equality and Diversity Committee, Newcastle University, UK
2008 Founder University of Arizona Lunar and Planetary Lab (LPL) Journal Club
2008-2014 UA LPL Committees: Colloquium Committee, Recruitment Committee, Graduate

Advising and Admissions Committee, Curriculum Committee, Computing Committee and Journal Club

**Commissions of Trust:**
2014 National Science Foundation (NSF) Panel Reviewer
2013 NASA Panel Reviewer
2012 NASA Panel Reviewer, NSF Panel Reviewer
2011-2013 National Academy of Sciences Research Associates Program Reviewer
2008-2011 NSF Teragrid Supercomputer Allocation Committee
2011 University of Arizona Physics Department, Academic Program Review Committee
ONGOING Reviewer for Astronomy & Astrophysics, Monthly Notices of the Royal Astronomical Society, Astrophysical Journal, Geophysical and Astrophysical Fluid Dynamics, New Astronomy

**Grants:**
$23,000 Magnetism in Hot Jupiter Atmospheres, NASA/NESSF, PI, 2014-2015
$368,000 Numerical Simulations of Magnetism in Hot Jupiters, NASA, PI, 2013-2016.
$330,000 Numerical Simulations of Solar Interior Dynamics, NASA, PI, 2012-2015.
$1,000,000 Faculty Position in Solar Physics, NSF, Acting PI, 2008-2013.
$180,000 Towards a Self-Consistent Model of the Solar Dynamo, NSF, PI, 2006-2008.

**Outreach**
I am very active in public outreach. In the last five years I have given more than a dozen public talks or lectures on Solar Physics, Astronomy and Planetary Science, with audiences ranging from elementary school children to enthusiastic adults. I have participated in multiple science outreach events, such as UA College of Science Scitini, Sun Day, Science Cafe and Wonders of Science. I have an ongoing video display at the University of Arizona Flandrau planetarium explaining the formation of sunspots. I have been a mentor with the NCAR SOARS program (summer mentoring for culturally diverse students), Arizona Assurance program (mentoring for first generation and underprivileged college students) and to many of the Lunar and Planetary Lab female graduate students. Since starting at Newcastle University I have become involved in the Athena/SWAN proposal team and have started Women in Mathematics lunches, where women at all career levels can meet to network and discuss issues such as imposter syndrome, stereotype threat and unconscious bias.

## Publications

**T M Rogers** and T D Komacek. Magnetic effects in Hot Jupiter Atmospheres. The Astrophysical Journal, 2014, 794, 132
**T M Rogers** and A P Showman. Magnetohydrodynamic Simulations of the Atmosphere of HD 209458b. The Astrophysical Journal Letters, 782(1):L4, February 2014
**T M Rogers,** D N C Lin, J N McElwaine, and H H B Lau. Internal Gravity Waves in Massive Stars: Angular Momentum Transport. The Astrophysical Journal, 772(1):21, July 2013
**T M Rogers** and D N C Lin. On the Tidal Dissipation of Obliquity. The Astrophysical Journal Letters, 769(1):L10, May 2013
**T M Rogers**, D N C Lin, and H H B Lau. Internal Gravity Waves Modulate the Apparent Misalignment of Exoplanets around Hot Stars. The Astrophysical Journal Letters, 758:L6, October 2012
**T M Rogers.** Toroidal Field Reversals and the Axisymmetric Tayler Instability. The Astrophysical Journal, 735(2):100, July 2011

**T M Rogers.** On Limiting the Thickness of the Solar Tachocline. The Astrophysical Journal, 733(1):12, May 2011
**T M Rogers** and K B MacGregor. On the interaction of internal gravity waves with a magnetic field - II. Convective forcing. Monthly Notices of the Royal Astronomical Society, 410:946, 2011
K B MacGregor and **T M Rogers**. Reflection and Ducting of Gravity Waves Inside the Sun. Solar Physics, 270(2), 417:436, June 2011
**T M Rogers** and K B MacGregor. On the interaction of internal gravity waves with a magnetic field - I. Artificial wave forcing. Monthly Notices of the Royal Astronomical Society, 401:191, 2010
Gary Glatzmaier, Martha Evonuk, and **T M Rogers**. Differential rotation in giant planets maintained by density-stratified turbulent convection. Geophysical and Astrophysical Fluid Dynamics, 103:31,51, February 2009
**T M Rogers**, K B MacGregor, and G A Glatzmaier. Non-linear dynamics of gravity wave driven flows in the solar radiative interior. Monthly Notices of the Royal Astronomical Society, 387:616, June 2008
**T M Rogers,** Gary A Glatzmaier, and C A Jones. Numerical Simulations of Penetration and Overshoot in the Sun. The Astrophysical Journal, 653:765, December 2006
**T M Rogers** and Gary A Glatzmaier. Angular Momentum Transport by Gravity Waves in the Solar Interior. The Astrophysical Journal, 653:756, December 2006
**T M Rogers** and Gary A Glatzmaier. Gravity waves in the Sun. Monthly Notices of the Royal Astronomical Society, 364:1135, December 2005
**T M Rogers** and Gary A Glatzmaier. Penetrative Convection within the Anelastic Approximation. The Astrophysical Journal, 620:432, February 2005
**T M Rogers**, Gary A Glatzmaier, and S E Woosley. Simulations of two-dimensional turbulent convection in a density-stratified fluid. Physical Review E, 67:26315, February 2003
Philip A Pinto, Ronald G Eastman, and **T M Rogers**. A Test for the Nature of the Type IA Supernova Explosion Mechanism. The Astrophysical Journal, 551(1):231, April 2001

### Invited Presntations, since 2009

2015 Exeter, UK, Astrophysics seminar
2014 KITP, Santa Barbara, USA, Invited Participant in *Wave Mean-Flow Interactions*
2014 UA Origins Program, USA, Invited Seminar
2014 Exoclimes III, Davos, Switzerland, Invited Review
2013 Ohio State University, USA, Invited Seminar
2013 University of Alberta, CA, Invited Seminar
2013 Connecting Theory to Experiments in GAFD, UCLA, USA, Invited Talk
2013 Next Generation Stellar Models, Leiden, The Netherlands, Invited Talk
2013 University of California, Santa Cruz, USA, Invited Seminar
2013 Waves and Instabilities in GAFD, Les Houches, FR, Invited Talk
2012 Dynamo Development Workshop, Boulder, USA, Invited Talk
2012 Northwestern University, USA, Invited Seminar
2012 University of Arizona, USA, Invited Seminar
2011 Supercomputing 2011, USA, Invited Presentation
2011 National Academy of Sciences Frontiers of Science Symposium, Shenzhen CN, Invited Presentation
2011 Geophysical and Astrophysical Internal Waves, Les Houches, Invited Talk
2011 IST Austria, Invited Seminar
2010 IAU 271, Astrophysical Dynamics from Stars to Galaxies, Nice, Fr, Invited talk
2010 AAS Meeting, Miami, USA, Invited Talk

2010 Internal Waves in GAFD, Banff, CA, Invited Talk
2009 AGU Fall Meeting, San Francisco, USA, Invited Talk
2009 Natural Dynamos Conference, Slovakia, Invited Talk
2009 Dynamos and Waves workshop, FR, Invited Talk
2009 UCSD, USA, Invited Seminar

## Awards and Prizes

1) 2011 National Academy of Sciences- Kavli Frontiers of Science Fellow, USA

> "The Academy's Kavli Frontiers of Science symposia bring together outstanding young scientists to discuss exciting advances and opportunities in a broad range of disciplines. Since its inception, 136 program "alumni" have been elected to the NAS and eight have won Nobel Prizes."

2) 2006 NSF Astronomy and Astrophysics Postdoctoral Fellowship

> "NSF Astronomy and Astrophysics Postdoctoral Fellowships provide an opportunity for highly qualified, recent doctoral scientists to carry out an integrated program of independent research and education."

3) 1999 National Physical Sciences Consortium Graduate Fellow

> "Graduate fellowship program in the physical sciences, targeting minorities and women to provide diversity and balance to meet future needs of academia and industry."

4) 1999 Member Phi Beta Kappa

> "The most outstanding arts and sciences students at America's leading colleges and universities."

5) Prior to 1995 I was in US Military Intelligence where I won Airman of the Quarter three times and Airman of the Year.