

Javiera M. Guedes

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INTERESTS

Cosmology, and N -body simulations applied to the co-evolution of galaxies and their central black holes, and to extrasolar planet formation.

EDUCATION

2010 Ph.D. (anticipated) Astrophysics, University of California, Santa Cruz
2008 M.S. Astronomy and Astrophysics, University of California, Santa Cruz
2005 B.A. Physics, University of California, Berkeley
2005 B.A. Astronomy, University of California, Berkeley

HONORS AND AWARDS

2009 Denice Denton Prize for Outstanding Graduate Student Research (UCSC)
2008 Regents Fellowship (UCSC)
2008 Graduate Research Award in Astrobiology (MIAC)
2007-2010 National Science Foundation Graduate Research Fellowship (NSF GRFP)
2005 Graduation with High Distinction (UC Berkeley)
2004- Phi Beta Kappa (UC Berkeley)
2004 Edward Wark Memorial Scholarship (UC Berkeley)
2004 Pomerantz Scholarship (UC Berkeley)
2001-2002 President Honor's Medal (LA Pierce College)
2001-2002 Dean's List (LA Pierce College)

GRANTS

2009 IGPP Mini-grant (\$1500, Awarded to fund observation run at CTIO, Chile)
2008 IGPP Mini-grant (\$2000, Awarded to fund observation run at CTIO, Chile)

RESEACH EXPERIENCE

2005- **N-body Simulations of Black Hole Recoil in Realistic Hosts**
University of California, Santa Cruz
Advisor: Piero Madau

2005- **Planet Formation and Detection**
University of California, Santa Cruz
Advisor: Greg Laughlin

- 2003-2005 **Supernova Cosmology**
Nearby Supernova Factory, LBNL
Advisor: Greg Aldering
- 2004 **Near IR astronomy of the Galactic Center**
NSF REU: University of California, Los Angeles
Advisor: Andrea Ghez
- 2003 **Gravitational Lensing by Galaxy Clusters**
University of California, Berkeley
Advisor: George Smoot

SELECTED SEMINAR & COLLOQUIUM TALKS

- 2009 **The Role of Massive Black Hole Recoil in Galaxy Evolution**
Instituto de Astrofísica de Canarias (Seminar Talk)
- 2008 **The Earths of Alpha Centauri B**
Cerro Calán, Santiago, Chile (Colloquium Talk)
- 2008 **The Earths of Alpha Centauri B**
Paris Observatory, France (Invited Seminar Talk)
- 2008 **Detectability of Earth-Like Planets Around Alpha Centauri B**
Carl Segan / SETI Institute, Mountain View, CA (Invited Colloquium Talk)
- 2008 **Formation and Detectability of Terrestrial Planets Around Alpha Centauri B**
University of Illinois, Urbana-Champaign
- 2006 **Gravitational Wave Recoil**
University of California, Santa Cruz

CONFERENCE TALKS

- 2008 **The Role of Black Hole Recoil in Galaxy Evolution**
Guedes, J., Diemand, J., Zemp., Madau, P., Kuhlen, J., Mayer, L., Stadel, J.
Novicosmo Workshop at SISSA, Trieste, Italy
- 2008 **Terrestrial Planet Formation and Detection Orbiting Alpha Centauri B**
Guedes, J., Rivera, E., Laughlin, G., Quintana, E., Fischer D.
Astrobiology Science Conference, Santa Clara Convention Center, CA
- 2008 **Massive Black Hole Recoil in High Resolution Hosts**
Guedes, J., Madau, P., Zemp. M., Diemand, J., Stadel, J.
Galactic & Stellar Dynamics in the Era of High Resolution Surveys
Louis Pasteur University, Strasbourg, France

REFEREED PUBLICATIONS

Simulations of Recoiling Massive Black Holes in the Via Lactea Halo

Guedes, J., Madau, P., Kuhlen, M., Diemand, J., & Zemp, M. 2009, *Apj*, accepted

Massive Black Hole Recoil In High Resolution Hosts

Guedes, J. Diemand, J., Zemp., Madau, P., Kuhlen, J., Mayer, L., Stadel, J. 2008, *AN*, 329, 1004.

Formation and Detectability of Terrestrial Planets Around Alpha Centauri B

Guedes, J. M., E. J. Rivera, E. Davis, G. Laughlin, E. V. Quintana, and D. A. Fischer 2008, *ApJ*, 679, 1582

TEACHING

2008 Teaching Assistant: Overview of the Universe (UCSC)
2007 Instructor: Galaxy Morphology, COSMOS Program (UCSC)
2006 Teaching Assistant: Overview of the Universe (UCSC)
2006 Teaching Assistant: The Formation and Evolution of the Universe (UCSC)
2005 Teaching Assistant: Light, Color, and Vision (UCSC)
2004 Teaching Assistant: Infrared Astronomy Laboratory (UC Berkeley)
2003 Grader: Introduction to Astrophysics (UC Berkeley)
2001-2002 Tutor of Mathematics, Physics, and Spanish (LA Pierce College)

EDUCATIONAL SERVICE AND OUTREACH

2009 Algebra Instructor (Santa Cruz Main Jail)
2008- Member of the Minority institute Astrobiology Collaborative (MIAC)
2007- Member of the AAS Committee on the Status of Minorities in Astronomy.
2006 Mentor of Ryan Denlinger, currently a Caltech undergraduate, region semi-finalist, Siemens Competition.
2005-2006 Friends Outside Volunteer, helped inmates and their families through the incarceration process (Santa Cruz Main Jail)
2005- Member of Alliances for Graduate Education and the Professoriate (AGEP)

FEATURED ARTICLES AND INTERVIEWS

The Earths of Alpha Centauri B, KZSC radio interview, April 2008
Earth "Twin" Might Circle Star Next Door, *National Geographic*, March 10, 2008
Alpha Centauri Scoped for Earth-Like Planets, *Discovery Channel News*, March 17, 2008
Nearest star's wobbles could reveal Earth's twin, *New Scientist*, February 29, 2008