

Erik J. Tollerud

CONTACT

INFORMATION

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University of California, Irvine
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EDUCATION

University of California, Irvine, Irvine, CA USA
Ph.D., Physics and Astronomy, expected June 2012 Advisor: James Bullock
Dissertation: “Dwarf Galaxies in LCDM”

University of California, Irvine, Irvine, CA USA
M.S., Physics and Astronomy, June 2008

University of Puget Sound, Tacoma, WA USA
B.S., Physics, May 2006

HONORS AND AWARDS

Thomas Malcolm & Hilda Enden Jack Physics Scholar, 6/2005
Nominated member of Sigma Xi, 5/2006
Coolidge Otis Chapman Honors Scholar, 6/2006
Honorable Mention, NSF GRF, 4/2008
GAANN Fellow, 6/2008–6/2011
Publication Featured in Nature Research Highlights¹, 9/2008
Optical Society of America Art in Science Award², 11/2010
Chambliss Astronomy Achievement Student Award, 217th AAS, 1/2011
UC Irvine School of Physical Sciences Faculty Endowed Fellow, 5/2011
UC Irvine Graduate Dean’s Dissertation Fellow, 6/2011
Fletcher Jones Fellow, 9/2011
Rodger Doxsey Travel Prize Honorable Mention, 219th AAS, 1/2012

RESEARCH EXPERIENCE

Graduate Student Researcher, 2009–2011
University of California, Irvine, CA USA
Elizabeth Barton, James Bullock
Research regarding Milky Way/Large Magellanic Cloud analogs in the Sloan Digital Sky Survey and near-field cosmology.

¹<http://www.nature.com/nature/journal/v456/n7220/full/456284f.html>

²visualization later featured in news media incl. MSNBC, AFP, Science Daily, nature.com

Graduate Student Researcher, 2007–present

University of California, Irvine, CA USA

James Bullock

Research on selection biases in the Sloan Digital Sky Survey for Milky Way Satellites, scaling relations of non-starforming stellar systems, and dynamical studies of Milky Way and M31 dSphs.

Graduate Student Researcher, 2007–2010

University of California, Irvine, Irvine, CA USA

Elizabeth Barton

Research on metallicities and evolution of Luminous Compact Blue Galaxies in the WIYN High Image Quality Indiana-Irvine Survey.

Undergraduate Honors Thesis, 2005–2006

University of Puget Sound, Tacoma, CA USA

James Bernhard

Stereoscopic visualization of complex three-dimensional physical systems and scientific concepts.

NASA Space Grant Intern, Summer 2005

Jet Propulsion Laboratory, Pasadena, CA USA

Michael Hecht

Designed data analysis software and performed instrument calibrations for MECA Instrument of Phoenix Mars Lander.

μ EP REU, Summer 2004

University of Arkansas, Fayetteville, AK USA

John Shultz

Studied effects of anodic oxidation on quantum dot growth in molecular beam epitaxy.

TEACHING AND
OUTREACH
EXPERIENCE

COSMOS Teaching Assistant, 2007–2011

Managed project groups and gave lectures to science-oriented summer camp for California high school students.

Public Lectures, UC Irvine Observatory, 2008–2011

UC Irvine Observatory Outreach Coordinator, 2006–2008

Planned and executed nearly 100 outreach visits for K-12 schools.

Teaching Assistant, UC Irvine, Intro to Astronomy, 2008

Teaching Assistant, UC Irvine, Physics of Music, 2007

Teaching Assistant, UC Irvine, Intro to Astronomy, 2007

Teaching Assistant, UC Irvine, Astronomy Lab, 2007

Lab Assistant, Univ. of Puget Sound, University Physics, 2006

Lab Assistant, Univ. of Puget Sound, Waves & Optics, 2005

Lab Assistant, Univ. of Puget Sound, College Physics, 2005

SERVICE
EXPERIENCE

- Astropy Coordinating Committee**, 2011–present
Planning board member for project to consolidate python programming language utilities for astronomy.
- Associated Graduate Students of UCI Chief of Staff**, 2011
Representative on administrative committees, liaison to President.
- UCI Graduate Council Representative**, 2010–present
Representative to UC Irvine Academic Senate committee on graduate student curriculum development.
- Organizer for UC Irvine “READ” journal club**, 2009–present
Organized bi-weekly discussions of recent papers on ArXiv/astro-ph between graduate students, postdoctoral researchers, and faculty.
- Co-Organizer, Astronomy Graduate Seminar**, 2009–2010
Organized weekly talks by graduate students and postdocs.
- Founding Chair, UCI Physics Graduate Caucus**, 2007–2010
Created graduate student organization to provide peer advising and graduate student voice in departmental affairs.

SELECTED
PUBLICATIONS

- Tollerud, E. J.**, Beaton, R. L., Geha, M. C., Bullock, J. S., Guhathakurta, P., J. S., Kalirai, Majewski, S. R., Kirby, E. N., & Gilbert, K. M., Yniguez, B., Patterson, R. J., Ostheimer, J.C., Choudhury, A., “The SPLASH Survey: Spectroscopy of 15 M31 Dwarf Spheroidal Satellites”, arXiv:1112.1067, *ApJ* submitted
- Purcell, C. W., Bullock, J. S., **Tollerud, E. J.**, Rocha, M., & Chakrabarti, S. “The Sagittarius impact as an architect of spirality and outer rings in the Milky Way”, *Nature* 477 (2011): 301–303
- Tollerud, E. J.**, Boylan-Kolchin, M., Barton, E. J., Bullock, J. S., & Trinh, C. Q. “Small-scale Structure in the Sloan Digital Sky Survey and Λ CDM: Isolated L^* Galaxies with Bright Satellites”, *ApJ*, 738 (2011): 102
- Tollerud, E. J.**, Bullock, J. S., Graves, G. J., & Wolf, J. “From Galaxy Clusters to Ultra-faint Dwarf Spheroidals: A Fundamental Curve Connecting Dispersion-supported Galaxies to Their Dark Matter Halos”, *ApJ* 726 (2011): 108
- Tollerud, E. J.**, Barton, E. J., van Zee, L., & Cooke, J. 2010, “The WHIQII Survey: Metallicities and Spectroscopic Properties of Luminous Compact Blue Galaxies”, *ApJ*, 708 (2010): 1076–1091
- Cooke, J., Sullivan, M., Barton, E. J., Bullock, J. S., Carlberg, R. G., Gal-Yam, A., & **Tollerud, E.** 2009, “Type II supernovae at redshift $z \sim 2$ from archival data”, *Nature*, 460 (2009): 237–239
- Tollerud, E. J.**, Bullock, J. S., Strigari, L. E., & Willman, B. “Hundreds of Milky Way Satellites? Luminosity Bias in the Satellite Luminosity Function”, *ApJ* 688 (2008): 277–289