

**Curriculum Vitae**  
**Nicholas J. McConnell**

Astronomy Department  
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**Education**

Ph.D. in Astrophysics, University of California, Berkeley (expected) 2012  
Thesis: “Black Hole Masses in Nearby Brightest Cluster Galaxies”  
Advisors: James R. Graham & Chung-Pei Ma  
M.A. in Astrophysics, University of California, Berkeley 2008  
B.A. in Astronomy and Physics, *summa cum laude*, Boston University 2006

**Research Experience**

University of California, Berkeley  
Graduate Student Researcher 2007-present  
I use optical and near-infrared spectroscopic data to measure stellar kinematics in galaxies. I run orbit superposition models to determine galaxies’ internal stellar dynamics, central black hole masses, and dark matter halo profiles.

Boston University Center for Space Physics  
Research Assistant 2004-2006  
I simulated performance of a fast steering mirror system and prepared electronic hardware for deployment on a sub-orbital rocket mission.

**Teaching Experience and Formal Training**

Community in the Classroom (Berkeley and Oakland elementary schools), 2011  
Solar System activity – designer and visiting instructor  
UC Santa Cruz, MARC/MBRS Summer Program, 2010  
Fluids Inquiry activity – design team leader and co-instructor  
Hartnell College, AST 1L: Introductory Astronomy Laboratory, 2009  
Transiting Planets Inquiry Activity – design team leader and co-instructor  
Maui Community College, ETRO 102: Instrumentation 2008  
Spectrometer Design activity – co-instructor  
UC Berkeley, AY C10: Introduction to General Astronomy, 2007  
Head Graduate Student Instructor (GSI)  
UC Berkeley, AY C12: The Planets, GSI 2007  
UC Berkeley, AY C10, GSI 2006  
The Princeton Review, MCAT Physics, instructor 2005-2006  
  
Center for Astronomy Education Tier I workshop 2011  
Institute for Scientist and Career Educators (ISEE), “Certificate in Teaching Innovative Laboratory Experiences” 2010  
ISEE Professional Development Program, “Inquiry in Science and Engineering Learning and Teaching” workshop 2008-2010  
ISEE Professional Development Program, “Re-thinking Science and Engineering Learning and Teaching” workshop 2008

### **Observing Experience**

McDonald Observatory (VIRUS-P) Trimesters 2011B, 2011C (5 nights)  
W. M. Keck Observatory Semesters 2008A-2010B (12 nights)  
(OSIRIS + LGS-AO, NIRC2 + LGS-AO)  
Gemini Observatory North Semester 2010B  
(Phase II planning for NIFS + LGS-AO)  
Lick Observatory (IRCAL + LGS-AO) Semesters 2007B-2009A (18 nights)

### **Refereed Publications**

*“Stellar Orbits and Black Hole Masses in Three Brightest Cluster Galaxies”*

**Nicholas J. McConnell**, Chung-Pei Ma, Karl Gebhardt, Jeremy D. Murphy, Tod R. Lauer, James R. Graham, Shelley A. Wright & Douglas O. Richstone. 2011, in prep.

*“The VAST Survey – II. Orbital Motion Monitoring of A-Type Star Multiples”*

Robert De Rosa, Jennifer Patience, Arthur Vigan, Paul Wilson, Adam Schneider, **Nicholas McConnell**, Sloane Wiktorowicz, Christian Marois, Inseok Song, Bruce Macintosh, James Graham, Mike Bessell, & Rene Doyon. 2011, accepted for publication in MNRAS

*“Two Ten-Billion-Solar-Mass Black Holes at the Centres of Giant Elliptical Galaxies”*

**Nicholas J. McConnell**, Chung-Pei Ma, Karl Gebhardt, Shelley A. Wright, Jeremy D. Murphy, Tod R. Lauer, James R. Graham, & Douglas O. Richstone. 2011, Nature, 480, 215.

*“The Black Hole Mass in the Brightest Cluster Galaxy NGC 6086”*

**Nicholas J. McConnell**, Chung-Pei Ma, James R. Graham, Karl Gebhardt, Tod R. Lauer, Shelley A. Wright, & Douglas O. Richstone. 2011, ApJ, 728, 100

*“Long-term Evolution of the Aerosol Debris Cloud Produced by the 2009 Impact on Jupiter”*

Agustin Sánchez-Lavega, Glenn S. Orton, Ricardo Hueso, Santiago Pérez-Hoyos, Leigh N. Fletcher, Enrique García-Melendo, Josep M. Gomez-Forellad, Imke de Pater, Michael Wong, Heidi B. Hammel, Padma Yanamandra-Fisher, Amy Simon-Miller, Naiara Barrado-Izagirre, Franck Marchis, Olivier Mousis, Jose-Luis Ortiz, Jorge García-Rojas, Massimo Cecconi, John T. Clarke, Keith Noll, Santos Pedraz, Anthony Wesley, Paul Kalas, **Nicholas McConnell**, William Golisch, David Griep, Paul Sears, Eric Volquardsen, Vishnu Reddy, Mike Shara, Richard Binzel, Will Grundy, Joshua Emery, Andrew Rivkin, Cristina Thomas, David Trilling, Karen Bjorkman, Adam J. Burgasser, Humberto Campins, Takashi M. Sato, Yuichi Kasaba, Julie Ziffer, R. Mirzoyan, Michael Fitzgerald, & Hervé Bouy. 2011, Icarus, 214, 462

### **Other Publications**

*“A College-level Inquiry-based Activity on Transiting Planets”*

**Nicholas J. McConnell**, Anne M. Medling, Linda E. Strubbe, Pimol Moth, Ryan M. Montgomery, Lynne M. Raschke, Lisa Hunter, & Barbara K. Goza. 2010, ASPC, 436, 97

*“Training the Next Generation of Astronomers”*

Peter K. G. Williams, Eric Huff, Holly L. Maness, Maryam Modjaz, Kristen L. Shapiro, Jeffrey M. Silverman, Linda Strubbe, Betsey Adams, Katherine Alatalo, Kuenley Chiu, Mark Claire, Bethany Cobb, Kelle Cruz, Louis-Benoit Desroches, Melissa Enoch, Chat Hull, Hannah Jang-Condell, Casey Law, **Nicholas McConnell**, Rowin Meijerink, Stella Offner, John K. Parejko, Jonathan Pober, Klaus Pontoppidan, Dovi Poznanski, Anil Seth, Steven Stahler, Lucianne Walkowicz, Andrew A. West, Andrew Wetzel & David Whysong. 2009, Astro2010, Position Papers, no. 65, arXiv:0904.2571

### **Conference Presentations**

Speaker, <i>Single and Double Black Holes in Galaxies</i> , Ann Arbor, MI	August 22-25, 2011
Speaker, <i>American Astronomical Society Meeting 217</i> , Seattle, WA	January 10-13, 2011
Poster, <i>Learning from Inquiry in Practice</i> , Santa Cruz, CA	January 16-17, 2010
Poster, <i>Keck Science Meeting</i> , Pasadena, CA	September 16-17, 2009
Poster, <i>International Astronomical Union Symposium 267: Evolution of Galaxies and Central Black Holes</i> , Rio de Janeiro, Brazil	August 10-14, 2009
Speaker, <i>Teaching Science &amp; Engineering Research Skills: Practices and Perspectives</i> , Santa Cruz, CA	April 3, 2009
Poster, <i>American Astronomical Society Meeting 213</i> , Long Beach, CA	January 5-8, 2009
Poster, <i>Keck Science Meeting</i> , Santa Cruz, CA	September 18, 2008

### **Invited Talks**

UCLA, extragalactic journal club	November 21, 2011
Princeton University, extragalactic journal club	November 14, 2011
University of Toronto, extragalactic journal club	November 10, 2011
Yale University, Galaxy Lunch	November 9, 2011
University of Texas at Austin, Cosmos Seminar	September 28, 2011
University of California, Berkeley, Theory Lunch	April 20, 2011
Keck Observatory, astronomy seminar	May 6, 2010
University of California, Berkeley, Adaptive Optics Seminar	October 28, 2008

### **Fellowships, Scholarships, and Awards**

Outstanding Graduate Student Instructor Award, UC Berkeley	2007
Astronomy Prize, Boston University Astronomy Department	2006
College Prize, Boston University Astronomy Department	2006
Inducted to Phi Beta Kappa honor society	2005
College of Arts and Science Scholarship, Boston University	2005-2006
University Scholarship, Boston University	2002-2006

### **Departmental Service**

Served as the graduate student representative on the New Building Committee (identified and addressed student concerns during the Astronomy department's relocation on UC Berkeley's campus)	2009 – 2011
Served as mentor for two Astronomy graduate students at UC Berkeley	2008 - 2011

### **Public Outreach**

Volunteer, Bay Area Science Festival	November 6, 2011
Presenter, Oakland Unified School District Dinner with a Scientist	June 1, 2011
Speaker, Alameda County 4-H Science Engineering Technology Career Day	April 9, 2011
Speaker, Eastbay Astronomical Society Monthly Meeting	August 28, 2010