

Jacob Edman

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| CURRENT | PhD Candidate, Department of Earth and Planetary Science University of California, Berkeley | <i>2012-Present</i> |
| RESEARCH INTERESTS | Atmospheric dynamics; tropical convection; climate change | |
| EDUCATION | University of California, Irvine, B.S., Physics B.S., Earth and Environmental Sciences <ul style="list-style-type: none">• <i>Summa Cum Laude</i>, Honors in Physics, Campuswide Honors• Honors Thesis in Physics, “Exploring the link between close companions and star formation history of isolated galaxies using SDSS data releases 6 and 7” University of Edinburgh, United Kingdom Physics, Geophysics | <i>June 2011</i> <i>June 2011</i> <i>Fall 2010</i> |
| HONORS AND AWARDS | NSF Graduate Research Fellow NSF Graduate Fellowship, Honorable Mention elected to Phi Beta Kappa elected to Sigma Pi Sigma Herbert Chen Award (UC Irvine physics) UC Irvine Excellence in Writing: Science and Technology Award Regents’ Scholar, UC Irvine National Merit Scholar UC Irvine Dean’s List | <i>April 2014 - present</i> <i>April 2012, 2013</i> <i>June 2010</i> <i>June 2010</i> <i>June 2010</i> <i>May 2010</i> <i>2007 - 2011</i> <i>2007 - 2011</i> <i>2007 - 2011</i> |
| PUBLICATIONS | Edman, J.P. and Romps, D.M. (2014), An improved weak pressure gradient scheme for single-column modeling. <i>Journal of the Atmospheric Sciences</i> . 71 , 24152429. doi: http://dx.doi.org/10.1175/JAS-D-13-0327.1 Edman, J.P., Barton, E.J. and Bullock, J.S. (2012), Exploring the links between star formation and minor companions around isolated galaxies. <i>Monthly Notices of the Royal Astronomical Society</i> , 424: 1454-1460. doi: 10.1111/j.1365-2966.2012.21335.x | |
| CONFERENCE PRESENTATIONS | Edman, J.P. and Romps, D.M. (2014) Parameterizing large-scale dynamics in single-column models with the weak-pressure-gradient approximation. Oral, 31st AMS Meeting on Hurricanes and Tropical Meteorology, San Diego, Calif, 30 Mar. Edman, J.P. and Romps, D.M. (2013) Parameterizing large-scale dynamics with the weak pressure gradient approximation. abstract A33K-07, Oral. 2013 Fall Meeting, AGU, San Francisco, Calif, 9-13 Dec. Solander, K., Edman, J., Lo, M, Reager, J.T., Thomas, B, David, C, Famiglietti, J.S., Singh, R.S., and Miller, N.L. Simulating reservoir operations in California for use in a coupled land-surface and human impacts model (CLM-HUM). abstract GC41A-0959;, Poster. 2012 Fall Meeting, AGU, San Francisco, Calif. 3-7 Dec. Edman, J.P., Lo, M., and Famiglietti, J.S. A high-resolution hydrologic model of California. abstract H41C-1045, Poster. 2011 Fall Meeting, AGU, San Francisco, Calif. 5-9 Dec. | |

Famiglietti, J. S.; Lo, M.; Kim, H.; Edman, J.; Sanders, B. F.; Castle, S.; Liu, Z.; Miller, N. L.; Singh, R. S.; Valentine, D. W.; Zaslavsky, I. Accelerating the Development of Land Surface Hydrological Modeling to Address Societal Needs: Application of an Integrated Data and Modeling Framework to California. abstract GC34B-08, Oral. 2011 Fall Meeting, AGU, San Francisco, Calif. 5-9 Dec.

Edman, J.P., Freund, F.T., and Zhao, X. Magnetic Asymmetry of Mid-Ocean Ridges. abstract OS21C-1532, Poster. 2010 Fall Meeting, AGU, San Francisco, Calif. 13-17 Dec.

RESEARCH EXPERIENCE

Graduate student researcher

August 2012 - Present

Advisor: Professor David Romps

Department of Earth and Planetary Science, University of California, Berkeley

- Investigating the fundamental dynamics of tropical convection, including the response of tropical convection to climate change.
- Developing methods for parameterizing large-scale dynamics in single-column and cloud resolving models

Junior Modeling Specialist

July 2011 - July 2012

Supervisor: Professor James Famiglietti

UC Center for Hydrologic Modeling

- Developed high-resolution land surface and hydrologic models to better understand the response of California's hydrologic cycle to future climate change

Undergraduate researcher

September 2008 - June 2011

Advisor: Dr. Elizabeth Barton

Department of Physics, University of California, Irvine

- Studied galaxy evolution and triggered star formation using data from Sloan Digital Sky Survey

Richard Branson Sustainability Group

January 2011 - March 2011

- Worked cooperatively with the Center for Unconventional Security Affairs to research ways to reduce outdoor water use in Southern California
- Submitted research and recommendations for expanding "smart timer" rebate programs to the Irvine Ranch Water District

Student researcher (NSF REU)

June 2010 - August 2010

Advisor: Dr. Friedemann Freund

SETI Institute/NASA Ames Research Center

- Participated in the NSF-funded Research Experience for Undergraduates
- Conducted an independent project studying paleomagnetic signatures surrounding mid-ocean ridges

TEACHING EXPERIENCE

Graduate student instructor

August 2013 - December 2013

EPS 181: Atmospheric Physics and Dynamics

Supervisor: Professor David Romps

Department of Earth and Planetary Science, University of California, Berkeley

Physics 2 Teaching Assistant

September 2009 - December 2009

Supervisor: Professor Stephen Barwick

Department of Physics, University of California, Irvine