

Dr. Jennifer D. Small Griswold

Associate Professor of Atmospheric Sciences
School of Ocean and Earth Sciences and Technology,
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Research Interests

Cloud Microphysics, Aerosols and Climate, Satellite Remote Sensing of Clouds and Aerosol

Education

- University of California, Santa Cruz, Santa Cruz CA
Ph.D. Earth & Planetary Sciences, June 2009
Thesis: Observational studies of the microphysics and dynamics of warm cumulus
- Rutgers, The State University of New Jersey, New Brunswick, NJ
B.S. Meteorology, May 2002
B.S. Environmental Science, May 2002

Research Experience

- *Associate Professor*, Department of Atmospheric Sciences, University of Hawaii at Mānoa, 2018-present
- *Assistant Professor*, Department of Atmospheric Sciences, University of Hawaii at Mānoa, 2012-2018

Cloud microphysics, Aerosol-Cloud-Climate Interactions and Remote Sensing of Clouds and Aerosols

- *Postdoctoral Researcher*, NASA Jet Propulsion Laboratory, 2009-2012

Influence of aerosols on clouds, precipitation and climate using multi-satellite data analyses and application of satellite observations to evaluate global climate.

- *Graduate Student Researcher*, UC Santa Cruz, 2002-2009

Observational studies of warm clouds using a flight phase Doppler interferometer to measure cloud drop size distributions and drop velocity for understanding the microphysical processes of precipitation initiation and mixing in warm clouds. Research supervised by Prof. Patrick Chuang.

Peer-Reviewed Publications in International and National Refereed Journals

Since Arriving at UH in 2012

15. Le Blanc, S. E., J. Redemann, C. Flynn, K. Pistone, M. Kacenelenbogen, M. Segal-Rosenheimer, Y. Shinozuka, S. Dunagan, R. P. Dahlgren, K. Meyer, J. Podolske, S. G. Howell, S. Freitag, **J. Small-Griswold**, B. Holben, M. Diamond, R. Wood, P. Formenti, S. Piketh, G. Maggs-Kolling, M. Gerber, and A. Namwoonde, 2020: Above-cloud aerosol optical depth from airborne observations in the southeast Atlantic, *Atmos. Chem. Phys.*, **20**, 1565-1590, doi.org/10.5194/acp-20-1565-2020. [5%]
14. Dillon, D. and **J.D. Small Griswold**: Droplet Clustering in Shallow Cumuli: The Effects of In-Cloud Location and Aerosol Number Concentration, 2019: *Atmos. Chem. Phys.*, **19**,

- 7297-7317, doi.org/10.5194/acp-19-7297-2019. [50%]
13. Goodman, C. J. and **J.D. Small Griswold**: Meteorological Impacts on Commercial Aviation Delays and Cancellations in the Continental US. 2019: *J. of App. Meteor. Clim.*, **58**, 479-494, DOI: 10.1175/JAMC-D-17-0277.1. [80%]
 12. Diamond, M., A. Dobracki, S. Freitag, **J. Griswold**, A. Heikkila, S. Howell, M. Kacarab, J. Podolske, P. Saide, and R. Wood, 2018: Time-dependent entrainment of smoke presents an observational challenge for assessing aerosol–cloud interactions over the southeast Atlantic Ocean, *Atmos. Chem. Phys.*, **18**, 14623-14636, doi.org/10.5194/acp-18-14623-2018. [10%]
 11. Goodman, C. and **J.D. Small Griswold**, 2018: Climate Impacts on Density Altitude and Aviation Operations, *J. of App. Meteor. Clim.*, **57**, 517-523, DOI: 10.1175/JAMC-D-17-0126.1 [50%]
 10. **Griswold, J.D.S.**, 2017: Improving Undergraduate Climate Change Literacy Through Writing: A Pilot Study, *Journal of College Science Teaching*, 47 (1), 31-37. [100%]
 9. Sockol, A. and **J.D. Small Griswold**, 2017: Inter-comparison of CMIP5 Model and Satellite Observations of Cloud-Aerosol Interactions, *Earth and Space Science*, **4**, doi:10.1002/2017EA000288. [50%]
 8. Norgren, M.S., **J.D. Small**, H.H. Jonsson and P.Y. Chuang, 2016: Observational estimates of detrainment and entrainment in non-precipitation shallow cumulus, *Atmos. Chem. Phys.*, **16**, 21-33, doi:10.5194/acp-16-21-2016. [40%]
 7. **Small, J.D.**, P.Y. Chuang, and H. Jonsson, 2013: Microphysical imprint of entrainment in warm cumulus, *Tellus B*, **65**, 19922, http://dx.doi.org/10.3402/tellusb.v65i0.19922. [90%]

Prior to Current Appointment

6. **Small, J.D.**, J. H. Jiang, H. Su, and Chengxing Zhai, 2011: Relationship between aerosol and cloud fraction over Australia, *Geophys. Res. Lett.*, **38**, L23802, doi:10.1029/2011GL049404. [80%]
5. **Small, J.D.**, P.Y. Chuang, G. Feingold, H. Jiang, 2009: Can aerosol decrease cloud lifetime? *Geophys. Res. Lett.*, **36**, L16806, doi:10.1029/2009GL038888. [80%]
4. **Small, J.D.** and P.Y. Chuang, 2008: New observations of precipitation initiation in warm cumulus clouds, *J. Atmos. Sci.*, **65**, 2972-2982, doi:10.1175/2008JAS2600.1 [90%]
3. Chuang, P.Y., E.W. Saw, **J.D. Small**, R.A. Shaw, C.M. Sipperley, G.A. Payne, and W.D. Bachalo, 2008. Airborne phase Doppler interferometry for cloud microphysical measurements, *Aerosol Sci. Tech.*, **42**, 685-703. [15%]
2. Rauber, R. M., B. Stevens, J. Davison, S. Göke, O. L. Mayol-Bracero, D. Rogers, P. Zuidema, H. T. Ochs III, C. Knight, J. Jensen, S. Bereznicki, S. Bordoni, H. Caro-Gautier, M. Colón-Robles, M. Deliz, S. Donaher, V. Ghate, E. Grzeszczak, C. Henry, A.M. Hertel, I. Jo, M. Kruk, J. Lowenstein, J. Malley, B. Medeiros, Y. Méndez-Lopez, S. Mishra, F. Morales-García, L. A. Nuijens, D. O'Donnell, D. L. Ortiz-Montalvo, K. Rasmussen, E. Riepe, S. Scalia, E. Serpetzoglou, H. Shen, M. Siedsma, **J. Small**, E. Snodgrass, P. Trivej, J. Zawislak, 2007: In the Driver's Seat – RICO and Education, *Bull. Am. Met. Soc.*, **88** (12): 1929-1937. [3%]

1. Harnack, R. and **J. Small**, 2002: Identification and analysis of dry periods in New Jersey using the New Brunswick precipitation record. *Bull. of the New Jersey Acad. of Sci.*, 47(1):1-6. [90%]

Articles Submitted to International and National Referred Journals

2. Dodson, S. D. and J.D. Small Griswold: Turbulent and Boundary Layer Characteristic during VOCALS-Rex. (*Submitted to Atmos. Chem. And Physics January 2020*)
1. Rossiter, D.L., **J.D. Small**, H. Jonsson, P.Y. Chuang: Measurements and Implications of Sub-Cloud Evaporation of Drizzle in Marine Stratocumulus. (*Submitted to the Quarterly Journal of the Royal Meteorological Society*).

Conference Presentations

62. **Small Griswold, J. D.** and A. Heikkila, 2019: Impact of Biomass Burning Aerosols on Marine Stratocumulus during ORACLES—Evidence of the Semidirect Effect? 99th AMS Annual Meeting, Phoenix, AZ, January 6-10, 2019. Oral Presentation Number 2.4.
61. Purdue, S., S. Gupta, **J. D. S. Griswold**, and P. Zuidema, 2019: Analysis of the Semidirect Effect on Stratocumulus Clouds in the SE Atlantic Using In Situ and Remote Sensing Measurements from the ORACLES Campaign, 99th AMS Annual Meeting, Phoenix, AZ, January 6-10, 2019. Poster Presentation Number 631.
60. A. D. Nugent, C. Karamperidou and **J. D. S. Griswold**, 2019: 505 A New Open Educational Resource for Intro-Level Atmospheric Science, 99th AMS Annual Meeting, Phoenix, AZ, January 6-10, 2019. Poster Presentation Number 505.
59. **Small Griswold, J. D.** and Ashley Heikkila, 2018: Microphysical Characteristics of Biomass Burning Aerosol Impacted Southeast Atlantic Marine Stratocumulus from the FPDR – PDI, *Eos Trans. AGU, Fall Meet. Suppl.*, Oral Presentation, Abs. A13H-2550.
58. **Small Griswold, J.D.**, 2018: What do undergraduates really know about the weather, climate and climate change?, *Eos Trans. AGU, Fall Meet. Suppl.*, Oral Presentation, Abs. ED33A-07.
57. Yamamoto, K., **J. D. Small Griswold**, S. Businger, A. Pattantyus, L. Holland, A. Nugent and A. Gettelman, 2018: Aerosol-Cloud Interactions from Hawaii's Kilauea Volcano. *Eos Trans. AGU, Fall Meet. Suppl.*, Poster Presentation, Abs. V43J-0257.
56. A. Gettelman and **J. D. Small Griswold**, 2018: Using Volcanic Eruptions to Characterize and Reduce Uncertainties in Aerosol Radiative Forcing of Climate, *Eos Trans. AGU, Fall Meet. Suppl.*, Oral Presentation, Abs. A44D-04.
55. Tseng, H., T. W. Giambelluca, **J. D. Small Griswold**, S. Freitag, S. G. Howell, A. Nugent, D. W. Beilman, C. Winchester and J. K. DeLay, 2018: Testing alternative ground-based cloud liquid water content measurement methods for estimating cloud water interception in tropical montane cloud forests, *Eos Trans. AGU, Fall Meet. Suppl.*, Poster Presentation, Abs. H43B-30.
54. **Small Griswold, J.D.**, A. Heikkila, A. Dobracki, and S. Howell, 2018: Characterization of Marine Stratocumulus during ORACLES with the FPDR-PDI, AMS 15th Conference on Cloud Physics, Vancouver, BC, Canada, July 9-13, 2018. Poster Number 58.
53. Fridlind, A. M., A. S. Ackerman, D. Painemal, H. Lee, A. M. Dasilva, **J.D.S. Griswold**, M. R. Poellot, and S. Howell, 2018: Large-Eddy Simulations of Namibian Stratocumulus

- Evolution during ORACLES-2016, AMS 15th Conference on Cloud Physics, Vancouver, BC, Canada, July 9-13, 2018. Poster Number 6.
52. Meyer, K., S. Platnick, **J.D.S. Griswold**, and B. Cairns, 2018: Cloud and Aerosol Imager Retrievals during ORACLES 2016: Evaluation of Cloud Microphysics and Above-Cloud Aerosol Optical Property Retrievals, AMS 15th Conference on Cloud Physics, Vancouver, BC, Canada, July 9-13, 2018. Oral Presentation Number 12.3.
 51. Howell, S., S. Freitag, A. Dobracki, N. Smirnow, C. Winchester, A. J. Sedlacek, J. Podolske, D. C. Noone, G. McFarquhar, M. R. Poellot, D. Delene, and **J.D.S. Griswold**, 2018: Cloud Droplet Residual Particles in Biomass-Burning Influenced Stratocumulus Clouds, AMS 15th Conference on Cloud Physics, Vancouver, BC, Canada, July 9-13, 2018. Oral Presentation Number 1.3.
 50. Painemal, D., A. M. Fridlind, H. Lee, R. Palikonda, W. L. Smith Jr., R. A. Ferrare, A. M. Dasilva, and **J.D.S. Griswold**, 2018: The Evolution of the Southeast Atlantic Boundary Layer Determined from Meteosat-10 Cloud Retrievals, GEOS-5 Model Outputs, and Observations during ORACLES 2016, AMS 15th Conference on Cloud Physics, Vancouver, BC, Canada, July 9-13, 2018. Oral Presentation Number J1.6.
 49. **Small Griswold, J.D.**, A. Heikkila, A. Dobracki, and S. Howell, 2018: Marine Stratocumulus Properties from the FPDR – PDI as a Function of Altitude and Aerosol during ORACLES Phase 1 and 2, 98th AMS Annual Meeting, Austin, TX, January 7-11, 2018. Oral Presentation Number 2.4.
 48. Heikkila, A., **J.D. Small Griswold**, S. Howell, A. Dobracki, and M. Kacarab, 2018: Characterization of Marine Stratocumulus Clouds and Aerosol-Cloud Interactions during ORACLES, 98th AMS Annual Meeting, Austin, TX, January 7-11, 2018. Poster Number 255.
 47. Yamamoto, K., **J.D. Small Griswold**, A. Pattantyus, and A. Gettelman, 2018: Volcanic Aerosol Effects from Hawaii’s Kilauea Volcano, 98th AMS Annual Meeting, Austin, TX, January 7-11, 2018. Oral Presentation Number 11.2.
 46. Gartzke, J., **J.D. Small Griswold**, 2018: The Relationship between Drought Severity, Precipitation, and Aerosol in California, 98th AMS Annual Meeting, Austin, TX, January 7-11, 2018. Oral Presentation Number 7.6.
 45. Nugent, A., **J.D.S. Griswold**, and C. Karamperidou, 2018: Creating and Using OER Materials in an Intro-Level Atmospheric Science Class, 98th AMS Annual Meeting, Austin, TX, January 7-11, 2018. Poster Number 126.
 44. **Small Griswold, J.D.**, A. Gettleman, and A. Pattantyus, 2017: Aerosol-Cloud Interactions in the Kilauea Volcanic Plume, 97th AMS Annual Meeting, Seattle, WA, January 22-26, 2017. Oral Presentation Number 9.5.
 43. Dodson, D. and **J.D. Small Griswold**, 2017: Turbulence and Droplet Clustering in Shallow Cumulus: The Effects of Aerosols and Cloud Height, 97th AMS Annual Meeting, Seattle, WA, January 22-26, 2017. Oral Presentation Number 8.5.
 42. **Small Griswold, J.D.**, A. Heikkila, and A. Dobracki, 2016: Marine Stratocumulus Properties from the FPDR – PDI as a Function of Aerosol during ORACLES, Eos Trans. AGU, Fall Meet. Suppl. Abs. A41D-0066.
 41. **Small Griswold, J.D.**, 2016: Inspiring Young Hawaiian and Pacific Island Women to Pursue S.T.E.M. Careers: Expanding Your Horizons – Hawaii, Eos Trans. AGU, Fall

- Meet. Suppl. Oral Presentation. Abs. ED43F-04.
40. Heikkila, A and **J.D. Small Griswold**, 2016: Intercomparison of CALIOP Cloud and Aerosol Profiles with *in situ* Marine Stratocumulus Observations during ORACLES, Eos Trans. AGU, Fall Meet. Suppl. Abs. A41D-0065.
 39. **Small Griswold, J.D.**, P.Y. Chuang, and H. H. Jonsson, 2016: Impact of Aerosol Amount on Drop Environment and Mixing Characteristics of Warm Continental Cumulus During GoMACCS, 17th International Conference on Clouds and Precipitation, Manchester, England, July 25-29, 2016. Oral Presentation Number 7.9.
 38. Heikkila, A., and **Small Griswold, J.D.**, 2016: Vertical Distributions and Seasonal Fluctuations from CALIOP: A Regional Aerosol-Cloud Interaction Analysis, 17th International Conference on Clouds and Precipitation, Manchester, England, July 25-29, 2016. Poster Presentation Number 13.11.
 37. **Small Griswold, J.D.**, P.Y. Chuang, and H. H. Jonsson, 2016: Aerosol-Cloud Interactions in Warm Continental Cumulus During GoMACCS, 96th AMS Annual Meeting, New Orleans, LA, January 10-14, 2016. Poster Presentation Number 786.
 36. **Small Griswold, J.D.**, 2016: Addressing Broader Impacts: Lessons Learned from recent NSF-CAREER Awards, 96th AMS Annual Meeting, New Orleans, LA, January 10-14, 2016. Oral Presentation Number 4.3.
 35. Bauman, M. and **J.D. Small Griswold**, 2016: A Machine Learning Analysis of the First Aerosol Indirect Effect Using *in situ* Cloud Measurements, 96th AMS Annual Meeting, New Orleans, LA, January 10-14, 2016. Poster Presentation Number 644.
 34. Goodman, C. and **J.D. Small Griswold**, 2016: Impacts of Climate Variability on Commercial Aviation Operations, 96th AMS Annual Meeting, New Orleans, LA, January 10-14, 2016. Oral Presentation Number J3.6.
 33. Heikkila, A. and **J.D. Small Griswold**, 2016: Regional Aerosol-Cloud Analysis: Vertical Distributions and Seasonal Fluctuations from CALIOP, 96th AMS Annual Meeting, New Orleans, LA, January 10-14, 2016. Oral Presentation Number S21.
 32. **Small Griswold, J.D.**, J.H. Jiang, and H. Su, 2015: On the relationship between aerosols and shallow cloud fraction as a function of region, season and aerosol type, 95th AMS Annual Meeting, Phoenix, AZ, January 4-8, 2015. Oral Presentation Number 3.2.
 31. **Small Griswold, J.D.**, 2015: Expanding Your Horizons – Hawaii: Inspiring Young Hawaiian and Pacific Island Women to Pursue S.T.E.M Careers, 95th AMS Annual Meeting, Phoenix, AZ, January 4-8, 2015. Oral Presentation Number 4.1.
 30. Bauman, M. and **J.D. Small Griswold**, 2015: Toward a global climatology of favorable conditions for pyrocumulonimbus events from 2002-2014, 95th AMS Annual Meeting, Phoenix, AZ, January 4-8, 2015. Oral Presentation Number J.5.5.
 29. Sockol, A. and **J.D. Small Griswold**, 2015: Inter-Comparison of CMIP5 Model Representations and Satellite observations of Cloud-Aerosol Interactions, 95th AMS Annual Meeting, Phoenix, AZ, January 4-8, 2015. Oral Presentation Number 6.2.
 28. **Small Griswold, J.D.**, J.H. Jiang, and H. Su, 2014: Regional and Seasonal Variation in the Relationship Between Absorbing Aerosols and Cloud Fraction, AMS 14th Conference on Cloud Physics, Boston, MA, July 6-11, 2014. Oral Presentation Number J5.5.
 27. Bauman, M. and **J.D. Small Griswold**, 2014: Compiling a Global Climatology of

- Pyrocumulonimbus Events to Assess their Climactic Impacts. AMS 14th Conference on Cloud Physics, Boston, MA, July 6-11, 2014. Paper Number 295.
26. Sockol, A. and **J.D. Small Griswold**, 2014: Inter-comparison of CMIP5 Model Representations and Satellite Observations of Cloud-Aerosol Interactions, AMS 14th Conference on Cloud Physics, Boston, MA, July 6-11, 2014. Paper Number 203.
 25. **Small, J.D.**, J.H. Jiang, and R. Bhawar, 2014: Investigating Aerosol-Cloud-Precipitation Relationships in South Atlantic Stratocumulus Clouds Using Modern and Long-Term Historical Satellite Data Sets, AMS Annual Meeting, Atlanta, GA, Feb 2-6, 2-14, Oral Presentation Number 3.4.
 24. **Small, J.D.**, J.H. Jiang, H. Su, and C. Zhai, 2013: Evaluation of Model Representations of Cloud-Aerosol Interactions in Biomass Burning Regions, *Eos Trans.*, AGU, Fall Meet. Suppl. Abs. A51E-0058.
 23. **Small, J.D.**, 2013: New Media Learning: Student Podcasting and Blogging in an Intro to Meteorology Course, *Eos Trans.*, AGU, Fall Meet. Suppl., Abs. ED31E-06.
 22. **Small, J.D.**, 2013: Climate Change Literacy: Teaching the Science of Global Climate Change Through Writing, AGU Chapman Conference on Communicating Climate Science, Granby, CO, Jun 8-13, 2013.

Books and Open Educational Resource Collaborations

1. Nugent, A, D. DeCou, S. Russell, C. Karamperidou, **J.D. Small Griswold**, and B. Seifert, 2019: Atmospheric Science: ATMO 200 Companion Text, UH OER, <http://pressbooks-dev.oer.hawaii.edu/atmo/>

Conference Presentations Prior to Current Appointment

21. **Small, J.D.**, J.H. Jiang, H. Su, and C. Zhai, 2012: Biomass burning aerosol effects on cloud fraction over Australia, AMS Meeting, Oral Presentation, Abstract J1.4.
20. **Small, J.D.**, J.H. Jiang, H. Su, and C. Zhai, 2011: Biomass burning aerosol effects on cloud fraction over Australia, *Eos Trans.* AGU, Fall Meet. Suppl. Abstract A14A-05.
19. **Small, J.D.**, J.H. Jiang, H. Su, and C. Zhai, 2011: Effects of Absorbing Aerosol on Cloud Fraction Over Australia, JPL Postdoctoral Research Symposium.
18. **Small, J.D.**, J.H. Jiang and H. Su, 2011: Regional differences in aerosol effects on cloud properties and precipitation using historical long-term satellite records. American Meteorological Society Meeting, Oral Presentation, Abstract J13.2.
17. **Small, J.D.**, J.H. Jiang and H. Su, 2010: Regional differences in relationships among clouds, biomass burning aerosols, and precipitation. *Eos Trans.* AGU, Fall Meet. Suppl. Abs. A11H-03.
16. **Small, J.D.** and J.H. Jiang, 2010: Analysis of the impact of biomass burning in Australia on precipitation and cloud properties using historical long-term satellite records. European Geophysical Union Meeting, Abstract EGU2010-5535.
15. **Small, J.D.** and P.Y. Chuang, 2009: An analysis of entrainment mixing processes in warm cumulus. *Eos Trans.* AGU, Fall Meet. Suppl., Abstract A13J-0427.

14. **Small, J.D.**, P.Y. Chuang, G. Feingold, and H. Jiang, 2008: First observations of evaporation-entrainment feedbacks in small cumulus. International Conference on Clouds and Precipitation, Abstract.
13. Feingold, G., **J.D. Small**, P.Y. Chuang, H. Jiang, S.K. Krueger, H.H. Jonsson, 2008: Assessment of aerosol and entrainment-mixing processes on drop size distributions in warm cumulus. International Conference on Clouds and Precipitation, Abstract.
12. Rossiter, D.L, **J.D. Small**, and P.Y., Chuang, 2008: Observations of Size-resolved Drizzle Rates in Marine Stratocumulus. International Conference on Clouds and Precipitation, Abstract.
11. **Small, J.D.**, P.Y. Chuang, G. Feingold, and H. Jiang, 2007: Are there aerosol indirect effects on buoyancy and entrainment in shallow cumulus clouds? *Eos Trans.*, AGU, Fall Meet. Suppl., Abstract A34A-06.
10. **Small, J.D.**, 2007: Environmental change science literacy through writing: Successes in an undergraduate writing and composition course, *Eos Trans.*, AGU, Fall Meet. Suppl., Abstract ED23A-0965.
9. Rossiter, D., **J.D. Small**, and P.Y. Chuang, 2007: Drizzle Rates in Marine Stratocumulus, *Eos Trans.*, AGU, Fall Meet. Suppl., Abstract A13B-1169.
8. **Small, J.D.** and P.Y. Chuang, 2007: New observations of precipitation initiation in warm cumulus clouds, Berkeley Atmos. Sci. Center Symp., October 5, Berkeley, CA, Abstract 52.
7. **Small, J.D.**, 2007: Writing about change: Teaching the science of global environmental change through writing, Bay Area Institute, August 14, San Francisco, CA.
6. **Small, J.D.** and P.Y. Chuang. 2006: Initiation of Precipitation in Trade Wind Cumulus Clouds, *Eos Trans.*, AGU, Fall Meet. Suppl., Abstract A13C-0939.
5. **Small, J.D.** and P.Y. Chuang: Collision-Coalescence Nuclei and Entrainment Mixing During RICO, 2006: 12th AMS Conf. on Cloud Physics. Madison, WI. Abstract 9.3.
4. **Small, J.D.** and P.Y. Chuang, 2005: Collision-Coalescence Nuclei Measurements During the Rain in Cumulus over the Ocean Experiment AGU, Fall Meet. Suppl., Abstract A13A-0885.
3. **Small, J.D.**, S.D. Anderson-Bereznicki, B. Medeiros, L. Nuijens, C.K. Henry, D.M. O'Donnell Jr., and F. Morales: RICO Graduate Student Research Flight: The Island Tail Objective, 2005: AGU, Fall Meet. Suppl. Abstract ED33A-1235.
2. Conant, W.C., P. Arnott, A. Bucholtz, G. Buzorius, P.Y. Chuang, H.H. Jonsson, S.M. Murphy, T.A. Rissman, **J.D. Small**, A. Sorooshian, V. Varutbangkul, R.C. Flagan, J.H. Seinfeld: Aerosol-Cloud Interactions Evaluated with Aircraft Measurements during the Marine Stratus Experiment, 2005: AGU, Fall Meet. Suppl., Abstract A13E-06.
1. Conant, W.C., J.H. Seinfeld, R.C. Flagan, R. Bahreini, T.A. Rissman, V. Varutbangkul, M. Lu, H.H. Jonsson, G. Buzorius, P.A. Durkee, K. Nielsen, A. Bucholtz, A. Termuende, M.A. Tschudi, B.A. Albrecht, P. Kollias, B. Cairns, P.Y. Chuang, **J. Small**, W.P. Arnott, J.W. Walker, G.L. Kok: The Coastal Stratocumulus Imposed Perturbation Experiment: Discerning aerosol indirect effects in stratocumulus clouds using imposed aerosol forcing, 2003: AGU, 84(46), *Eos Trans.*, AGU Fall Meet. Suppl., Abstract A12B-0091.

Invited Seminars, Workshops and Presentations

- **Small Griswold, J.D.**, 2020: ARM Aerial Instrumentation Workshop. *Invited Participant*, PNNL, Richland, Washington (March 2020).
- **Small Griswold, J.D.**, 2019: Finding the Silver Lining - Challenges and Improvements in situ Observations of Clouds. *Gordon Research Conference on Radiation and Climate*, Bates College, Lewiston, Maine (July 2019).
- **Small Griswold, J.D.**, 2018: Observations of Clouds, Aerosols, and their Interactions using Satellites and Aircraft Observations. *Chinese Meteorological Agency*, Beijing, China, (May 2018).
- **Small Griswold, J.D.**, 2018: Observations of Clouds, Aerosols, and their Interactions using Satellites and Aircraft Observations *Nanjing University of Information Science and Technology*, Nanjin, China (May 2018).
- **Small, J.D.**, 2012: Aerosol-Cloud Interactions Aircraft and Space-Based Platforms. *University of Hawaii at Manoa, Department of Atmospheric Sciences*, Interview Seminar.
- **Small, J.D.**, 2010: The sky is not the limit, *5th annual West Coast Conference for Undergraduate Women in Physics*, University of California Santa Cruz.
- **Small, J.D.**, 2009: Chasing the Warm Rain Mystery, *Jet Propulsion Laboratory*, Interview Seminar.
- **Small, J.D.** and P.Y., Chuang, 2007: Understanding warm clouds: Answering old questions with new observations and insights, *GISS/Columbia University Friday Seminar Series*.
- **Small, J.D.** and P.Y., Chuang, 2008: Chasing the Warm Rain Mystery: Investigating buoyancy, entrainment and microphysical processes in shallow cumulus, *Lawrence Livermore National Laboratory*, seminar.

Honors, Grants, Fellowships and Awards

- *Open Education Research Grant: A new OER Text for ATMO 102: Pacific Climates and Cultures: How weather and cultural identities are intertwined in the Pacific Islands*, Outreach College, University of Hawaii at Manoa, Awarded May 7, 2020, **\$4,676**.
- *AGU 2019 Editors' Citation for Excellence in Refereeing*, for JGR-Atmospheres. Awarded on April 10, 2020.
- *Presidents Emerging Leaders Program – Cohort IX*, Selected in Spring 2019 for the 2019-2020 year Program.
- *Open Education Research Grant: Merging Mathematical and Conceptual Representations of Atmospheric Science – an OER text with Custom Ancillary and Supporting Materials*, Outreach College, University of Hawaii at Manoa, Awarded April 10, 2017, **\$4,900**.
- *Chancellor's Citation for Meritorious Teaching*: The award recognizes faculty members who have made significant contributions in teaching and student learning. University of Hawaii at Manoa, Awarded May 1, 2017, **\$500**.
- *United Nations Framework Convention on Climate Change, Conferences of the Parties 22*: Chief of Party for the University Corporation of Atmospheric Research, Marrakech Morocco, Nov. 7-18 2016.
- *NASA EV2 AWARD: ORACLES (ObseRvations of Aerosols above CLouds and their*

interactions), UH Cloud and Aerosol funding with Steven Howell, Award Effective: Feb. 20, 2015. - Sept 30, 2019, UH Component ~\$1,805,600.

- *NSF CAREER: A Comprehensive Investigation into Cloud-Aerosol Interactions Using Satellite, Aircraft and Model Data*, Award Effective: July 1, 2013 - June 30, 2018, ~\$569,600.
- *U. Hawai'i SEED Diversity and Equity Initiative Grant: Women as Scientists Colloquium*, \$500.
- Outstanding Postdoctoral Research Award, 2011.
- Best Student Oral Presentation, 2006: AMS 12th Conference on Cloud physics.
- Outstanding Earth Science TA (EART 006, 2005; 80C 2004): University of California Santa Cruz.
- Center for Informal Learning and Schools Graduate Science Fellow, 2005-07: University of California Santa Cruz.
- American Meteorological Society/NASA's Earth Science Enterprise Graduate Fellowship, 2002-03: University of California Santa Cruz.

Teaching Experience

- *Associate Professor*, University of Hawaii at Mānoa, 2018-Present
- *Assistant Professor*, University of Hawaii at Mānoa, 2012-2018
 - Undergraduate Non-Major Course and Lab: Introduction to Meteorology (MET 101/ATMO 101)
 - Undergraduate Hawaii Theme Course: Pacific Climates and Cultures (MET 102/ATMO 102)
 - Graduate Level Course and Lab: Satellite Data Applications (MET 611/ATMO 611)
- *Adjunct Faculty*, Cerritos College, 2011-2012
 - Courses: Weather and Climate, Physical Geography
- *Subject Matter Expert (Meteorology)*, South University Online, 2011-present
 - Course: Introduction to Meteorology
- *Instructor*, University of California – Santa Cruz, 2007-2009
 - Courses: Weather and Climate, Concepts of Environmentalism, Writing 1 for Freshman
- *Graduate Student Teaching Assistant*, University of California – Santa Cruz, 2004-2007

Graduate Students Supervised or Committee Member

Number of *in progress* Graduate Students Supervised (currently supported by grants): 1

- 1) *Dillon Dodson – PhD Student, Summer 2017-Present

Number of *completed* Graduate Students Supervised (previously supported by grants): 7

- 1) *Ashley Heikkila – MS Student, Fall 2016-Summer 2018, Graduated Summer 2018
- 2) *Kayla Yamamoto – MS Student, Fall 2016-Summer 2018, Graduated Summer 2018
- 3) *Jessica Gartzke – MS Student, Fall 2016-Spring 2018, Graduate Spring 2018
- 4) *Dillon Dodson – MS Student, Fall 2015-Spring 2017, Graduated Spring 2017
- 5) *Christopher Goodman – MS Student, Fall 2014-Summer 2016, Summer 2016

Graduation

- 6) *Alyssa Sockol – MS Student, Fall 2013-Fall 2015, Graduated Fall 2015
- 7) *Mark Bauman – PhD turned MS Student, Fall 2013-Fall 2015 Graduated Fall 2015

Number of Graduate Student Research committees (not my own students): 12

- 1) Kristin Butt – MS Student (Dr. A. Nugent, main adviser, Graduated Summer 2019)
- 2) Estelle Bonny – PhD Student (Dr. R. Wright, main adviser, Graduated Summer 2018)
- 3) Amie Dobracki – MS Student (Dr. S. Howell, main adviser, Graduated Spring 2018)
- 4) David DeCou – MS Student (Dr. A. Nugent, main adviser, Graduated Spring 2018)
- 5) Xiaou Bai – MS Student (Dr. Chu, main adviser, Graduated Summer 2017)
- 6) Annette Foerster – PhD Student (Dr. Bell, main adviser, Graduated Fall 2016)
- 7) Andrew Frambach – MS Student (Dr. Bell, main adviser, Graduated Fall 2015)
- 8) Rebecca Simpson – PhD Student (Dr. Huebert, main adviser, Graduated Fall 2015)
- 9) Malte Stuecker – PhD Student (Fei-Fei Jin, main adviser, Graduated Spring 2015)
- 10) Liye Li – MS Student (Dr. .-L. Chen, main adviser, Graduated Spring 2015)
- 11) Thomas Winning – MS (Dr. Y.-L. Chen, main adviser, Graduated Summer 2014)
- 12) Aaron Levine – PhD Student (Dr. Jin, main adviser, Graduated Summer 2014)
- 13) Thomas Dunn – PhD Student (Dr. Businger, main adviser, Graduated Fall 2013)

Number of Student Qualifying Exam Committees: 2

- 1) Annette Foerster – PhD Student (Dr. Michael Bell, main adviser)
- 2) Yan Zhu – PhD Student (Dr. Tim Li, main adviser)

Previous Field Campaign Participation

- 2016-2018 ORACLES (ObseRvations of Aerosols above CLouds and their intEractionS), Science Team member, flying the Flight-Probe Dual Range Phase Doppler Interferometer (FPDR-PDI) on the NASA P-3 in the Southeast Atlantic off the coast of Namibia.
- 2008 VOCALS (VAMOS Ocean Cloud Atmosphere Land Study), data processing advisor for Phase Doppler Interferometer (PDI) data collected on the Navy CIRPAS Twin Otter, over the Southeast Pacific Ocean off the coast of Chile.
- 2007 CLASIC (Cloud and Land Surface Interaction Campaign), Science Team member, flying the Phase Doppler Interferometer (PDI) on the Navy CIRPAS Twin Otter, over Ponca City, Oklahoma.
- 2007 MASE-II (Marine Stratocumulus Experiment-II), Science Team member, flying the Phase Doppler Interferometer (PDI) on the Navy CIRPAS Twin Otter, off the coast of California.

GoMACCS (Gulf of Mexico Atmospheric Composition and Climate Study), Science Team member, flying the Phase Doppler Interferometer (PDI) on the Navy CIRPAS Twin Otter, near Houston Texas and over the Gulf of Mexico.
- 2005 MASE-I (Marine Stratocumulus Experiment-I), Science Team member, flying the Phase Doppler Interferometer (PDI) on the Navy CIRPAS Twin Otter, off the coast of California.
- 2004 RICO (Rain in Cumulus over the Ocean), Science Team member, flying the Phase Doppler Interferometer (PDI) on the NCAR C-130 Aircraft off the coast of Antigua, WI.

Service - University and Professional Committees and Activities

Service to the Department of Atmospheric Sciences and SOEST:

- 2019-Present **Associate Chair** for the Department of Atmospheric Sciences
- 2019-Present **SOEST Academic Council**
- 2019-Present **SOEST Research Council**
- 2017-Present **Undergraduate Chair** for the Department of Atmospheric Sciences
- 2012-Present **ATMO Curriculum Committee** (Chair since Spring 2016)
- 2016 **SOEST Revolutionary Committee**
- 2013 **SOEST Young Investigator Program Selection Committee Member**

UH Mānoa

- 2019-Present **Meeting Pattern Advisory Committee**, UH Manoa
- 2018-2020 **Senate Executive Committee**, Mānoa Faculty Senate
- 2016-2018 **SOEST Representative**, Mānoa Faculty Senate
- 2016-2018 **Secretary, SOEST Representative**, General Education Committee
- 2013-2015 **SOEST Representative**, Mānoa Faculty Senate
- 2014-2015 **Chair and Vice-Chair, SOEST Representative**, Committee on Student Affairs
- 2012-Present **Scholarship Reviewer**, Associated Students of the University of Hawaii
- 2013-Present **Board of Director Member**, University of Hawaii Professional Assembly

Service to the National and International Scientific Community:

- 2013-2019 **Member of UCAR President's Advisory Committee on University Relations**
- 2016-2018 **Chair of the American Meteorological Society Committee on Cloud Physics**, Activities and Roles: Committee issues, AMS glossary additions or edits, Planning of 2018 AMS Cloud Physics Conference.
- 2013-2016 **Member of the American Meteorological Society Committee on Cloud Physics**, Activities and Roles: Committee issues, AMS glossary additions or edits, Planning of 2014 AMS Cloud Physics Conference.

Agency Reviews and Review Panels

- 2019 **Graduate Research Fellowship Program, Panelist**, NSF
- 2018 **NASA Earth Venture Suborbital - 3 Proposal Panel**, NASA, Review NASA-EVS-3 proposals for the A.34 of NRA NNH17ZDA001N-EVS3.
- 2017-2018 **Graduate Research Fellowship Program, Panelist**, NSF
- 2015-2017 **NSF Proposal Reviewer** for CAREER grants and Field Projects
- 2013-Present **AAAS Reviewer**, Science Books and Films
- 2013 **NASA ROSES Terra-Aqua Review Panel**, Activities: Review NASA-ROSES proposals for the A.28 of NRA NNH13ZDA001N.

Academic Journal Reviewer

- 2019-Present *Geophysical Research Letters* (3x)
- 2019-Present *Weather Climate and Society* (2x)
- 2019-Present *Remote Sensing* (2x)
- 2018-Present *Atmospheric Research* (5x)
- 2018-Present *Atmosphere* (2x)
- 2017-Present *Dynamics of Atmospheres and Oceans* (1x)
- 2012-Present *Journal of Geophysical Research – Atmospheres* (15x)

- 2014-Present *Atmospheric Chemistry and Physics* (7x)
 2013-Present *The Journal of Geoscience Education* (1x)
 2013-Present *The Journal of the Atmospheric Sciences* (4x)
 2011-Present *The Journal of Climate* (2x)
 2010-Present *The Bulletin of the American Meteorological Society* (2x)

Service – Education and Community Outreach Activities

- 2019 **Hawai'i State Science & Engineering Fair Deputy Environmental Cluster Judge**, Hawai'i Academy of Science, Honolulu HI, (April 9, 2019)
 2018 **Presenter for SOEST Visitors**, Boys and Girls Club, Honolulu, HI, (July 25th, 2018)
 2018 **Presenter for SOEST Visitors**, Windward Nazarene, Kaneohe, HI, (June 19, 2018)
 2018 **Chair, Expanding Your Horizons – Hawaii**, STEM conference for 6th-8th grade girls, April 21st, 2018
 2018 **Hawai'i State Science & Engineering Fair Deputy Environmental Cluster Judge**, Hawai'i Academy of Science, Honolulu HI, (March 29, 2018)
 2017 **UCAR Weather Day on the Hill and Hill Visits, Washington, D.C.**, May 2017
 2017 **Chair, Expanding Your Horizons – Hawaii**, STEM conference for 6th-8th grade girls, April 15th, 2017
 2017 **Atmospheric Science Presenter**, SOEST High School Lab Tours, April 10, 2017
 2017 **Hawai'i State Science & Engineering Fair Deputy Environmental Cluster Judge**, Hawai'i Academy of Science, Honolulu HI, (April 11, 2017)
 2016 **Presenter for STEMplus Citizen Science Session, 'Iolani School, Meteorology in the Modern Age: Clouds and Climate**, November 2016
 2016 **Chair, Expanding Your Horizons – Hawaii**, STEM conference for 6th-8th grade girls, April 16th, 2016
 2016 **UCAR Weather Day on the Hill and Hill Visits, Washington, D.C.** May 2016
 2016 **Presenter for SOEST Visitors**, Highlands Inter. School, Pearl City, HI, (March 2016)
 2016 **Hawai'i State Science & Engineering Fair Judge**, Hawai'i Academy of Science, Honolulu HI, (March 29, 2016)
 2015 **Green Screen Magic Exhibit, 2015 SOEST Open House for K-12 children**
 2015 **Chair, Expanding Your Horizons – Hawaii**, STEM conference for 6th-8th grade girls, April 18th, 2015
 2015 **Hawai'i State Science & Engineering Fair Judge**, Hawai'i Academy of Science, Honolulu HI, (March 23, 2015)
 2014 **Presenter for SOEST Visitors**, Highlands Inter. School, Pearl City, HI, April 2014
 2014 **Hawai'i State Science & Engineering Fair Judge**, Hawai'i Academy of Science, Honolulu HI, (April 1, 2014)
 2014 **Chair, Expanding Your Horizons – Hawaii**, STEM conference for 6th-8th grade girls, April 24th, 2014
 2013 **SOEST Blog - About Graduate Student Life, Faculty Text and Content Editor**, Representing the Department of Atmospheric Science
 2013 **Green Screen Magic Exhibit, 2013 SOEST Open House for K-12 children**
 2013 **Hawai'i State Science & Engineering Fair Judge**, Institution: Hawai'i Academy of Science, Honolulu HI, (April 8, 2013)
 2013 **Volunteer Presenter for Career Day (Women's History Month)**, Trinity Lutheran Middle School, Wahiawa, HI (March 14, 2013)

2012 **Women's History Project - Hawaii Liaison**, Activities: Plan events during Women's History Month (March) and throughout the year to support and recognize the achievements of women. (Fall 2012-Present)