

## Current

- 2016 – Present
- Associate Professor**  
Department of Earth and Planetary Science  
University of California, Berkeley, CA
- Faculty Scientist**  
Climate and Ecosystem Sciences Division  
Lawrence Berkeley National Laboratory, Berkeley, CA
- Director**  
Berkeley Atmospheric Sciences Center  
University of California, Berkeley, CA

## Education

- 1999 – 2005      **Harvard University**, Cambridge, MA      **Ph.D., Physics**  
Thesis: Holography and related topics in string theory
- 1995 – 1999      **Yale University**, New Haven, CT      **B.S./M.S., Physics**  
Magna cum laude      **B.S., Mathematics**

## Previous positions

- 2011 – 2016      **Assistant Professor**  
Department of Earth and Planetary Science, UC Berkeley, CA
- 2008 – 2010      **Research Associate**  
Department of Earth and Planetary Sciences, Harvard University, MA
- 2006 – 2008      **Environmental Fellow**  
Center for the Environment, Harvard University, MA
- 2005 – 2006      **Postdoctoral Fellow**  
Woods Hole Research Center, MA

## Publications (group members in bold)

- 2016      **D.M. Romps**, “Clausius-Clapeyron scaling of CAPE from analytical solutions to RCE,” *Journal of the Atmospheric Sciences*, in press, 2016
- 2016      **J.T. Seeley, D.M. Romps**, “Tropical cloud buoyancy is the same in a world with or without ice,” *Geophysical Research Letters*, vol. 43, no. 7, 3572–3579, 2016
- 2016      **D.M. Romps**, “Reply to comments on “MSE minus CAPE is the true conserved variable for an adiabatically lifted parcel,”” *Journal of the Atmospheric Sciences*, in press, 2016

- 2016 **D.M. Romps**, “The Stochastic Parcel Model: A deterministic parameterization of stochastically entraining convection,” *Journal of Advances in Modeling Earth Systems*, vol. 8, no. 1, 319–344, 2016
- 2016 **D.M. Romps, N. Jeevanjee**, “On the sizes and lifetimes of cold pools,” *Quarterly Journal of the Royal Meteorological Society*, vol. 142, no. 696, 1517–1527, 2016
- 2016 **N. Jeevanjee, D.M. Romps**, “Effective buoyancy at the surface and aloft,” *Quarterly Journal of the Royal Meteorological Society*, vol. 142, no. 695, 811–820, 2016
- 2015 **J.T. Seeley, D.M. Romps**, “Why does convective available potential energy (CAPE) increase with warming?,” *Geophysical Research Letters*, vol. 42, no. 23, 10429–10437, 2015
- 2015 **W. Langhans, D.M. Romps**, “The origin of water-vapor rings in tropical oceanic cold pools,” *Geophysical Research Letters*, vol. 42, no. 18, 7825–7834, 2015
- 2015 **D.M. Romps**, “MSE minus CAPE is the true conserved variable for an adiabatically lifted parcel,” *Journal of the Atmospheric Sciences*, vol. 72, no. 9, 3639–3646, 2015
- 2015 **D.M. Romps, R. Öktem**, “Stereo photogrammetry reveals substantial drag on cloud thermals,” *Geophysical Research Letters*, vol. 42, no. 12, 5051–5057, 2015
- 2015 **N. Jeevanjee, D.M. Romps**, “Effective buoyancy, inertial pressure, and the mechanical generation of boundary-layer mass flux by cold pools,” *Journal of the Atmospheric Sciences*, vol. 72, no. 8, 3199–3213, 2015
- 2015 **D.M. Romps, A.B. Charn**, “Sticky thermals: Evidence for a dominant balance between buoyancy and drag in cloud updrafts,” *Journal of the Atmospheric Sciences*, vol. 72, no. 8, 2890–2901, 2015
- 2015 **J.P. Edman, D.M. Romps**, “Self-consistency tests of large-scale-dynamics parameterizations for single-column modeling,” *Journal of Advances in Modeling Earth Systems*, vol. 7, no. 1, 320–334, 2015
- 2015 **R. Öktem, D.M. Romps**, “Observing atmospheric clouds through stereo reconstruction,” *IS&T/SPIE Electronic Imaging*, vol. 9393, 93930H-1, 2015
- 2015 **J.T. Seeley, D.M. Romps**, “The effect of global warming on severe thunderstorms in the United States,” *Journal of Climate*, vol. 28, no. 6, 2443–2458, 2015
- 2015 **W. Langhans, K. Yeo, D.M. Romps**, “Lagrangian investigation of the precipitation efficiency of convective clouds,” *Journal of the Atmospheric Sciences*, vol. 72, no. 3, 1045–1062, 2015

- 2014 **D.M. Romps, J.T. Seeley**, D. Vollaro, J. Molinari, “Projected increase in lightning strikes in the United States due to global warming,” *Science*, vol. 346, no. 6211, 851–854, 2014
- 2014 M. Duarte, A.S. Almgren, K. Balakrishnan, J.B. Bell, **D.M. Romps**, “A numerical study of methods for moist atmospheric flows: compressible equations,” *Monthly Weather Review*, vol. 142, no. 11, 4269–4283, 2014
- 2014 **D.M. Romps**, “An analytical model for tropical relative humidity,” *Journal of Climate*, vol. 27, no. 19, 7432–7449, 2014
- 2014 **R. Öktem**, Prabhat, J. Lee, A. Thomas, P. Zuidema, **D.M. Romps**, “Stereo photogrammetry of oceanic clouds,” *Journal of Atmospheric and Oceanic Technology*, vol. 31, no. 7, 1482–1501, 2014
- 2014 **J.P. Edman, D.M. Romps**, “An improved weak-pressure-gradient scheme for single-column modeling,” *Journal of the Atmospheric Sciences*, vol. 71, no. 7, 2415–2429, 2014
- 2014 **D.M. Romps**, “Rayleigh damping in the free troposphere,” *Journal of the Atmospheric Sciences*, vol. 71, no. 2, 553–565, 2014
- 2013 **N. Jeevanjee, D.M. Romps**, “Convective self-aggregation, cold pools, and domain size,” *Geophysical Research Letters*, vol. 40, 2013
- 2013 **K. Yeo, D.M. Romps**, “Measurement of convective entrainment using Lagrangian particles,” *Journal of the Atmospheric Sciences*, vol. 70, no. 1, 266–277, 2013
- 2012 **D.M. Romps**, “On the equivalence of two schemes for convective momentum transport,” *Journal of the Atmospheric Sciences*, vol. 69, no. 12, 3491–3500, 2012
- 2012 **D.M. Romps**, “Numerical tests of the weak pressure gradient approximation,” *Journal of the Atmospheric Sciences*, vol. 69, no. 9, 2846–2856, 2012
- 2012 **D.M. Romps**, “Weak pressure gradient approximation and its analytical solutions,” *Journal of the Atmospheric Sciences*, vol. 69, no. 9, 2835–2845, 2012
- 2012 J. Molinari, **D.M. Romps**, D. Vollaro, and L. Nguyen, “CAPE in tropical cyclones,” *Journal of the Atmospheric Sciences*, vol. 69, no. 8, 2452–2463, 2012
- 2011 **D.M. Romps**, Z. Kuang, “A transilient matrix for moist convection,” *Journal of the Atmospheric Sciences*, vol. 68, no. 9, 2009–2025, 2011
- 2011 **D.M. Romps**, “Response of tropical precipitation to global warming,” *Journal of the Atmospheric Sciences*, vol. 68, no. 1, 123–138, 2011
- 2010 P.N. Blossey, Z. Kuang, **D.M. Romps**, “Isotopic composition of water in the tropical tropopause layer in cloud-resolving simulations of an idealized tropical circulation,” *Journal of Geophysical Research*, vol. 115, D24309, 2010

- 2010 **D.M. Romps**, “A direct measure of entrainment,”  
Journal of the Atmospheric Sciences, vol. 67, no. 6, 1908–1927, 2010
- 2010 **D.M. Romps**, Z. Kuang “Nature versus nurture in shallow convection,”  
Journal of the Atmospheric Sciences, vol. 67, no. 5, 1655–1666, 2010
- 2010 **D.M. Romps**, Z. Kuang “Do undiluted convective plumes exist in the upper  
tropical troposphere?,” Journal of the Atmospheric Sciences, vol. 67, no. 2,  
468–484, 2010
- 2009 **D.M. Romps**, Z. Kuang, “Overshooting convection in tropical cyclones,”  
Geophysical Research Letters, vol. 36, L09804, 2009
- 2008 **D.M. Romps**, “The dry-entropy budget of a moist atmosphere,”  
Journal of Atmospheric Sciences, vol. 65, no. 12, 3779–3799, 2008
- 2005 A. Simons, A. Strominger, D.M. Thompson (**D.M. Romps**), X. Yin,  
“Supersymmetric branes in  $\text{AdS}_2 \times \text{S}^2 \times \text{CY}_3$ ,” Physical Review D, vol. 71, no. 6,  
066008, 2005, hep-th/0406121
- 2004 D.M. Thompson (**D.M. Romps**), “AdS solutions to the 2D type 0A effective  
action,” Physical Review D, vol. 70, no. 10, 106001, 2004, hep-th/0312156
- 2004 A. Strominger, D.M. Thompson (**D.M. Romps**), “Quantum Bousso bound,”  
Physical Review D, vol. 70, no. 4, 044007, 2004, hep-th/0303067
- 2002 D.M. Thompson (**D.M. Romps**), “Descent relations in type 0A/0B,”  
Physical Review D, vol. 65, no. 10, 106005, 2002, hep-th/0105314