



## D. J. Rasmussen

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RESEARCH INTERESTS	sea-level rise, coastal floods, natural hazards, decision-making under uncertainty, natural hazard risk management, policy process for public works, environmental policy, climate change	
APPOINTMENTS	2015 – <i>present</i>	Ph.D. Student, Woodrow Wilson School of Public and International Affairs, Princeton University
EDUCATION	2020	Ph.D. in Public and International Affairs, Princeton University ( <i>Expected</i> ) Dissertation: <i>Coastal Defense in an Era of Sea-Level Rise: Science, Politics, and Decision-Making</i>
	2013	M.S. in Civil and Environmental Engineering, University of California, Davis Thesis: <i>The Ozone Climate Penalty: Past, Present, and Future</i> [ <a href="#">pdf</a> ]
	2009	B.S. in Atmospheric and Oceanic Science, University of Wisconsin, Madison Thesis: <i>An Analysis of Climate Change Impacts on Future Wind Energy Production in California</i> [ <a href="#">pdf</a> ]
OTHER RESEARCH EXPERIENCE	2013 – 2016	Research Assistant, Rhodium Group
	2014 – 2015	Senior Engineer, ENVIRON/ Ramboll
	2012 – 2014	Research Assistant and then Engineer, California Air Resources Board
	2010 – 2011	Research Assistant, Geophysical Fluid Dynamics Laboratory/ NOAA
	2008 – 2010	Research Assistant, UW-Madison
JOURNAL ARTICLES	2020	<b>D.J. Rasmussen</b> , R.E. Kopp, M. Oppenheimer, R. Shwom: The politics of natural hazard preparedness and infrastructure: lessons for coastal defense and other climate adaptation public works. <i>Submitted</i> . [ <a href="#">pdf</a> ]
	2020	<b>D.J. Rasmussen</b> , M.K. Buchanan, R.E. Kopp, and M. Oppenheimer: A flood damage allowance framework for coastal protection with deep uncertainty in sea-level rise. <i>Earth's Future</i> . <b>8</b> (3) doi:10.1029/2019EF001340 [ <a href="#">pdf</a> ]
	2020	T. Frederikse, M.K. Buchanan, E. Lambert, R.E. Kopp, M. Oppenheimer, <b>D.J. Rasmussen</b> , and R.S.W. van de Wal: Antarctic Ice Sheet and emission scenario controls on 21st-century extreme sea-level changes. <i>Nature Comm.</i> <b>11</b> (390) doi:10.1038/s41467-019-14049-6 [ <a href="#">pdf</a> ]
	2018	<b>D.J. Rasmussen</b> , K. Bittermann, M.K. Buchanan, S. Kulp, B.H. Strauss, R.E. Kopp, and M. Oppenheimer: Extreme sea level implications of 1.5 °C, 2.0 °C, and 2.5 °C temperature stabilization targets in the 21st and 22nd century. <i>Environ. Res. Lett.</i> <b>13</b> 034040 doi:10.1088/1748-9326/aaac87 [ <a href="#">pdf</a> ]

- 2017 S.M. Hsiang, R.E. Kopp, A.S. Jina, J. Rising, M. Delgado, S. Mohan, **D.J. Rasmussen**, R. Muir-Wood, P. Wilson, M. Oppenheimer, K. Larsen, and T. Houser: Economic damage from climate change in the United States. *Science*. **356** (6345), 1362-1369 doi:10.1126/science.aal4369 [pdf]
- 2016 **D.J. Rasmussen**, M. Meinshausen, and R.E. Kopp: Probability-weighted ensembles of U.S. county-level climate projections for climate risk analysis. *J. Appl. Meteorol. Clim.* **55** (10), 2301-2322 doi:10.1175/JAMC-D-15-0302.1 [pdf]
- 2014 R.E. Kopp, R. Horton, C.M. Little, J.X. Mitrovica, M. Oppenheimer, **D.J. Rasmussen**, B.H. Strauss, and C. Tebaldi: Probabilistic 21st and 22nd century sea-level rise projections at a global network of tide gauge sites. *Earth's Future*. **2** (8), 383-406 doi:10.1002/2014EF00023 [pdf]
- 2013 **D.J. Rasmussen**, J. Hu, A. Mahmud, and M.J. Kleeman: The ozone climate penalty: past, present, and future. *Environ. Sci. Technol.* **47** (24), 14258-14266 doi:10.1021/es403446m [pdf]
- 2012 **D.J. Rasmussen**, A.M. Fiore, V. Naik, L.W. Horowitz, M.G. Schultz, and S.J. McGinnis: Surface ozone-temperature relationships in the eastern US: A monthly climatology for evaluating chemistry-climate models. *Atmos. Environ.* **47**, 142-153 doi:10.1016/j.atmosenv.2011 [pdf]
- 2011 **D.J. Rasmussen**, T. Holloway, and G.F. Nemet: Opportunities and Challenges in Assessing Climate Change Impacts on Wind Energy—A Critical Comparison of Wind Speed Projections in California. *Environ. Res. Lett.* **6** 024008 doi:10.1088/1748-9326/6/2/024008 [pdf]

## BOOKS

- 2015 T. Houser, R. Kopp, S. Hsiang, R. Muir-Wood, K. Larsen, **D.J. Rasmussen**, M. Delgado, A. Jina, S. Mohan, P. Wilson, M. Mastrandrea, and J. Rising: *Economic Risks of Climate Change: An American Prospectus*. New York, NY: Columbia University Press. 384 pp. ISBN: 9780231174565 [link]

## RESEARCH REPORTS

- 2015 U. Nopmongcol, J. Johnson, B. Brashers, **D.J. Rasmussen**, T. Shah, J. Zagunis, Z. Liu, and R. Morris: *Formation of Secondary PM<sub>2.5</sub> in the Capital Region Study*. Prepared for Environmental and Sustainable Resource Development, Edmonton, AB. [pdf]
- 2015 C. Emery, G. Wilson, **D.J. Rasmussen**, G. Yarwood: *CAMx Speed Improvements*. Prepared for Texas Commission on Environmental Quality, Austin, TX. [pdf]
- 2015 J. Johnson, G. Wilson, **D.J. Rasmussen**, G. Yarwood: *Daily Near Real-Time Ozone Modeling for Texas*. Prepared for Texas Commission on Environmental Quality, Austin, TX. [pdf]
- 2014 S. Kemball-Cook, T. Pavlovic, J. Johnson, L. Parker, **D.J. Rasmussen**, J. Zagunis, L. Ma, G. Yarwood: *Analysis of Wildfire Impacts on High Ozone Days in Houston, Beaumont, and Dallas-Fort Worth During 2012 and 2013*. Prepared for Texas Commission on Environmental Quality, Austin, TX. [pdf]
- 2014 T. Houser, R. Kopp, S. Hsiang, R. Muir-Wood, K. Larsen, **D.J. Rasmussen**, M. Delgado, A. Jina, S. Mohan, P. Wilson, M. Mastrandrea, and J. Rising: *American Climate Prospectus: Economic Risks in the United States*. Oakland, CA: Rhodium Group, 194 pp. [pdf]
- 2012 **D.J. Rasmussen** and M.J. Kleeman: Acceleration of CALPUFF using MPICH-2. Final Report to the California Air Resources Board. ARB Contract 11-760. [pdf]
- 2010 **D.J. Rasmussen**, L.M. Keller, and M.A. Lazzara: A 20-year assessment of the frequency and intensity of McMurdo area high wind events. Preprints, *5<sup>th</sup> Antarctic Meteorological Observation, Modeling, and Forecasting Workshop* [pdf]

CONFERENCE PRESENTATIONS	2017	American Geophysical Union Fall Meeting, New Orleans, LA, December 15 <a href="#">[slides]</a>
	2015	American Geophysical Union Fall Meeting, San Francisco, CA, December 16 <a href="#">[poster]</a>
	2014	American Geophysical Union Fall Meeting, San Francisco, CA, December 17 <a href="#">[slides]</a>
	2011	American Geophysical Union Fall Meeting, San Francisco, CA, December 5 <a href="#">[slides]</a>
PUBLIC OUTREACH	2020	<i>The largest movable structures on Earth could save New York City from another Hurricane Sandy, but will they get built?</i> , short film (independently produced) ( <i>forthcoming</i> )
AWARDS AND GRANTS	2019	Karl F. Schlaepfer '49 and Gloria G. Schlaepfer Fund (Princeton)
PROFESSIONAL SERVICE		Informal Reviewer, IPCC Special Report on the Ocean and Cryosphere in a Changing Climate, 2019
		Energy Committee of the American Meteorological Society, 2011–2013
		Referee: <i>Nature Clim. Change, Atmos. Chem. Phys., Clim. Chang., Atmos. Environ., Atmos. Res.</i>
TEACHING		TA, <i>The Environment: Science and Policy</i> (Princeton University, Spring 2017, 2018)
HOBBIES		Alpine skiing, CrossFit, AcroYoga, guitar, photography and film
CITIZENSHIP		USA

Last updated: March 10, 2020