

MARION DUMAS

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ACADEMIC EMPLOYMENT

2017-present Assistant Professorial Research Fellow
 Grantham Research Institute
2015-2017 Omidyar Fellow, Santa Fe Institute

EDUCATION

2009 - 2015 Columbia University, Ph.D. in Sustainable Development School: International and Public Affairs
 Dissertation: Three essays on political institutions and environmental governance
2007 - 2009 M.Sc., ETH Zürich, Major in Ecology and Evolution
 Thesis: Developing a model and database for assessing food production systems' sensitivity to phosphate rock shortages at the world scale
2002-2006 B.Sc., Massachusetts Institute of Technology, Major: Environmental Sciences
 Department of Earth, Atmospheric and Planetary Sciences
 Minor: Applied Mathematics

PUBLICATIONS

ARTICLES

Pia Andres, Eugenie Dugoua, and Marion Dumas. (2022). "Directed Technological Change and General Purpose Technologies: Can AI Accelerate Clean Energy Innovation?" GRI Working Paper.
Eugenie Dugoua, Marion Dumas, and Joëlle Noailly. (2022). "Text as Data in Environmental Economics and Policy." *Review of Environmental Economics and Policy* 16 (2): 346–56.
Dumas, Marion, Eleonor Power, and Jessie Barker, 2021. When does reputation lie? Dynamic feedbacks between costly signals and social prominence. *Phil. Trans. R. Soc. B* 376: 20200298
Xiaofan Liang, Ryan Taylor, Geoffrey West, Marion Dumas (PI), and Chris Kempes (PI), 2021. Institutional Efficiency and Complexity: The Scale and Scope of Universities, *PlosOne*¹.
Dugoua, Eugenie and Marion Dumas (2021). Green Product Innovation in Industrial Networks. *Journal of Environmental Economics and Management*, Vol 107, 102420
Brelsford, Christa, Marion Dumas et al., 2018. Developing a sustainability science approach for water systems, *Ecology & Society* Vol 25(2): 1-6:
Galesic, Mirta, Wendy Bruine de Bruin, Marion Dumas, Arie Kapteyn, Jill Darling, Erik Meijer, 2018. Asking about Social Circles Improves Election Predictions. *Nature Human Behavior*, Vol. 2: 187–193.
Dumas, Marion, 2017. Taking the Law to Court: Citizen Suits and the Legislative Process, *American Journal of Political Science* Vol 61(4): 944-957.

¹ Note: we used the natural science convention of putting the PIs last and the students first.

O'Halloran, Sharyn, Marion Dumas, Sameer Maskey, Geraldine McAllister, and David Park, 2016. Computational Data Sciences and the Regulation of Banking and Financial Services, *Advances in Social Networks Analysis and Mining*, p. 179-209.

Dumas, Marion, James Rising, and Johannes Urpelainen, 2016. Political Competition and Renewable Energy Transitions over Long Time Horizons: A Dynamic Approach, *Ecological Economics* Vol 124 (2016): 175-184.

Dumas, Marion, Emmanuel Frossard, and Roland Scholz, 2011. Modeling Biogeochemical Processes of Phosphorus for Global Food Supply, *Chemosphere* Vol 84(6): 798-805.

BOOK CHAPTERS

Dumas, Marion, 2019. "Detecting Ideology in Judicial Decisions about the Environment" and

Dumas, Marion and Jan Frankenreiter, 2019. "Text as Observational Data", In *Law as Data: Computation, Text, and the Future of Legal Analysis*, Eds. M. Livermore and D. Rockmore, SFI Press.

Cardenas, Juan Carlos, Marion Dumas, and Alexander Teytelboym, 2017. 'Economics of the Environment'. Unit 20 in The CORE Team, *The Economy*. Available at: <http://www.core-econ.org>

Burt, David, Marion Dumas, Nathaniel Springer, David Vaccari, 2012. "Global Phosphorus: Geological Sources and Demand-driven Production", In Wyant, K.A. et al., Eds., *Phosphorus, Food, and Our Future*, New York: Oxford University Press.

POLICY REPORTS

with James Rising and RFF, *Regional Just Transitions in the UK: Insights from 40 Years of Policy Experience*

WORKING PAPERS AND PROJECTS IN PROGRESS _____

with Eugenie Dugoua, *in prep*. Green Product Innovation in Industrial Networks: Evidence from the Automotive Industry.

in prep. Inequality and the Green Product Cycle. [WP here](#)

with James Rising, *in prep*. Policies for just transitions: lessons from the UK's history

with Lucie Gadenne and Xavier Jaravel, *Environmental Engel Curves along the Development Path and the Impact of Trade*

WORKSHOPS/GRANTS/AWARDS/SERVICE _____

2022- Horizon Europe, AdJUST Consortium, Work package leader.

2021- Section Editor, Global Sustainability

2021 NBER – Economics of Innovation in the Energy Sector Second Meeting

2020 NBER – Economics of Innovation in the Energy Sector First Meeting

2020 Rebuilding Macroeconomics Sustainability Hub ~ The dynamics of green product innovations ~ 60,000 pounds.

2019 Emerging Approaches for Measuring Institutions at Scale, Sixth Workshop on the Ostrom Workshop, Indiana University, Bloomington Indiana.

2018 AXA Future Research Leader Fellowship ~ Firm networks, coordination failures and the role of industrial policy in the low-carbon transition ~ 125,000 euros.

2017 \$50,000 grant from the National Science Foundation for workshop proposal

2013 Mellon Fellowship.

2010 Sasakawa Young Leaders Fellowship Fund Grant for summer research.

2010 ETH Medal for Excellence in Research.

2009-2014 Columbia Graduate Fellowship.

2009-2012 Stanford Graduate Fellowship (declined).

2006 MIT Goetze Prize for Undergraduate Research.

POLICY AND MEDIA ENGAGEMENTS

- 2020 RFF-GRI joint project on UK Just Transitions Policies
- 2020 UCL-BEIS roundtable on Markets for Industrial Decarbonization
- 2020 BBC interview on societal changes for the low-carbon transition
- 2020 Guardian public panel “Your Questions Answered” on climate change

TEACHING EXPERIENCE

- 2021-present Sustainability: Environment, Economy and Society
- 2020-present MSc and PhD supervision
- 2018-2019 Seminar instructor, Climate Change: Science, Economics and Policy, LSE
- 2016-present Member and contributing author of **CORE-econ**
- 2015 Instructor Complexity Science, Columbia University
- 2011-2015 Teaching assistant, Columbia University: Economics of Energy, Columbia University, Political Economy of Development, Environmental Science for Sustainable Development.