ErnestoCarrella

Postdoc

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🐦 ErnestoCarrella

CarrKnight

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About me ———

I build agent-based models and social simulations. I specialize in coupled environmental-economic systems and estimation techniques. Married. Father of two.

Employment

2015 - 2020	Post-doctoral Researcher Oxford, GB	University of Oxford
2010 - 2015	Research Assistant Fairfax, US	George Mason University

Education

2010 - 2015	PhD - Computational Social Science Fairfax, US	George Mason University
2008 - 2010	M.Sc - Economics Urbana, US	University of Illinois
2005 - 2008	B.sc - Economics NT, HK	Chinese University of Hong Kong

Publications

1. Carrella, E, S Saul, K Marshall, MG Burgess, RB Cabral, RM Bailey, C Dorsett, M Drexler, JK Madsen, and A Merkl (2020). Simple Adaptive Rules Describe Fishing Behaviour Better than Perfect Rationality in the US West Coast Groundfish Fishery. *Ecological Economics* 169, 106449.
2. Carrella, E, R Bailey, and J Madsen (2020). Calibrating Agent-Based Models with Linear Regressions. *Journal of Artificial Societies and Social Simulation* 23(1), 1–7.
3. Burgess, MG, E Carrella, M Drexler, RL Axtell, RM Bailey, JR Watson, RB Cabral, M Clemence, C Costello, C Dorsett, et al. (2020). Opportunities for agent-based modelling in human dimensions of fisheries. *Fish and Fisheries* 21(3), 570–587.
4. Neil, E, JK Madsen, E Carrella, N Payette, and R Bailey (2020). Agent-based modelling as a tool for elephant poaching mitigation. *Ecological Modelling* 427, 109054.
5. Madsen, JK, R Bailey, E Carrella, and P Koralus (2020). From reactive towards anticipatory fishing agents. *Journal of Simulation*, 1–15.
6. Bailey, RM, E Carrella, R Axtell, MG Burgess, RB Cabral, M Drexler, C Dorsett, JK Madsen, A Merkl, and S Saul (2019). A computational approach to managing coupled human–environmental systems: the POSEIDON model of ocean fisheries. *Sustainability Science* 14(2), 259–275.
7. Carrella, E, RM Bailey, and JK Madsen (2019). Repeated discrete choices in geographical agent based models with an application to fisheries. *Environmental Modelling & Software* 111, 204–230.
8. Madsen, JK, R Bailey, E Carrella, and P Koralus (2019). Analytic Versus Computational Cognitive Models: Agent-Based Modeling as a Tool in Cognitive Sciences. *Current Directions in Psychological Science* 28(3), 299–305.
9. Carrella, E (2014). Zero-knowledge traders. *Journal of Artificial Societies and Social Simulation* 17(3), 4.
10. Axtell, R, D Farmer, J Geanakoplos, P Howitt, E Carrella, B Conlee, J Goldstein, M Hendrey, P Kalikman, D Masad, et al. (2014). An agent-based model of the housing market bubble in metropolitan washington, dc. In: *Whitepaper for Deutsche Bundesbank's Spring Conference on "Housing markets and the macroeconomy: Challenges for monetary policy and financial stability*.

Working papers

1. Madsen, JK, R Bailey, E Carrella, and T Pilditch (Under review). Towards a Standard Cognitive Framework for Socially Oriented, Adaptive, and Generative Human-Environment Agents. In: *2017 AAAI Fall Symposium Series*.

Teaching

2016-2020	Complexity	Tutoring & Lecturing
	Geography Department - University of Oxford	
2019-2020	Philosophy of the economics and the environment	Tutoring
	Wadham College - University of Oxford	
2020	ESSA Summer School 2020 on Agent-Based Modelling	Lecturing
	Università degli Studi di Milano	

Grants

2015	Gordon and Betty Moore Foundation	Named Lead Researcher
	Reimagining Fisheries Management	
	• 200k	
2016	Walton Family Foundation	Named Lead Researcher
	Reimagining Fishery Management: an Agent-based Modeling Approach.	
	• $200k	
2016	David and Lucile Packard Foundation	Named Lead Researcher
	Reimagining Fishery Management: A Coupled Agent-Based and Ecosystem Modeling Approach	
	• $225k	
2017	David and Lucile Packard Foundation	Named Lead Researcher
	Driving Management Innovation in the Indonesian Deep-Slope Snapper Fishery through the POSEIDON Modeling Framework	
	• $350k	
2018	Gordon and Betty Moore Foundation	Named Lead Researcher
	POSEIDON, Pioneering a New Era of Fisheries Management	
	• $1.2M	
2019	David and Lucile Packard Foundation	Named Lead Researcher
	POSEIDON: Enabling Science-Based Adaptive Management of the Indonesian Deepwater Snapper Fishery	
	• $325k	

Invited Talks

Apr. 2019	Microsimulation and agent-based models. Department for Business, Energy and Industrial Strategy (BEIS) - UK
Oct. 2018	What can machine learning tell us. Department for Business, Energy and Industrial Strategy (BEIS) - UK
Jul. 2018	Agent-based approaches to modeling fisheries management. Kementerian Kelautan dan Perikanan - Indonesia
May. 2018	Agent-Based Models and Sustainability. Alan Turing Institute - UK
Dec. 2017	Agent-based fishery models. National Taiwan Ocean University - Taiwan