

Michael Dennis

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Education

University of California, Berkeley, Doctor of Philosophy
Artificial Intelligence, Computational Geometry Sep. 2016 – present

DePaul University, Bachelor of Science
Computer Science, Mathematical Sciences Sep. 2012 – Jun. 2016

Peer-Reviewed Publications

Adversarial Policies Beat Professional-Level Go AIs 2022
T. Wang, A. Gleave, N. Belrose, T. Tseng, J. Miller, **M. Dennis**, Y. Duan, V.
Pogrebniak, S. Levine, S. Russell
NeurIPS 2022 DeepRL Workshop

MAESTRO: Open-Ended Environment Design for Multi-Agent Reinforcement Learning 2022
M. Samvelyan, A. Khan, **M. Dennis**, M. Jiang, J. Parker-Holder, J. Foerster, R.
Raileanu, T. Rocktäschel
NeurIPS 2021 DeepRL Workshop

Grounding Aleatoric Uncertainty in Unsupervised Environment Design 2022
M. Jiang, **M. Dennis**, J. Parker-Holder, A. Lupu, H. Kuttler, E. Grefenstette, T.
Rocktäschel, J. Foerster
(NeurIPS 2022) Advances in Neural Information Processing Systems 35

Evolving Curricula with Regret-Based Environment Design 2022
J. Parker-Holder*, M. Jiang*, **M. Dennis**, M. Samvelyan, J. Foerster, E.
Grefenstette, T. Rocktäschel
(ICML 2022) 39th International Conference on Machine Learning

Replay-Guided Adversarial Environment Design 2021
M. Jiang*, **M. Dennis***, J. Parker-Holder, J. Foerster, E. Grefenstette, T.
Rocktäschel
(NeurIPS 2021) – Advances in Neural Information Processing Systems 34

Quantifying Differences in Reward Functions 2021
A. Gleave, **M. Dennis**, S. Legg, S. Russell, J. Leike
(ICLR 2021) – Ninth International Conference on Learning Representations

Accumulating Risk Capital Through Investing in Cooperation 2021
C. Roman, **M. Dennis**, A. Critch, S. Russell
(AAMAS 2021) – 20th International Conference on Autonomous Agents and
Multiagent Systems

A New Formalism, Method and Open Issues for Zero-Shot Coordination 2021
J. Treutlein, **M. Dennis**, C. Oesterheld, J. Foerster
(ICML 2021) 38th International Conference on Machine Learning

<i>Adversarial policies: Attacking deep reinforcement learning</i> A. Gleave, M. Dennis , C. Wild, N. Kant, S. Levine, S. Russell (ICLR 2020) – Eighth International Conference on Learning Representations	2020
<i>Emergent Complexity and Zero-shot Transfer via Unsupervised Environment Design</i> M. Dennis* , N Jaques*, E Vinitisky, A Bayen, S Russell, A Critch, S Levine (NeurIPS 2020) – Advances in Neural Information Processing Systems 33	2020
<i>The stretch factor of hexagon-Delaunay triangulations</i> M. Dennis , L. Perković, D. Türkoğlu (SoCG 2020) – 36th International Symposium on Computational Geometry	2020

Teaching Experience

CS 294-210: How to Mentor Undergraduate Research Graduate Student Instructor, UC Berkeley	Spring 2022
CS 189-289A Introduction to Machine Learning Graduate Student Instructor, UC Berkeley	Fall 2021
Human-aligned AI Summer School Invited Instructor, Charles University in Prague	Summer 2019
CS 294-149: Safety and Control for Artificial General Intelligence Graduate Student Instructor, UC Berkeley	Fall 2018

Invited Talks

Minimax Regret as a solution to Unsupervised Environment Design <i>Center for Long-Term Risk Seminar</i>	2021
Unsupervised Environment Design for Transfer in RL <i>G-Research Seminar</i>	2021
Automatically Generating Complex Solvable Environments <i>Future of Humanity Institute and Deepmind AI Safety Group Joint Seminar</i>	2021

Press Coverage

“Who needs a teacher? Artificial intelligence designs lesson plans for itself,” by Matthew Hutson. Science. 19 January 2021.

“Watch this AI goalie psych out its opponent in the most hilarious way,” by Matthew Hutson. Science. 26 December 2019.

Professional Activities

Reviewing

International Conference on Learning Representations (Highlighted Reviewer) 2022
International Conference on Machine Learning 2021
Neural Information Processing Systems 2021
Cooperative AI workshop 2021

Workshop Organizing

Political Economy of Reinforcement Learning Systems Workshop, NeurIPS 2021
Agent Learning in Open-Endedness Workshop, ICLR 2022
Center for Human-Compatible AI Workshop 2022

Mentorship and Outreach

BAIR mentor program

Fall 2019-2021

Offered guidance to undergraduates from disadvantaged backgrounds once a month to help them think through possible career paths after graduation

Equal Access for Application Assistance program

2020,2021

Offering feedback to undergraduates applying for Berkeley who otherwise have no opportunities to get direct feedback on their application