

# Michael Dennis

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USA

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## Education

**University of California, Berkeley**, Doctor of Philosophy  
Artificial Intelligence, Theoretical Computer Science Sep. 2016 – present

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

## Teaching Experience

**CS 294-210: How to Mentor Undergraduate Research** Spring 2022  
Graduate Student Instructor, UC Berkeley

**CS 189-289A Introduction to Machine Learning** Fall 2021  
Graduate Student Instructor, UC Berkeley

**Human-aligned AI Summer School** Summer 2019  
Invited Instructor, Charles University in Prague

**CS 294-149: Safety and Control for Artificial General Intelligence** Fall 2018  
Graduate Student Instructor, UC Berkeley

## Peer-Reviewed Publications

*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

*Adversarial policies: Attacking deep reinforcement learning* 2020

A. Gleave, **M. Dennis**, C. Wild, N. Kant, S. Levine, S. Russell  
(ICLR 2020) – Eighth International Conference on Learning Representations

*Emergent Complexity and Zero-shot Transfer via Unsupervised Environment Design* 2020

**M. Dennis\***, N Jaques\*, E Vinytsky, A Bayen, S Russell, A Critch, S Levine  
(NeurIPS 2020) – Advances in Neural Information Processing Systems 33

*The stretch factor of hexagon-Delaunay triangulations* 2020  
**M. Dennis**, L. Perković, D. Türkoğlu  
(SoCG 2020) – 36th International Symposium on Computational Geometry

## Preprints

*Evolving Curricula with Regret-Based Environment Design* 2022  
J. Parker-Holder\*, M. Jiang\*, **M. Dennis**, M. Samvelyan, J. Foerster, E. Grefenstette, 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 2021 DeepRL Workshop

## Invited Talks

**Minimax Regret as a solution to Unsupervised Environment Design** 2021  
*Center for Long Term Risk Seminar*

**Unsupervised Environment Design for Transfer in RL** 2021  
*G-Research Seminar*

**Automatically Generating Complex Solvable Environments** 2021  
*Future of Humanity Institute and Deepmind AI Safety Group Joint Seminar*

## 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

## 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