Michael J. Curry

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Education

2017 – Present	🔖	**Ph.D. Candidate, University of Maryland** in Computer Science.
2014-2016	🔖	**M.S., Columbia University, NY** in Computer Science.
2010 – 2014	🔖	**B.A.** *cum laude***, Amherst College** in Computer Science.

Employment History

9/2017 – Present	🔖	**Graduate Assistant** University of Maryland.

Supported by

- DARPA "Guaranteeing AI Robustness Against Deception (GARD)"

- AFOSR MURI "Innovations in Mean-Field Game Theory for Scalable Computation and Diverse Applications"

- DARPA "Serial Interactions in Imperfect Information Games for Complex Military Decision-Making (SI3-CMD)"

Summer 2020 🔖 **Researcher** Institute for Pure and Applied Mathematics, UCLA.
G-RIPS Summer Program (Industry Partner: AMD)
Investigated machine learning for improving Quantum Monte Carlo approaches to finding ground state solutions of the Schrödinger equation.

2017 – 2018 🔖 **Research Associate.** NIH, Bethesda, MD.
In Section on Quantitative Imaging and Tissue Sciences, worked on NIH BRAIN Initiative grant to characterize the latency of signal propagation in the brain by combining functional and structural imaging data

2016 🔖 **R&D Engineer.** Text IQ, New York, NY.
Maintained and improved, in response to rapidly changing requirements, a data processing and modeling pipeline, making predictions about email data in the legal space.

2012 – 2014 🔖 **Peer Tutor & TA** Amherst College, Amherst, MA.

Research Publications

K. Kuo, A. Ostuni, E. Horishny, **M. J. Curry**, S. Dooley, P.-Y. Chiang, T. Goldstein, and J. Dickerson, "ProportionNet: Balancing fairness and revenue for auction design with deep learning", 2020, in submission, available on request.

M. J. Curry, P.-Y. Chiang, T. Goldstein, and J. Dickerson, "Certifying strategyproof auction networks", in *Neural Information Processing Systems (NeurIPS)*, 2020.

P.-Y. Chiang, **M. J. Curry**, A. Abdelkader, A. Kumar, J. Dickerson, and T. Goldstein, "Detection as regression: Certified object detection by median smoothing", in *Neural Information Processing Systems (NeurIPS)*, 2020.

D. McElfresh, **M. J. Curry**, T. Sandholm, and J. Dickerson, "Improving policy-constrained kidney exchange via pre-screening", in *Neural Information Processing Systems (NeurIPS)*, 2020.

F. Christia, **M. J. Curry**, C. Daskalakis, E. Demaine, J. Dickerson, M. Hajiaghayi, A. Hesterberg, M. Knittel, and A. Milliff, "Scalable equilibrium computation in multi-player influence games on networks", 2020, working paper.

A. Abdelkader, **M. J. Curry**, L. Fowl, T. Goldstein, A. Schwarzschild, M. Shu, C. Studer, and C. Zhu, "Headless horseman: Adversarial attacks on transfer learning models", in *International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2020, pp. 3087–3091.

M. J. Curry, J. P. Dickerson, K. A. Sankararaman, A. Srinivasan, Y. Wan, and P. Xu, "Mix and match: Markov chains and mixing times for matching in rideshare", in *Conference on Web and Internet Economics (WINE)*, 2019.

M. J. Curry, D. McElFresh, X. You, C. Moy, F. Huang, T. Goldstein, and J. P. Dickerson, "Reinforcement learning for dynamic set packing", in *Multi-disciplinary Conference on Reinforcement Learning and Decision Making (RLDM)*, 2019.

L. Walker, **M. J. Curry**, A. Nayak, N. Lange, C. Pierpaoli, and B. D. C. Group, "A framework for the analysis of phantom data in multicenter diffusion tensor imaging studies", *Human brain mapping*, vol. 34, no. 10, pp. 2439–2454, 2013.

M. O. Irfanoglu, **M. J. Curry**, E. Özarslan, C. G. Koay, S. Pajevic, and P. J. Basser, "Diffusion tensor uncertainty: Visualization and similarity metrics", in *Proceedings of the International Society of Magnetic Resonance in Medicine (ISMRM)*, 2012.

L. Walker, **M. J. Curry**, N. Amritha, N. Lange, C. Pierpaoli, and T. B. D. C. Group, "Impact of the analysis of phantoms on data quality for the dti component of the nih mri study of normal brain development", in *Proceedings of the International Society of Magnetic Resonance in Medicine (ISMRM)*, 2012.

F. Tannazi, L. Walker, **M. J. Curry**, and C. Pierpaoli, "Bias in diffusion tensor-derived quantities depend on the number of dwis composing the dt-mri dataset", in *Proceedings of the International Society of Magnetic Resonance in Medicine (ISMRM)*, 2011.

Technical Skills

Coding – Daily Use	▮	Python.
Coding – Some Experience	▮	Julia, Java, Mathematica.
Tools and Frameworks	▮	Numpy/Scipy, PyTorch, Gurobi, SQL.

Miscellaneous Experience

Professional Service

2020	▮	NeurIPS, ICML reviewer.
2019	▮	IJCAI, EC reviewer.

Teaching Roles

Teaching TA	▮	CMSC 216 (Introduction to Computer Systems).
Grading TA	▮	CMSC 351 (Algorithms).