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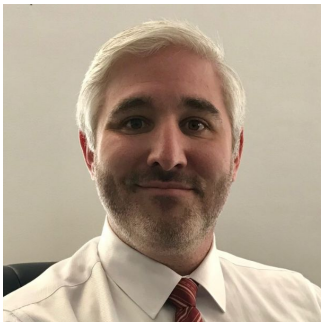

Education

Doctor of Philosophy	Cornell University	2013
Master of Science	Cornell University	2009
Bachelor of Science	Illinois Institute of Technology	2007

Professional History

Head of Research	SigOpt, Inc.	2015 - present
Visiting Assistant Professor	University of Colorado, Denver	2013 - 2015
Lab Grad Associate	Argonne National Laboratory	2010 - 2013

Books & Chapters

Stable likelihood computation for Gaussian random fields, M. McCourt, G. Fasshauer, Recent Applications of Harmonic Analysis to Function Spaces, Differential Equations, and Data Science, I. Pesenson, Q.T. Le Gia, A. Mayeli, H. Mhaskar, D.-X. Zhou, Eds., 917-943, 2017.

Kernel-based Approximation Methods Using Matlab, G. Fasshauer, M. McCourt, World Scientific Press, 2015. ISBN: 978-981-4630-14-6

Articles & Proceedings

Discovering near-perfect broadband and broad angle antireflection surfaces for optoelectronics by machine learning, S. Haghanifar, M. McCourt, B. Cheng, J. Wuenschell, P. Ohodnicki, P. Leu, Optica, 2020. In Press

Practical Bayesian optimization over sets, J. Kim, M. McCourt, T. You, S. Kim, S. Choi, Proceedings of the 37th International Conference on Machine Learning, 2020. In Press

Efficient rollout strategies for Bayesian optimization, D. Bindel, E. Lee, B. Cheng, M. McCourt, D. Eriksson, Proceedings of the Thirty-Sixth Conference on Uncertainty in Artificial Intelligence, 2020. In Press.

On variable and random shape Gaussian interpolations, S. Chiu, L. Ling, M. McCourt, Applied Mathematics and Computation, 377:125159, 2020.

Sampling humans for optimizing preferences in Coloring Artwork, M. McCourt, I. Dewancker, ICML Workshop on Human in the Loop Learning, 2019.

Creating glasswing butterfly-inspired durable antifogging superomniphobic supertransmissive, superclear nanostructured glass through Bayesian learning and optimization, S. Haghanifar, M. McCourt, B. Cheng, J. Wuenschell, P. Ohodnicki, P. Leu, Materials Horizons, 6(8):1632-1642, 2019.

Practical Bayesian optimization in the presence of outliers, R. Martinez-Cantin, K. Tee, M. McCourt, Proceedings of the Twenty-First International Conference on Artificial Intelligence and Statistics, PMLR 84:1722-1731, 2018.

An augmented MFS approach for brain activity reconstruction, G. Ala, G. Fasshauer, E. Francomano, S. Ganci, M. McCourt, Mathematics and Computers in Simulation, 141:3-15, 2017.

A strategy for ranking optimization methods using multiple criteria, I. Dewancker, M. McCourt, S. Clark, P. Hayes, A. Johnson, G. Ke, JMLR Workshop and Conference Proceedings, 64:11-20, 2016.

A meshfree solver for the MEG forward problem, G. Ala, G. Fasshauer, E. Francomano, S. Ganci, M.

McCourt, IEEE Transactions on Magnetics, 51(3):1-4, 2015.

The method of fundamental solutions in solving coupled boundary value problems for M/EEG, G. Ala, G. Fasshauer, E. Francomano, S. Ganci, M. McCourt, SIAM Journal on Scientific Computing, 37(4):B570-B590, 2015.

Sparse matrix-matrix products executed through colorings, M. McCourt, B. Smith, H. Zhang, SIAM Journal on Matrix Analysis and Applications, 36(1):90-109, 2015.

An introduction to the Hilbert-Schmidt SVD using iterated Brownian bridge kernels, R. Cavoretto, G. Fasshauer, M. McCourt, Numerical Algorithms, 68(2):393-422, 2015.

Multiphysics simulations: Challenges and opportunities, D. Keyes et al, The International Journal of High Performance Computing Applications, 27(1), 4-83. 2013.

Using Gaussian eigenfunctions to solve boundary value problems, M. McCourt, Advances in Applied Mathematics and Mechanics, 5:569-594, 2013.

Improving parallel scalability for edge plasma transport simulations with neutral gas species, M. McCourt, T. D. Rognlien, H. Zhang, L. C. McInnes, Computational Science and Discovery, 5:014012, 2012.

Stable evaluation of Gaussian RBF interpolants, G. Fasshauer, M. McCourt, SIAM Journal on Scientific Computing, 34(2):A737-A762, 2012.

Pseudorandom numbers for conformal measures, M. Denker, J. Duan, M. McCourt, Dynamical Systems, 24(4):439-457, 2009.

Spectral methods for resolving spike dynamics in the Gierer-Meinhardt model, M. McCourt, N. Dovidio, M. Gilbert, Communications in Computational Physics, 3:659-678, 2008.

Patents

Systems and methods for implementing an intelligent machine learning optimization platform for multiple tuning criteria, B. Cheng, O. Kim, M. McCourt, P. Hayes, S. Clark.

- US10528891B1, 2020-01-07, Granted
- US10558934B1, 2020-02-11, Granted
- US20200097855A1, 2020-03-26, Pending
- US20200097856A1, 2020-03-26, Pending

Systems and methods implementing an intelligent machine learning tuning system providing multiple tuned hyperparameter solutions, K. Tee, M. McCourt, P. Hayes, S. Clark.

- US20190156229A1, 2019-05-23, Pending

Systems and methods implementing an intelligent optimization platform, P. Hayes, M. McCourt, A. Johnson, G. Ke, S. Clark.

- US10217061B2, 2019-02-26, Granted
- US10607159B2, 2020-03-31, Granted

Systems and methods for an accelerated tuning of hyperparameters of a model using a machine learning-based tuning service, M. McCourt, B. Hsu, P. Hayes, S. Clark.

- US20200019888A1*,* 2020-01-16, Pending

Libraries

GaussQR - Matlab library for stably computing with kernel methods (part of textbook)
https://github.com/mikemccourt/gaussqr

QMCPy - Python library for providing and developing Quasi-Monte Carlo methods
https://github.com/QMCSoftware/QMCSoftware

PrefOpt - Python library for conducting optimization of most-preferred (non-numeric) metrics
https://github.com/prefopt/prefopt