Wesley Tansey

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Education

2011–2017	**PhD in Computer Science, University of Texas at Austin** Advisor: Prof. James G. Scott
2006–2008	**MS in Computer Science, Virginia Tech**
2003–2006	**BS in Computer Science, Virginia Tech**

Academic Appointments

2020–Present	**Assistant Member, Memorial Sloan Kettering Cancer Center** Computational Oncology Program Department of Epidemiology and Biostatistics
2017–2020	**Postdoctoral Research Scientist, Columbia University** Supervisors: Profs. Raul Rabadan and David Blei
2016	**Visiting Researcher, Duke University** Supervisor: Prof. Lawerence Carin
2015	**Visiting Researcher, Stanford University** Supervisor: Prof. Russell Poldrack

Awards

Columbia Data Science Institute Seed Funds Grant

2x Recipient of the Garg Fellowship for Research with Real-World Impact

Recipient of NSF Beacon Grant

NSF Graduate Research Fellowship Program, Honorable Mention in Machine Learning

Outstanding Graduate Student Award, Virginia Tech

Professional Service

Co-organizer: 2018, 2019, & 2020 ICML Workshop on Computational Biology

Reviewer: JASA, AoS, AoAS, Biostatistics, Biometrika, JMLR, NeurIPS

Mentor: UT Austin Intellectual Entrepreneurship pre-grad program

Other Experience

2014	**Data Science Intern, MyFitnessPal**
2013–2014	**Machine Learning Consultant, Atlas Wearables**
2013	**Software Engineering Intern, Google**
2011–2014	**Teaching Assistant, Computer Science Department, UT Austin**
2011–2012	**Co-founder, Curvio (Tech Startup)**
2010	**Co-founder, EffectCheck (Tech Startup)**
2010–2011	**Machine Learning Consultant, Natural Selection Financial**
2008–2010	**Quantitative Research Associate, Lincoln Vale Adaptive Strategies (Hedge Fund)**

Publications and Preprints

2021 | **W. Tansey**, V. Veitch, H. Zhang, R. Rabadan, and D. M. Blei. The holdout randomization test for feature selection in black box models. *Journal of Computational and Graphical Statistics*, 2021 (In Press).

2021 | J. Altosaar, R. Ranganath, and **W. Tansey**. RankFromSets: Scalable set recommendation with optimal recall. *Stat*, 2021.

2020 | **W. Tansey**, Y. Wang, R. Rabadan, and D. Blei. Double empirical bayes testing. *International Statistical Review*, 2021.

2020 | M. Sudarshan, **W. Tansey**, and R. Ranganath. Deep direct likelihood knockoffs. In *Neural Information Processing Systems (NeurIPS)*, 2020.

2020 | **W. Tansey**, K. Li, H. Zhang, S. W. Linderman, R. Rabadan, D. M. Blei, and C. H. Wiggins. Dose-response modeling in high-throughput cancer drug screenings: An end-to-end approach. *Biostatistics (In Press)*, 2020.

2020 | C. Burns, J. Thomason, and **W. Tansey**. Interpreting black box models via hypothesis testing. In *ACM-IMS Foundations of Data Science Conference (FODS)*, 2020.

2019 | **W. Tansey**, J. H. Loper, L. Lei, and W. Fithian. Smoothed nested testing on directed acyclic graphs. *arXiv preprint arXiv:1911.09200*, 2019.

2019 | **W. Tansey**, C. Tosh, and D. M. Blei. Relational dose-response modeling for cancer drug studies. *arXiv preprint arXiv:1906.04072*, 2019.

2018 | **W. Tansey**, Y. Wang, D. M. Blei, and R. Rabadan. Black box FDR. In *International Conference on Machine Learning*, pages 4874–4883, 2018.

2018 | **W. Tansey**, O. Koyejo, R. A. Poldrack, and J. G. Scott. False discovery rate smoothing. *Journal of the American Statistical Association*, 113(523):1156–1171, 2018.

2018 | **W. Tansey**, K. Pichotta, and J. G. Scott. Leaf-smoothed hierarchical softmax for ordinal prediction. In *AAAI Conference on Artificial Intelligence*, 2018.

2018 | **W. Tansey**, J. Thomason, and J. G. Scott. Maximum-variance total variation denoising for interpretable spatial smoothing. In *AAAI Conference on Artificial Intelligence*, 2018.

2017 | **W. Tansey**, A. Athey, A. Reinhart, and J. G. Scott. Multiscale spatial density smoothing: an application to large-scale radiological survey and anomaly detection. *Journal of the American Statistical Association*, 112(519):1047–1063, 2017.

2016 | **W. Tansey**, E. W. Lowe, and J. G. Scott. Diet2vec: Multi-scale analysis of massive dietary data. In *NIPS Workshop on Machine Learning for Health*, 2016.

2015 | **W. Tansey**, O.-H. Madrid-Padilla, A. Suggala, and P. Ravikumar. Vector-space markov random fields via exponential families. In *International Conference on Machine Learning*, 2015.

2012 | R. Miikkulainen, E. Feasley, L. Johnson, I. Karpov, P. Rajagopalan, A. Rawal, and **W. Tansey**. Multiagent learning through neuroevolution. *Advances in Computational Intelligence*, pages 24–46, 2012.

2012 | **W. Tansey**, E. Feasley, and R. Miikkulainen. Accelerating evolution via egalitarian social learning. In *International Conference on Genetic and Evolutionary Computation Conference*, pages 919–926. ACM, 2012.

2009 | M. Song, E. Tilevich, and **W. Tansey**. Trailblazer: A tool for automated annotation refactoring. In *ACM SIGPLAN Conference on Object-Oriented Programming Systems, Languages, and Applications*, pages 813–814. ACM, 2009.

2008 | **W. Tansey** and E. Tilevich. Annotation refactoring: Inferring upgrade transformations for legacy applications. In *ACM SIGPLAN Conference on Object-Oriented Programming Systems, Languages, and Applications*, volume 43, pages 295–312. ACM, 2008.

2008	**W. Tansey** and E. Tilevich. Efficient automated marshaling of C++ data structures for MPI applications. In *IEEE International Symposium on Parallel and Distributed Processing*, pages 1–12. IEEE, 2008.
2008	S. Gopal, **W. Tansey**, G. Kannan, and E. Tilevich. DeXteR: An extensible framework for declarative parameter passing in distributed object systems. In *ACM/IFIP/USENIX International Conference on Middleware*, pages 144–163. Springer-Verlag New York, Inc., 2008.

Invited Talks

2020	New York Genome Center, Computational Cancer Genomics Working Group Lecture.
2020	Columbia University, Symposium on Probability and Society.
2020	Johns Hopkins University, Department of Biostatistics Seminar.
2020	University of California at Los Angeles, Department of Biostatistics Seminar.
2020	Columbia University, Department of Statistics Seminar.
2020	University of British Columbia, Department of Medical Genetics Seminar.
2020	Duke University, AI + Health Seminar.
2020	University of North Carolina at Chapel Hill, Computational Medicine Seminar.
2020	MD Anderson, Bioinformatics and Computational Biology Seminar.
2020	Memorial Sloan Kettering Cancer Center, Computational Oncology Seminar.
2020	University of Minnesota, Department of Statistics Seminar.
2020	University of Texas at Austin, Department of Statistics and Data Sciences Seminar.
2020	University of Illinois at Urbana-Champaign, Department of Statistics Seminar.
2020	Purdue University, Department of Electrical and Computer Engineering Seminar.
2020	University of Chicago, Booth School of Business Seminar.
2019	Broad Institute, Seminar Series on Models, Inference, and Algorithms.
2018	Broad Institute, Next Generation in Biomedicine Symposium.
2018	Broad Institute, Nature Conference on Big Data and Cancer.
2018	University of Illinois at Urbana-Champaign, Department of Computer Science Seminar.
2018	University of Notre Dame, Department of Statistics Seminar.
2018	University of Chicago, Department of Statistics.
2018	International Conference on Machine Learning; Stockholm, Sweden.
2018	University of Texas at Austin, Department of Statistics Seminar.

2016	NIPS Workshop on Machine Learning for Health; Barcelona, Spain.
2015	Invited Session at Joint Statistical Meetings; Seattle, WA.
2015	International Conference on Machine Learning; Lille, France.
2015	ISBA Nonparametric Bayes; Raleigh, NC.
2012	International Conference on Genetic and Evolutionary Computation Conference; Philadelphia, PA.
2009	ACM SIGPLAN Conference on Object Oriented Programming Systems, Languages, and Applications; Nashville, TN.
2008	IEEE International Symposium on Parallel and Distributed Processing; Miami, FL.