Dustin Tran

Ph.D. Student
Columbia University
Department of Computer Science
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Education

Ph.D. Computer Science, Columbia University — 2016–
Advisors: David M. Blei, Andrew Gelman

M.S. Computational Science & Engineering, Harvard University — 2014–2015
Advisor: Edoardo M. Airoldi

B.A. (Hon.) Mathematics, Statistics, University of California, Berkeley — 2010–2014

Employment

Visiting Researcher — 2016
Graduate School of Business, Stanford University
Supervisor: Susan Athey
Collaborators: Matt Hoffman, Kevin Murphy

Visiting Researcher — 2015
Department of Statistics and Computer Science, Columbia University
Supervisors: David M. Blei, Andrew Gelman

Awards

Adobe Research Fellowship ($10,000) — 2016

Columbia SEAS Fellowship (Full funding) — 2016–

LinkedIn Economic Graph Challenge — 2015

Harvard GSAS Fellowship (Full funding) — 2015

Dorothea Klumpke Roberts Prize in Mathematics — 2014

Regents' and Chancellor's Scholarship (Full funding) — 2010–2014

Rose Hills Foundation Science & Engineering Grant ($5,000) — 2013

Cal Alumni Leadership Scholarship ($2,500) — 2010

Publications

PREPRINTS

1. **D. Tran**, A. Gelman, and A. Vehtari. Gradient-based marginal optimization.
2. **D. Tran**, A. Kucukelbir, A. Gelman, B. Carpenter, and D.M. Blei. Stan: Generalizing and automating variational inference.
3. **D. Tran**, F. Ruiz, S. Athey, and D.M. Blei. Validating causal models.
4. R. Ranganath, **D. Tran**, J. Altosaar, and D.M. Blei. Operator variational inference.
5. A. Dieng, **D. Tran**, R. Ranganath, J. Paisley, and D.M. Blei. The χ divergence for approximate inference.
6. G. Basse, J. Pouget-Abadie, **D. Tran**, E.M. Airoldi, Y. Xu, and S. Ghosh. Naive A/B tests for link formation algorithms lead to biased performance evaluations.
7. A. Kucukelbir, **D. Tran**, R. Ranganath, A. Gelman, and D.M. Blei. Automatic differentiation variational inference.
8. **D. Tran**, P. Toulis, and E.M. Airoldi. Stochastic gradient descent methods for estimation with large data sets.

Refereed Conference Papers

9. R. Ranganath, **D. Tran**, and D.M. Blei. Hierarchical variational models. In *International Conference on Machine Learning*, 2016.
10. **D. Tran**, M. Kim, and F. Doshi-Velez. Spectral M-estimation with application to hidden Markov models. In *Artificial Intelligence and Statistics*, 2016.
11. P. Toulis, **D. Tran**, and E.M. Airoldi. Towards stability and optimality in stochastic gradient descent. In *Artificial Intelligence and Statistics*, 2016.
12. **D. Tran**, R. Ranganath, and D.M. Blei. The variational Gaussian process. In *International Conference on Learning Representations*, 2016.
13. **D. Tran**, D.M. Blei, and E.M. Airoldi. Copula variational inference. In *Neural Information Processing Systems*, 2015.

Teaching

1. Teaching Fellow | Harvard University 2015
   AM 205: Advanced Scientific Computing–Numerical Methods
2. Teaching Assistant | University of California, Berkeley 2013
   MATH 10B: Methods in Calculus, Statistics, Combinatorics
3. Teaching Assistant | University of California, Berkeley 2011
   MATH 128A: Numerical Analysis

Professional Service

Reviewing

Foundations and Trends in Machine Learning 2016

International Conference on Learning Representations 2016

International Conference on Machine Learning 2016

Knowledge Discovery and Data Mining 2016

Neural Information Processing Systems 2016

Uncertainty in Artificial Intelligence 2016

WORKSHOP ORGANIZATION

NIPS: Advances in Approximate Bayesian Inference 2015

PROFESSIONAL MEMBERSHIPS

American Statistical Association

Association of Computing Machinery

Bernoulli Society

Institute of Electrical and Electronics Engineers

Institute for Mathematical Statistics

International Society for Bayesian Analysis

Royal Statistical Society

Invited Talks

1. Google Brain – MOUNTAIN VIEW, CA 2016
2. International Conference on Learning Representations – SAN JUAN, PR 2016
3. PPAML/DARPA Meeting – NEW YORK, NY 2016
4. Harvard University – CAMBRIDGE, MA 2016
5. NIPS Workshop: Advances in Approximate Bayesian Inference – MONTREAL, CA 2015
6. NIPS Workshop: Black Box Learning and Inference – MONTREAL, CA 2015
7. Massachusetts Institute of Technology – CAMBRIDGE, MA 2015
8. Harvard University – CAMBRIDGE, MA 2015
9. Microsoft Research – CAMBRIDGE, MA 2015
10. University of Connecticut – STORRS, CT 2015
11. Max Planck Institute for Intelligent Systems – TÜBINGEN, DE 2015