

Oluwasanmi Koyejo

Curriculum Vitae

Engineering Research Associate
Department of Psychology,
Stanford University
450 Serra Mall, Bldg. 420,
Jordan Hall Rm. 332,
Stanford, CA 94305-2130

Phone: (512) 850-4674
Email: sanmi@stanford.edu
Web: <http://sanmik.github.io>
Lab: <https://poldracklab.stanford.edu>
Code: <https://github.com/sanmik>

Academic Positions

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|-------------|--------------------------------|--|
| 2014 - | Engineering Research Associate | Stanford University (PI: R. Poldrack) |
| 2013 - 2014 | Research Associate | UT Austin (PI: R. Poldrack & P. Ravikumar) |

Education

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|-------------|--|--|
| 2013 - 2013 | Postdoctoral Fellow | UT Austin (PI: R. Poldrack & P. Ravikumar) |
| 2013 | Ph.D., Electrical Engineering | UT Austin (Advisor: J. Ghosh) |
| 2008 | M.S., Electrical Engineering | UT Austin |
| 2005 | B.S. (Hons), Electrical Engineering & Minor in Statistics | New Jersey Institute of Technology (NJIT) |

Scientific products

Technical publications

1. **Oluwasanmi Koyejo***, Nagarajan Natarajan*, Pradeep K Ravikumar, and Inderjit S Dhillon. Consistent binary classification with generalized performance metrics. In *Advances in Neural Information Processing Systems*, pages 2744–2752, 2014
2. **Oluwasanmi Koyejo**, Rajiv Khanna, Joydeep Ghosh, and Russell Poldrack. On prior distributions and approximate inference for structured variables. In *Advances in Neural Information Processing Systems*, pages 676–684, 2014
3. Anqi Wu, Mijung Park, **Oluwasanmi Koyejo**, and Jonathan W Pillow. Sparse Bayesian structure learning with "dependent relevance determination" priors. In *Advances in Neural Information Processing Systems*, pages 1628–1636, 2014
4. **Oluwasanmi Koyejo**, Cheng Lee, and Joydeep Ghosh. A constrained matrix-variate Gaussian process for transposable data. *Machine Learning*, 97(1-2):103–127, 2014
5. **Oluwasanmi Koyejo** and Joydeep Ghosh. Constrained Bayesian inference for low rank multitask learning. In *Proceedings of the 29th conference on Uncertainty in Artificial Intelligence (UAI)*, pages 97–106, 2013
6. Russell A Poldrack, Deanna M Barch, Jason P Mitchell, Tor D Wager, Anthony D Wagner, Joseph T Devlin, Chad Cumba, **Oluwasanmi Koyejo**, and Michael P Milham. Toward open sharing of task-based fMRI data: the openfMRI project. *Frontiers in Neuroinformatics*, 7, 2013

7. Mijung Park*, **Oluwasanmi Koyejo***, Joydeep Ghosh, Russell Poldrack, and Jonathan Pillow. Bayesian structure learning for functional neuroimaging. In *Proceedings of the Sixteenth International Conference on Artificial Intelligence and Statistics*, pages 489–497, 2013
8. Cheng H Lee, **Oluwasanmi Koyejo**, and Joydeep Ghosh. Identifying candidate disease genes using a trace norm constrained bipartite raking model. In *Engineering in Medicine and Biology Society (EMBC), 2013 35th Annual International Conference of the IEEE*, pages 3459–3462. IEEE, 2013
9. **Oluwasanmi Koyejo**, Priyank Patel, Joydeep Ghosh, and Russell A Poldrack. Learning predictive cognitive structure from fMRI using supervised topic models. In *Pattern Recognition in Neuroimaging (PRNI), 2013 International Workshop on*, pages 9–12. IEEE, 2013
10. **Oluwasanmi Koyejo**, Sreangsu Acharyya, and Joydeep Ghosh. Retargeted matrix factorization for collaborative filtering. In *Proceedings of the 7th ACM Conference on Recommender Systems, RecSys '13*, pages 49–56, New York, NY, USA, 2013. ACM
11. **Oluwasanmi Koyejo**, Cheng Lee, and Joydeep Ghosh. Constrained Gaussian process regression for gene-disease association. In *Data Mining Workshops (ICDMW), 2013 IEEE 13th International Conference on*, pages 72–79. IEEE, 2013
12. **Oluwasanmi Koyejo** and Russell A. Poldrack. Decoding cognitive processes from functional MRI. In *NIPS Workshop on Machine Learning and Interpretation in Neuroimaging*, 2013
13. Sreangsu Acharyya*, **Oluwasanmi Koyejo***, and Joydeep Ghosh. Learning to rank with Bregman divergences and monotone retargeting. In *Proceedings of the 28th conference on Uncertainty in Artificial Intelligence (UAI)*, 2012
14. **Oluwasanmi Koyejo** and Joydeep Ghosh. A kernel-based approach to exploiting interaction-networks in heterogeneous information sources for improved recommender systems. In *Proceedings of the 2nd International Workshop on Information Heterogeneity and Fusion in Recommender Systems, HetRec '11*, pages 9–16, New York, NY, USA, 2011. ACM
15. **Oluwasanmi Koyejo** and Joydeep Ghosh. MiPPS; a generative model for multi-manifold clustering. In *AAAI Fall Symposium on Manifold Learning and Its Applications*. AAAI Press, 2009

*Equal Contribution.

Thesis

16. **Oluwasanmi Koyejo**. *Constrained relative entropy minimization with applications to multitask learning*. PhD thesis, The University of Texas at Austin, May 2013

Preprints

17. Wesley Tansey, **Oluwasanmi Koyejo**, Russell A. Poldrack, and James G. Scott. False discovery rate smoothing. *arXiv:1411.6144*, 2014
18. **Oluwasanmi Koyejo**, Cheng Lee, and Joydeep Ghosh. The trace norm constrained matrix-variate Gaussian process for multitask bipartite ranking. *arXiv:1302.2576*, 2013

Peer-reviewed workshop papers

19. Shalmali Joshi, **Oluwasanmi Koyejo**, and Joydeep Ghosh. Constrained inference for multi-view clustering. In *ICML Workshop on Divergence Methods for Probabilistic Inference*, 2014
20. **Oluwasanmi Koyejo**, Sreangsu Acharyya, and Joydeep Ghosh. Ratings re-specification for rank ordered recommendations. In *UAI workshop on New Challenges in E-Commerce Recommendations*, 2013
21. **Oluwasanmi Koyejo** and Joydeep Ghosh. A representation approach for relative entropy minimization with expectation constraints. In *ICML workshop on Divergences and Divergence Learning (WDDL)*, 2013
22. **Oluwasanmi Koyejo** and Jeff Andrews. Capacity gains of multi-user diversity in a cellular downlink interference-limited environment. In *GAIN 2007 student conference*, February 2007

Peer-reviewed abstracts

23. **Oluwasanmi Koyejo**, David Reese McKay, Emma E.M. Knowles, John Blangero, David Glahn, and Russell A. Poldrack. Exploratory analysis of imaging and behavioral phenotypes with sparse CCA. In *Organization for Human Brain Mapping (Abstract)*, 2014
24. Russell A. Poldrack, Timothy Laumann, Laurie Frick, **Oluwasanmi Koyejo**, Brenda Gregory, Ashleigh Hover, Mei-Yen Chen, Alex Huk, Sung Jun Joo, Evan Gordon, Avi Snyder, Babatunde Adeyemo, Daniel Handwerker, Jackson Liang, Ryan Boyd Zack Booth Simpson, Scott Hunicke-Smith, Thomas Caven, Edward Marcotte, Steven E. Petersen, and Jeanette A. Mumford. Extensive neurocognitive phenotyping of a single human: The MyConnectome project. In *Organization for Human Brain Mapping (Abstract)*, 2014

Academic magazine publications

25. **Oluwasanmi Koyejo**. Manifold learning and its applications: Reports of the AAAI 2010 fall symposia. *AI Magazine*, 32(1):93–100, 2011
26. Richard Souvenir and **Oluwasanmi Koyejo**. Manifold learning and its applications: Reports of the AAAI 2009 fall symposia. *AI Magazine*, 31(1):88–94, 2010

Submitted papers and working manuscripts

27. Avradeep Bhowmik, Joydeep Ghosh, and **Oluwasanmi Koyejo**. Generalized linear models for aggregated data. 2015. Under review
28. Shalmali Joshi, Joydeep Ghosh, Mark Reid, and **Oluwasanmi Koyejo**. Multiview clustering via probabilistic aggregation. 2015. Under review
29. Rajiv Khanna, Joydeep Ghosh, Russell A. Poldrack, and **Oluwasanmi Koyejo**. Sparse sub-modular probabilistic PCA. 2015. Under review
30. **Oluwasanmi Koyejo** and Joydeep Ghosh. Bayesian inference with constraints. 2014
31. **Oluwasanmi Koyejo***, Nagarajan Natarajan*, Pradeep K Ravikumar, and Inderjit S Dhillon. Consistent multilabel classification with generalized performance metrics. 2014

Teaching experience

Teaching Assistant, tutor

| | | |
|-------------|----------------------------|-------------------------------------|
| 2008 - 2010 | Senior design project | UT Austin |
| 2008 | Signals and systems | UT Austin |
| 2007 - 2009 | High school math | Austin partners in math (volunteer) |
| 2006 - 2007 | Senior design project | UT Austin |
| 2004 - 2005 | Signals and systems | New Jersey Institute of Technology |
| 2002 | Gear Up program | New Jersey Institute of Technology |
| 2001 | University learning center | New Jersey Institute of Technology |

Awards & Honors

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|-------------|--|
| 2014 | Trainee award from the Organization for Human Brain Mapping (OHBM) |
| 2013 | Student paper award at the conference for Uncertainty in Artificial Intelligence (UAI) |
| 2012 | Travel award at the conference for Uncertainty in Artificial Intelligence (UAI) |
| 2007 | "Q" Award of excellence from Qualcomm |
| 2006 | "Q" Award of excellence from Qualcomm |
| 2005 | Outstanding NCE graduate award from NJIT |
| 2005 | Outstanding ECE graduate award from NJIT |
| 2004 - | Phi Eta Sigma honors society |
| 2004 - | Tau Beta Pi honors society |
| 2004 - | Omicron Delta Kappa national leadership honors society |
| 2003 | Leadership award from NJIT |
| 2001 - 2005 | Albert Dorman honors college |

Memberships and Affiliations

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|-------------|--|
| 2014 - | Stanford Center for Mind, Brain and Computation |
| 2013 - | Organization for Human Brain Mapping |
| 2002 - 2013 | Institute of Electrical and Electronics Engineers |
| 2009 - 2011 | Association for the Advancement of Artificial Intelligence |

Professional Service

Program chair

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| 2015 | International workshop on Pattern Recognition in Neuroimaging (PRNI) |
| 2014 | ICML workshop on Divergence Methods for Probabilistic Inference (DMPI) |
| 2010 | AAAI symposium on Manifold learning and its applications |
| 2005 - 2007 | UT Austin GEC GAIN Conference |

Ad-hoc peer review

Statistics and Computing, STAT, SIAM International Conference on Data Mining, ACM SIGKDD, Information Sciences, INFORMS Journal on Computing, International Conference on Information Systems

Reading group, seminar host, other leadership

2012 WNCG seminar (student host)
 2012 Byteclub machine learning coding group
 2009 - 2010 Gnofai machine learning reading group
 2002 - 2003 NJIT Student Senate
 2003 - 2005 NJIT ECE student advisory board

Industry Positions

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|-------------------|-----------------------------------|-------------------------------------|
| 05/2010 - 05/2011 | Research intern | Adometry (Acquired by Google, 2014) |
| 05/2007 - 08/2007 | QCT systems intern | Qualcomm Inc. |
| 05/2006 - 08/2006 | WTBU intern | Texas Instruments |
| 05/2005 - 08/2005 | Product engineering intern | Texas Instruments |
| 02/2003 - 08/2004 | Operations service center intern | Ei ³ corporation |
| 06/2003 - 08/2008 | Energy resources and trade intern | PSEG |

Presentations***Symposium talks, departmental lectures and conference presentations***

10/2014 Biostatistics seminar at University of North Carolina
 09/2014 Parietal team at INRIA, France
 09/2014 European conference on Machine Learning (ECML), France
 06/2014 "Unconference" at Organization for Human Brain Mapping
 07/2013 Conference on Uncertainty in Artificial Intelligence
 07/2013 Workshop on New challenges in e-commerce recommendations
 06/2013 Workshop on Divergences and divergence learning
 06/2013 Pattern Recognition in Neuroimaging
 01/2013 Lawrence Livermore national lab
 12/2012 Adometry, Austin, TX
 11/2012 Apple Inc., Austin, TX
 11/2011 International workshop on Information heterogeneity and fusion in recommender systems
 11/2010 Workshop on Manifold learning and its applications
 01/2001 Graduate and industry networking day (UT Austin)