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## CURRENT POSITION

2018-present Faculty member, Vector Institute, Toronto  
2018-present Canada CIFAR AI Chair  
2015-present Assistant Professor, University of British Columbia, Department of Statistics, Department of Medical Genetics  
2015-present Scientist, Center for Molecular Medicine and Therapeutics  
2015-present Canada Research Chair II in Computational Biology  
2015-present Fellow, Canadian Institute for Advanced Research

## ACADEMIC AND TRAINING BACKGROUND

PDF 2014-2015 Harvard Medical School (Computational Immunology)  
PDF 2011-2014 Stanford University (Computational Biology and Machine Learning)  
PhD 2006-2011 University of Toronto (Computer Science and Computational Biology)  
MS 2004-2006 Queen's University (Bioinformatics)  
BSc 2001-2004 University of Toronto (Computer Science and Life Sciences)  
1999-2001 Queen's University (Life Sciences) – transferred to UofT in 2001

## SELECTED RECENT PUBLICATIONS

Trainees: underlined, co-first or co-senior authorship: \*

1. Yoshida H, Lareau C, ..., **Mostafavi S\***, Buenrostro J\*, Benoist C\*. The cis-Regulatory Atlas of the Mouse Immune System. (2019). *Cell*.
2. **Mostafavi S\***, Gaiteri C\*, Sullivan SE, ..., Young-Pearse TL, Bennett DA, De Jager PL. A molecular network of the aging human brain provides insights into the pathology and cognitive decline of Alzheimer's disease. (2018). *Nature Neuroscience*.
3. Ng B, White CC, Klein HU, Sieberts SK, McCabe C, Patrick E, Xu J, Yu L, Gaiteri C, Bennett DA, **Mostafavi S\***, De Jager PL\* (2017). An xQTL map integrates the genetic architecture of the human brain's transcriptome and epigenome. *Nature Neuroscience*.
4. Knowles DA, Davis J, Edgington H, Raj A, ... , Mostafavi S, Montgomery SB\*, Battle A\*. (2017). Allele-specific expression reveals interactions between genetic variation and environment. *Nature Methods*.
5. **Mostafavi S\***, Yoshida H\*, Moodley D, ..., Mathis D\*, Benoist C\* and the Immunological Genome Project Consortium. (2016). Parsing the interferon transcriptional network and its disease associations. *Cell*.
6. Pierson E, the GTEx Consortium, Koller D, Battle A\*, **Mostafavi S\***. (2015) Sharing and specificity of co-expression networks across 35 human tissues. *PLOS Computational Biology*.
7. The GTEx Consortium. (2015) The Genotype-Tissue Expression (GTEx) pilot analysis: Multi-tissue gene regulation in humans. *Science*.
8. **Mostafavi S**, Ortiz-Lopez A, Hattori K, Pop C, Bogue M, Mathis D, Koller D, Benoist CB. (2014) Variation and genetic control of gene expression in primary immunocytes across inbred mouse strain. *Journal of Immunology*.
9. Raj T, Rothamel K, **Mostafavi S**, Ye C, Lee M, Replogle J, Von Korff A, Imboya S, McCabe C, Okada Y, Patsapolous N, Lee M, Wood I, Mathis D, Hafler D, Koller D, Regev A, Hacohen N, Benoist C\*, Stranger BE\*, De Jager PL\*. (2014). Polarization of the effects of autoimmune and neurodegenerative risk alleles in leukocytes. *Science*.
10. Levinson DF, **Mostafavi S**, Milaneschi, Y, Rivera, M, Ripke S, Wray NR, Sullivan, PF. Genetics studies of major depressive disorder: Why are there no GWAS findings, and what can we do about it? *Biological Psychiatry*.
11. **Mostafavi S**, Battle A, Zhu X, ..., Levinson D. (2013). Type I interferon signaling genes in recurrent major depression: increased expression detected by whole-blood RNA sequencing. *Molecular Psychiatry*

12. Battle A, **Mostafavi S**, Zhu X, Potash JB, Weissman MW, Mc-Cormick C, Haudenschild CD, Beckman K, Shi J, Mei R, Urban AE, Montgomery SB, Levinson D, Koller D. (2013). Characterizing the genetic basis of transcriptome diversity through RNA-sequencing of 922 individuals. *Genome Research*.
13. **Mostafavi S**, Battle A, Zhu X, Urban AE, Levinson D, Montgomery SB, Koller D. (2013). Normalizing RNA-sequencing data by modeling hidden covariates with prior knowledge. *PLOS ONE*.
14. Lonsdale J. et al., and the GTEx consortium. (2013). The Genotype-Tissue Expression (GTEx) project. *Nature Genetics*.
15. **Mostafavi S**, Goldenberg A, Morris Q. (2012). Labeling nodes using three degrees of propagation. *PLOS ONE*

## RESEARCH FUNDING

- 2018-2023 Genome Canada (co-I). Childhood Asthma and the Microbiome—Precision Health for Life: The Canadian Healthy Infant Longitudinal Development (CHILD) Study
- 2018-2023 Genome Canada (co-I). Care4Rare-Solve: Multi-omic based diagnosis of rare disease.
- 2017-2022 NIH R24 (sub-contract PI). Computational Methods Inference Gene Regulation Networks in the Immune System.
- 2016-2020 NSERC Discovery Grant (PI). Multi-Omic Data Integration Methods for Complex Traits.
- 2016-2019 CIFAR research funds (PI). Construction of Epigenetic Growth Chart.
- 2016-2019 Biogen Inc (PI). Cell-type Specific eQTL Analysis in the Brain. SRA Award.
- 2015-2020 Canada Research Chair Program (Tier II Chair in Computational Biology)
- 2015-2019 CIFAR Catalyst Grant (co-PI). Cell Type Deconvolution Algorithms.
- 2015-2019 NIH U01 (sub-contract PI). Pathway discovery, validation and compound identification for Alzheimer's disease.

## SELECTED INVITED PRESENTATIONS

- 2018 Invited speaker, Princess Margaret Hospital Research Center, Toronto, Canada
- 2018 Invited speaker, UCLA Human Genetics, Los Angeles, USA
- 2018 Invited speaker, Women's Brain Initiative Symposium at Brigham Women's Hospital , Boston, USA
- 2018 Invited speaker, CIFAR and Jacobs Foundation Meeting, Marbach Castle, Germany
- 2018 Invited speaker, Biogen Inc, Boston, MA, USA
- 2018 Invited speaker, Statistical Seminar Series, McGill University, Montreal, Canada
- 2017 Invited speaker, Riken Institute for Integrative Medicine, Tokyo, Japan
- 2017 Invited speaker, Canadian Human & Statistical Genetics Meeting, Quebec City, Canada
- 2015 Invited speaker, Mount Sinai School of Medicine, NY, USA
- 2015 Invited speaker, Aalto University, Computer Science Seminar, Finland
- 2015 Invited speaker, CIFAR meeting on Brain development, Vancouver, Canada
- 2015 Invited speaker, Broad Institute, Population Genetics Meeting, Boston, MA

## SELECTED ACTIVITIES

- 2019 Area chair ("Studies of Phenotypes and Clinical Applications") for ISMB
- 2015-2019 RECOMB Program Committee member
- 2011-2018 Co-organizer of Machine Learning and Computational Biology Workshop (at NueorIPS)
- 2011-2017 Pacific Symposium on Biocomputing Program Committee
- 2012 Co-organizer, Workshop on Genomics and Genetics at ICML