

## Delasa Aghamirzaie, Ph.D.

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### CONTACT INFORMATION

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### TRAINING

- Post-Doctoral Fellow, Department of Genome Sciences, University of Washington, July 2016- present
  - Mentor: Dr. Cole Trapnell
  - Transcriptional and Epigenetic Regulation of Pluripotency and Self-Renewal Using Single Cell Genomics
- Ph.D. in Genetics, Bioinformatics, and Computational Biology (GBCB), May 2016, Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, Virginia, USA.
  - Mentors: Dr. Ruth Grene, Dr. Lenwood S. Heath, Dr. Eva Collakova
  - Dissertation: isoform-specific expression during Arabidopsis and soybean embryo development
- Research Intern in Computational Biology Group, IBM T.J Watson Research Center, Yorktown Heights, NY, May-August 2015
  - Mentor: Dr. Erhan Bilal, Dr. Laxmi Parida
  - Watson Genomics Analytics (WGA) Project, Application of Deep Learning Techniques to Gene Expression Data Sets
- M.Sc. in Computer Engineering, Computer Architecture, October 2011, Department of Computer Engineering and Information Technology, Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran.
  - Thesis: Accelerating Protein Secondary Structure Prediction Using Artificial Neural Networks on GPU
- B.Sc. Computer Engineering, September 2009, Hardware, Department of Computer Engineering and Information Technology, Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran.
  - Thesis: Suppression of Variation Effects on FPGAs Using Multiple Configurations

### AWARDS AND HONORS

- 2016-2017: AstraZeneca DREAM challenge finalist (6<sup>th</sup> among more than 50 teams)
- 2016: Cold Spring Harbor Scholarship Award for Plant Genomics Meeting
- 2015-2016: Genetics, Bioinformatics, and Computational Biology Academic Fellowship
- 2015: Molecular Plant Science Student Grant Proposal Winner
- 2014: Molecular Plant Science Fellowship for 2nd Plant Genomics Conference
- 2013: Best poster award in PPWS research symposium
- 2013: NIH Fellowship for National Short Course in System Biology, University of California, Irvine
- 2011: Best Master Thesis Award in The Amirkabir University of Technology
- 2011: Ranked 3rd among M.Sc. Students in Computer Engineering
- 2009: Accepted as an Honored/Talented Student to Computer Engineering M.Sc. program
- 2009: Ranked 2nd among B.Sc. Students in Computer Hardware Engineering.

## PUBLICATIONS

- **D. Aghamirzaie**, Sh. Wu, K. Raja Vulmugran, D. Altarawy, L.S. Heath, R. Grene, "Expresso: Exploring Arabidopsis' Transcription Factors and Target Genes from ChIP-Seq Data", submitted, December 2016.
- Y. Ni, **D. Aghamirzaie**, E. Collakova, S. Li, R. Grene, L.S. Heath, "A Machine Learning Approach to Predict Gene Regulatory Networks in Seed Development in Arabidopsis", *Frontiers in Plant Science*, section Bioinformatics and Computational Biology, December 2016.
- **D. Aghamirzaie**, S. Li, E. Collakova, R. Grene, "CoSpliceNet: A framework for co-splicing network inference from transcriptomics data", *BMC Genomics*, October 2016.
- A. Schneider, **D. Aghamirzaie**, H. Elmarakeby, A. Poudel, A.J. Koo, L.S. Heath, R. Grene, E. Collakova, "Potential Targets of VAL1 Repression In Developing Arabidopsis Thaliana Embryos", *The Plant Journal*, January 2016.
- **D. Aghamirzaie**, D. Batra, L.S.Heath, A. Schneider, R. Grene, E. Collakova, "Transcriptome-Wide Functional Characterization Reveals Novel Relationships Among Differentially Expressed Transcripts In Developing Soybean Embryos", *BMC Genomics*, November 2015.
- **D. Aghamirzaie**, M. Nabiyouni, Y. Fang, C. Klumas, L.S.Heath, R. Grene, E. Collakova, "Changes in RNA Splicing in Developing Soybean (*Glycine max*) Embryos", *Biology* 2013.
- E. Collakova, **D. Aghamirzaie**, Y. Fang, C. Klumas, F. Tabataba, A. Kakumanu, E. Myers, L. Heath, R. Grene, "Metabolic and Transcriptional Reprogramming in Developing Soybean (*Glycine max*) Embryos", *Metabolites*, May 2013.
- M. Nabiyouni, **D. Aghamirzaie**, "A Highly Parallel Multi-Class Pattern Classification on GPU," 12th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (ccgrid), 2012, Best Paper Candidate.
- **D. Aghamirzaie**, A. Razavi, M. Saheb Zamani, M. Nabiyouni, "Reduction of Process Variation Effect on FPGAs Using Multiple Configurations", IEEE/IFIP International Conference on Very Large-Scale Integration (VLSI-SOC'10), September 2010.

## TALKS

- **Delasa Aghamirzaie**, "Fundamentals of Computational Algorithms for Data Analysis of RNA-Seq Data", *Paradigms of Bioinformatics*, October 2015
- **Delasa Aghamirzaie**, Erhan Bilal, Takahiko Koyama, Fang Wang, Filippo Utro, Kahn Rhrissorrakrai, Raquel Norel, Laxmi Parida, and Ajay Royyuru, "Interpreting Cancer Patient Genomics Data to Assist Clinicians", IBM T.J Watson Research Center, Intern Seminar Series, August 2015
- **Delasa Aghamirzaie**, "Fundamentals of Next Generation Sequencing", *Plant Stress Physiology Course*, April 2015.
- **Delasa Aghamirzaie**, "CodeWise: A Support Vector Machine Classifiers for Accurate detection of Noncoding RNAs", *Graduate Student Assembly Symposium*, March 2015
- **Delasa Aghamirzaie**, "Comprehensive Functional Characterization Reveals Novel Relationships Among Differentially Expressed Transcripts in Developing Soybean Embryos", *MPS/TPS Mini-symposium*, Feb, 2015
- **Delasa Aghamirzaie**, "An Accurate Support Vector Machine Classifier for Assessing Coding Potential of Transcripts Using Several Sequential and Structural Features", *Biological Data Science Meeting*, Cold Spring Harbor Laboratories, New York, November 2014
- Ruth Grene, **Delasa Aghamirzaie**, "Toward a Functional Classification of Splice Variants from Soybean Seed Embryos", 2<sup>nd</sup> Plant Genomics Congress, St. Louis, USA, September 2014

## SELECTED POSTERS

- **D. Aghamirzaie**, Sh. Wu, K. Raja Vulmugran, R. Grene, "Expresso: Exploring Arabidopsis' Transcription Factors and Target Genes from ChIP-Seq Data", *Biological Data Science*, Cold Spring Harbor Laboratory, USA, November 2014.
- **D. Aghamirzaie**, L. Heath, R. Grene, E. Collakova, "Changes in RNA Splicing in Soybean Seed Embryos", 8<sup>th</sup> q-bio Conference, Santa Fe, NM, August 2014.
- **D. Aghamirzaie**, D. Batra, E. Collakova, L. Heath, R. Grene, "Modeling and Identifying Regulatory Modules in (*Glycine max*) Soybean Time Series Gene Expression Data using Bayesian Networks". *International Conference on Computational Cell Biology (ICCCB 2013)*, Blacksburg, Virginia, August, 2013.