BIANCA DUMITRASCU

Quantitative and Computational Biology
Princeton University

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EDUCATION

2015–present Quantitative and Computational Biology,
Princeton University
Ph.D. Candidate (Advisor: Prof. Barbara E. Engelhardt)

2013–2015 Princeton University
M.A. in Quantitative and Computational Biology

2009–2013 Massachusetts Institute of Technology
B.S. in Mathematics

AWARDS

2013 - present Princeton Centennial Ph.D. Fellowship

PUBLICATIONS

- **A Bayesian test to identify variance effects**
  B. Dumitrascu, G. Darnell, J. Ayroles, B. E. Engelhardt
  Preprint. arXiv:1512.01616 [q-bio.QM].
- **BIISQ: Bayesian nonparametric discovery of Isoforms and Individual Specific Quantification from RNA-seq data**
  D. Aguiar, L. F. Cheng, **B. Dumitrascu**, F. Mordelet, A. Pai, B. E. Engelhardt
  [in preparation].
- **A Bayesian nonparametric factor analysis model for gene co-expression under structured and unstructured noise**
  B. Dumitrascu, R. de Vito, C. Brown, B. E Engelhardt
  [in preparation].
- **Identifying causal relationships among genes driving response to exposure with transcriptional time series data**
  B. Dumitrascu, J. Lu, B. Jo, I. C. McDowell, T. Reddy, and B. E. Engelhardt
  [in preparation].

EXTENDED ABSTRACTS AND INVITED TALKS

- **A Bayesian nonparametric factor analysis model for gene co-expression under structured and unstructured noise**
  B. Dumitrascu, R. de Vito, C. Brown, B. E. Engelhardt
  Women in Machine Learning Workshop, Barcelona, 2016.

- **Exploring the Glucocorticoid receptor network - challenges in causal inference**
  B. Dumitrascu, J. Lu, B. Jo, I. C. McDowell, T. Reddy, and B. E. Engelhardt
  Probabilistic Modeling in Genomics, Oxford University, 2016
  Oral Presentation.

- **BIISQ: Bayesian nonparametric discovery of Isoforms and Individual Specific Quantification from RNA-seq data**
  D. Aguiar, L. F. Cheng, **B. Dumitrascu**, F. Mordelet, A. Pai, B. E. Engelhardt
  American Society of Human Genetics, Baltimore, MD, 2015.

- **Detection of variance controlling quantitative traits loci**
  B. Dumitrascu, G. Darnell, J. Ayroles, B. E. Engelhardt
  New York Area Population Genomics Workshop, NYC, 2015
  Oral Presentation.

- **BTH: A Bayesian test to identify variance quantitative trait loci**
  B. Dumitrascu, G. Darnell, J. Ayroles, B. E. Engelhardt
  American Human Genetics Society Annual Meeting, Baltimore, MD, 2015.

Teaching Experience

Princeton University
Introduction to Java Programming (ISC231 - COS126), Fall 2015.
Interacting with Data (COS 424), Spring 2015.
Research Topics in Quantitative and Computational Biology(QCB 302), Fall 2014.

Organizational Activities

2014–2016 Princeton Computer Science and Machine Learning Reading Group

Professional Skills

Programming: Python, R, MATLAB