725 Concord Turnpike
Arlington, MA 02476, USA

BRAD FRIEDMAN

617-230-7055
brad.aaron.friedman@gmail.com

Education

2006	PhD in Mathematics, MIT, Supervisor: Christopher Burge (biology).
2001	Certificate of Advanced Study in Mathematics, Cambridge University, *with Distinction*.
2000	B. Music in piano, University of Illinois at Urbana (UIUC), *with High Honors.*
1999	B. Science in Mathematics, UIUC, *with Highest Honors*.

Work and Research Experience

2006-present	Postdoctoral Fellow, Maniatis Lab, Harvard University. • Developed new software package for analysis of RNA-Seq data (available at `http://expressionplot.com/`). • Analyzed/integrated diverse ALS-related gene expression data sets • Identified and characterized targets of TDP43, an RNA binding protein implicated in ALS. • Created new TDP43 mouse model • Mentored undergraduate and high school students in scientific research
2003-2006	Research Assistant, Burge Lab, MIT. Studied the evolution and sequence determinants of RNA splicing in fungi and mammals.
2001-2010	Tutor and Consultant in statistics, math and computer science for students at Boston University, MIT and Harvard, and for clients in the pharmaceutical and finance industries.
2001-2006	Piano teacher
2001-2003	Calculus and Applied Math Instructor, MIT
2002	Mentor, Research Science Institute, MIT
2000	Teacher, Colegio Bilingüe Jefferson, Guayaquil, Ecuador
1998-2000	Calculus Instructor, UIUC
1999	Graph Theory Research, UIUC Math Department

Publications

• **Friedman BA**, Maniatis TM, “ExpressionPlot, a web-based framework for analysis of RNA-Seq and microarray gene expression data”. Software available at `expressionplot.com` and manuscript submitted.

• **Friedman BA**, Weichman M, Maniatis TM, “The ALS disease protein TDP43 controls voltage gated sodium channel alternative RNA splicing”, in preparation.

• Phatnani HP*, **Friedman BA***, Maniatis TM, et al, “An RNA-Seq analysis of Disease/ Progression in ALS”, in preparation. (*equal contributors)

• Ng, SL, **Friedman BA**, Maniatis TM, et al, “IKKε dictates STAT dimerization to Control Virus Infection”, in prepration.

• Golan D, Levy C, **Friedman B**, Shomron N., “Biased hosting of intronic microRNA genes”

Bioinformatics, 2010

• **Friedman BA**, Stadler MB, Shomron N, Ding Y, Burge CB. "Ab Initio Identification of Functionally Interacting Pairs of Cis-Regulatory Elements", *Genome Research*, 2008

• Nielsen CB*, **Friedman B***, Birren B, Burge CB, Galagan JE. "Patterns of Intron Gain and Loss in Fungi", *PLoS Biology*, 2004 (*equal contributors)

Presentations

2010	"Is ALS a Disease of RNA Processing?", invited talk at *International Consortium on Superoxide Dismutase and ALS 2010*
2010	"ExpressionPlot: A web-based framework for analysis of RNA-Seq and microarray gene expression data", poster at *ISMB 2010*.
2005	"Splicing Motif Discovery Using Positional Bias", poster at *Structural, Functional and Evolutionary Genomics* and *RECOMB 2005*.
2004	"Evolution of Fungal Introns", talk at *Society for Molecular Biology and Evolution Annual Meeting*

Awards

2007-2010	ALS Therapy Alliance Grant (to cover all personnel and research costs associated with my postdoctoral research).
2005	Gordon Research Conference Scholarship for poster presentation
2001-2002	MIT Presidential Scholar (PhD fellowship)
2000-2001	Churchill Scholar (for study at Churchill College, Cambridge University)
1999	Brahana Prize (UIUC undergraduate math prize)
1997, 1998	Honorable Mention, Putnam Undergraduate Math Competition (top 60 in US and Canada)