URI LASERSON

laserson@mit.edu
+1 617 910 0447

610 Webster St. Apt. 2
San Francisco, CA 94117

EDUCATION

Sep 2005 – Aug 2012 — **Massachusetts Institute of Technology / Harvard Medical School**, Cambridge, MA
Division of Health Sciences and Technology and Department of Mathematics
PhD Candidate in Biomedical Engineering and Applied Mathematics

Sep 2001 – Jan 2005 — **New York University**, New York, NY
BA, *magna cum laude*, in Mathematics and Biology

EXPERIENCE

Feb 2012 – Present — **AbVitro**, Boston, MA
Scientific Advisor and Consultant

- Defining specification for informatics infrastructure/pipeline to manage and analyze high-throughput antibody sequence data.
- Developing probabilistic analysis algorithms for new types of high-throughput antibody data.

Jan 2007 – Aug 2012 — **Harvard Medical School, Department of Genetics**, Boston, MA
PhD Candidate, Advisor: George Church

- Spearheaded the application of next-generation sequencing technology in immunology; increased known antibody sequences by 100×.
- Designed and implemented statistical analysis for high-throughput autoantigen discovery; published in *Nature Biotech*.
- Devised and tested numerous experimental approaches for high-throughput capturing of antibodies; utilized emulsions, microfluidics, *in situ* biochemistry methods.
- Wrote software pipeline for handling large amounts of antibody sequence data, including alignment, clustering, database, and other elements.
- Initiated and managed multiple research projects and also collaborations with other labs, including Steve Elledge (Harvard), Dennis Burton (Scripps), and Daphne Koller (Stanford).

Dec 2010 – Apr 2011 — **Flagship Ventures**, Cambridge, MA
Consultant

- Developed intellectual property around analysis methods for new antibiotics startup; contributed to patent applications around my inventions.

Dec 2007 – Sep 2010 — **Good Start Genetics**, Cambridge, MA
Founder and Director

- Founded GSG, and as the only technical founder, defined early technological direction of the company.
- Developed detailed R&D plan; analyzed competing technologies; designed initial budgets.
- Pitched to VCs and angels for investments; succeeded in raising first $1M in capital (GSG has since raised >$30M in two investment rounds and is approaching 50 FTEs).
- Recruited and evaluated initial technical hires.

May 2006 – Aug 2006 — **OrbiMed Advisors**, New York, NY
Summer Associate

- Analyzed quantitative options strategy for life sciences-focused hedge fund.
- Implemented agent-based cancer survival model in C++ to analyze clinical trials.

URI LASERSON

AWARDS

2012 Forbes 30 Under 30 Science & Innovation
2012 MIT-Lemelson Student Prize Finalist
2006 NIH Bioinformatics and Integrative Genomics Fellowship
2005 NSF Graduate Research Fellowship Honorable Mention
2004 Phi Beta Kappa
2004 Hollis Cooley Prize for Excellence and Promise in Mathematics
2001 Intel Science Talent Search Semifinalist

SKILLS

Python	C / C++
NumPy / SciPy / matplotlib / pandas	MATLAB
Biopython	bash / awk
MongoDB	git

PUBLICATIONS

Laserson U*, Vigneault F*, Bachelet I, Simen BB, Lieberman-Aiden E, et al. (*in preparation*) High-resolution antibody dynamics of vaccine-induced immune responses

Laserson U*, Sok D*, Walker LM, Mahan A, Alter G, Laserson J, Liu YP, Koller D, Poignard P, Church GM, Burton D (*in preparation*) Evolutionary dynamics of anti-HIV broadly neutralizing antibodies

Larman HB, **Laserson U**, Klarenbeek P, Debakker P, Church GM, Plenge R, Elledge SJ (*in preparation*) High-throughput PhIP-seq screening of clinical sera

Larman HB, Zhao Z, **Laserson U**, Li MZ, Ciccia A, Gakidis MAM, Church GM, Kesari S, LeProust EM, Solimini NL, Elledge SF (2011) Autoantigen discovery with a synthetic human peptidome, *Nature Biotech* 29: 535

Laserson U, Gan HH, Schlick T (2006) Exploring the connection between synthetic and natural RNAs in genomes: a novel computational approach, *New Algorithms for Macromolecular Simulation*, Springer Berlin Heidelberg, 35–56

Laserson U, Gan HH, Schlick T (2005) Predicting candidate genomic sequences that correspond to synthetic functional RNA motifs, *Nucleic Acids Research* 33: 6057

Fera D, Kim N, Shiffeldrim N, Zorn J, **Laserson U**, Gan HH, Schlick T (2004) RAG: RNA-As-Graphs web resource, *BMC Bioinformatics* 5: 88

Laserson U, Gan HH, Schlick T (2004) Searching for 2D RNA geometries in bacterial genomes, *Proceedings of the Twentieth Annual Symposium on Computational Geometry*, ACM, 373–377

Gan HH, Fera D, Zorn J, Shiffeldrim N, Tang M, **Laserson U**, Kim N, Schlick T (2004) RAG: RNA-As-Graphs database—concepts, analysis, and features, *Bioinformatics* 20: 1285

PATENTS

Church GM, Bachelet I, **Laserson U**, Vigneault F (2011) High-throughput immune sequencing, Patent application WO PCT/US2011/055801

Porreca G, **Laserson U**, Li JB, Wassman ER (2010) Methods and compositions for evaluating genetic markers, Patent application WO2010126614