

Frank Austin Nothaft

fnothaft@berkeley.edu • <http://www.fnothaft.net> • 202.340.0466

Education

University of California, Berkeley

Doctor of Philosophy, Computer Science. August 2013–present. GPA: 3.78.

Masters of Science, Computer Science. August 2013–May 2015. GPA: 3.78.

Stanford University

Bachelor of Science with Honors, Electrical Engineering. September 2007–June 2011.

Minor in Management Science & Engineering. GPA: 3.24.

Publications

Peer Reviewed Journal Articles

Benedict Paten, et al. “The NIH BD2K Center for Big Data in Translational Genomics.” To appear in *Journal of the American Medical Informatics Association (JAMIA)*. Invited.

Peer-Reviewed Conference Proceedings

Frank Austin Nothaft, et al. “Rethinking data-intensive science using scalable analytics systems.” To appear in *Proceedings of the International Conference on Management of Data*, May 2015 (SIGMOD ’15).

Frank Austin Nothaft, Luis Fernandez, Stephen Cefali, Nishant Shah, Luke Darnell, and Jacob Rael. “Pragma-based floating-to-fixed point conversion for the emulation of analog behavioral models.” In *Proceedings of the International Conference on Computer-Aided Design*, November 2014 (ICCAD ’14).

Krishna Malladi, **Frank Austin Nothaft**, Kartika Periythambi, Benjamin Lee, Christos Kozyrakis, and Mark Horowitz. “Towards energy-proportional datacenter memory with mobile DRAM.” In *Proceedings of the International Symposium on Computer Architecture*, June 2012 (ISCA ’12).

Technical Reports

Matthew Massie, **Frank Austin Nothaft**, Christopher Hartl, Christos Kozanitis, Anthony D. Joseph, and David Patterson. “ADAM: Genomics formats and processing patterns for cloud scale computing.” *University of California, Berkeley Technical Report UCB/EECS-2013-207*. November 2013.

Theses

Frank Austin Nothaft, “Scalable genome resequencing with ADAM and avocado.” Masters Thesis, University of California, Berkeley, May 2015. *Technical Report UCB/EECS-2015-65*.

Frank Austin Nothaft, “Design strategies for compiler managed instruction stores.” Honors Thesis, Stanford University, June 2011.

Honors

NSF Graduate Research Fellowship

National Science Foundation, August 2013–May 2016

Hugh Hildreth Skilling Award for Teaching Excellence

Stanford University Department of Electrical Engineering, June 2011

Departmental Honors

Stanford University Department of Electrical Engineering, June 2011

Presentations	Conference Talks	
	“Reproducible Emulation of Analog Behavioral Models.” <i>International Conference on Computer Aided Design (ICCAD '14)</i> , San Jose, CA, November 2014	
	“ADAM: Fast, Scalable Genome Analysis” <i>Bioinformatics Open Source Conference (BOSC '14)</i> , Boston, MA, July 2014 <i>Spark Summit</i> , San Francisco, CA, June 2014	
	Invited Talks	
	“Fast Variant Calling with ADAM and avocado” <i>KTH Kista/SICS</i> , Kista, Sweden, February 2015	
Experience	“ADAM: Fast, Scalable Genome Analysis” <i>DNANexus</i> , Mountain View, CA, December 2014 <i>Novartis Institutes</i> , Cambridge, MA, October 2014 <i>Wellcome Trust Genome Center</i> , Hinxton, UK, July 2014	
	“Automation For Validating Behavioral Models Against Schematics” With Nishant Shah, <i>Cadence Mixed Signal Design Summit</i> , San Jose, CA, September 2012	
	Broadcom, Engineer, Staff 1—IC Design	April 2012—present
	Broadcom, Engineer—IC Design	June 2011—April 2012
	Design verification and automation for RF/mixed-signal integrated circuits	
Teaching	Internships	
	NVIDIA, ASIC Intern	Summer 2010
	Design validation, test, and characterization for GPU systems	
	SAIC, Systems Engineering Intern	Summer/Winter 2008
	Evaluation of technologies for high-reliability emergency telecommunications	
Service	AJ Engineers, Inc., Electrical Engineering Intern	Summer 2007
	Design and drafting of electrical systems for dwellings	
	CS162: Operating Systems	Summer 2015
	Course Assistant for Charles Reiss, University of California, Berkeley	
	EE109: Digital Systems Design Lab	Spring 2010—2011
	Course Assistant for Dr. James Weaver, Stanford University	
	EE108A: Digital Systems Design 1	Fall & Winter 2009—2011
	Course Assistant for Professor Subhasish Mitra, Stanford University	
	Standards Bodies	
	Co-chair, GA4GH Containers and Workflows Working Group, 2015—present Member, GA4GH Data Working Group, 2014—present	
	Conference Organization	
	New Frontiers in Computing (NFIC) <i>Co-Chair</i> , Stanford, CA, 2010 <i>Organizing Committee Member</i> , Stanford, CA, 2009	

**Service
(con't)**

Reviewing

Bioinformatics Open Source Conference (BOSC), 2015
Hot Topics in Networks Workshop (HotNets), 2014

Professional Society Leadership

Chair, IEEE Orange County Computer Society, 2013
Vice Chair, IEEE Orange County Computer Society, 2012
Chair, Stanford University IEEE Student Branch, June 2009–June 2011

Outreach

Project Mentor
Techbridge, Oakland, CA, 2014

Panel on Careers in Science, Technology, Engineering, and Mathematics
The Wooden Floor, Santa Ana, CA, May 2012

Professional Society Membership

IEEE: Graduate Student Member: 2014–present, Member: 2011–2013,
Student Member: 2007–2011

ACM: Member: 2011–present, Student Member: 2011

ISCB: Student Member: 2014–present

Students Mentored

Eric Tu, UC Berkeley, Undergraduate/Masters
Niranjana Kumar, UC Berkeley, Undergraduate
Ananth Pallaseni, UC Berkeley, Undergraduate