

Publications

- Butler, Rasmussen, Lin, Santos, Sakthikumar, Munro, Rheinbay, Grabherr, Forche, Reedy, Agrafioti, Arnaud, Bates, Brown, Brunke, Costanzo, Fitzpatrick, de Groot, Harris, Hoyer, Hube, Klis, Kodira, Lennard, Logue, Martin, Neiman, Nikolaou, Quail, Quinn, Santos, Schmitzberger, Sherlock, Shah, Silverstein, Skrzypek, Soll, Staggs, Stansfield, Stumpf, Sudbery, Thyagarajan, Zeng, Berman, Berriman, Heitman, Gow, Lorenz, Birren, Kellis, Cuomo. *Evolution of pathogenicity and sexual reproduction in eight Candida genomes*. Nature 459: 657-662. 2009.
- Rasmussen, Organ, Baldwin, Kellis, and Edwards. *A Phylogenomic Approach to the Evolutionary Dynamics of Gene Duplication in Birds*. In *Evolution After Gene Duplication* (in press). (Eds.) K. Dittmar and D. Liberles. Wiley & Sons.
- Lin, Deoras, Rasmussen, Kellis. *Performance and Scalability of Discriminative Metrics for Comparative Gene Identification in 12 Drosophila Genomes*. PLoS Comput Biol. 2008 April; 4(4): e1000067
- Rasmussen, Kellis. *Accurate gene-tree reconstruction by learning gene- and species-specific substitution rates across multiple complete genomes*. Genome Research 17. 2007 17: 1932-1942.
- Stark, Lin, Kheradpour, Pederson, Parts, Carlson, Crosby, Rasmussen, Roy, Deroas, Ruby, Brennecke, FlyBase curators, Berkeley Drosophila Genome Project, Hodges, Hinrichs, Caspi, Paten, Park, Han, Maeder, Polansky, Robson, Aerts, vanHelden, Hassan, Gilbert, Eastman, Rice, Weir, Hahn, Park, Dewey, Pachter, Kent, Haussler, Lai, Bartel, Hannon, Kaufman, Eisen, Clark, Smith, Celniker, Gelbart, Kellis. *Discovery of functional elements in 12 Drosophila genomes using evolutionary signatures*. Nature 450: 219-232. 2007.
- Drosophila 12 Genomes Consortium. *Evolution of genes and genomes on the Drosophila phylogeny*. Nature 450: 203-218. 2007.
- Rasmussen, Deshpande, Karypis, Johnson, Crow, and Retzel. *wCLUTO: A Web-Enabled Clustering Toolkit*. Plant Physiology. 2003.
- Rasmussen and Karypis. *gCLUTO: An interactive clustering, visualization, and analysis system*. University of Minnesota Technical Report #04-021. 2004.

Talks

- Quest for Orthologs. 7/2009.
Efficient Bayesian Reconstruction and Reconciliation of Thousands of Gene Family Phylogenies Across Multiple Complete Genomes.
Wellcome Trust Sanger Institute, Hinxton, UK.
- Genome Analysis Program. 4/2007.
Phylogenomics of mammalian, fly, and fungal genomes.
Broad Institute of MIT and Harvard, Massachusetts.
- Meetings on Genome Informatics. 10/2005.
Multiple genome phylogeny for ortholog and paralog detection.
Cold Spring Harbor Laboratory, New York.

Teaching Experience

Fall 2008,2006 **6.878/6.047 Computational Biology: Genomes, Networks, Evolution**
Teaching Assistant

MIT

Work Experience

- Summer 2003 **Institute of Technology Center for Education (ITCEP)** Minneapolis, MN
Teaching Assistant
Worked with gifted middle and high school students for several math, science, and engineering summer programs at the University of Minnesota. Students ranged from 5th to 12th grade. My responsibilities included tutoring, chaperoning students over night in the dorms, and taking students to off campus field trips.
- Summer 2001 **Interelate** Eden Prairie, MN
Web developer and programmer
Designed web applications for Interelate's intranet web site using technologies such as ASP, ServerSide JavaScript, and Visual Basic.
- 2000 – 2001 **Agiliti** Bloomington, MN
Web designer
Designed websites for Agiliti and their partners: tekneawards.org, vezone.com, agiliti.com. Used Illustrator, Photoshop, Flash, Javascript, HTML

Computing Experience

programming languages/technologies: ASP, BASH, BASIC, C/C++, Fortran, HTML, Java, Java Script, Latex, LISP, Matlab, MPI, Perl, PHP, Python, Scheme, and VB.

Software developed:

- **SPIDIR** (SPecies Inferred Distance-based Reconstruction) - Phylogenetic software.
<http://compbio.mit.edu/spidir>
- **gCLUTO** - Graphical clustering toolkit
<http://glaros.dtc.umn.edu/gkhome/views/cluto>; <http://www-users.cs.umn.edu/~mrasmus/gcluto/index.shtml>
- **SUMMON** - Scientific visualization prototyping and scripting.
<http://people.csail.mit.edu/rasmus/summon/index.shtml>
- **KeepNote** - Note-taking and organization.
<http://rasm.ods.org/keepnote>

Honors & Awards

William A. Martin Award for best M.S. thesis in the field of Computer Science (2006)
Ruth L. Kirschstein National Research Service Award (2004-2007)
Barry M. Goldwater Scholarship (2003)
CRA Outstanding Undergraduate Award, Honorable Mention (2003)
Frank Louk Scholarship (2003)
Lando Scholarship (2002)
Ella Thrope Math Scholarship (2001, 2002, 2003)
Math Undergrad Scholarship (2001)
Iron Range Scholarship (2001)
IT Honors Undergraduate Research Assistant Scholarship (2001)
Minnesota Technology, Inc. Scholarship (2001, 2002)
Tau Beta Phi National Engineering Honors Society; Phi Kappa Phi Honors Society; Golden Key International Honors Society; University of Minnesota Dean's List (2000 - 2003)