

# DEREK Y. CHIANG

Broad Institute of MIT & Harvard  
320 Charles St, Room 181  
Cambridge, MA 02141

## EDUCATION

- University of California, Berkeley** May 2005  
Doctor of Philosophy in Molecular and Cell Biology  
with a Designated Emphasis in Genomic & Computational Biology  
Advisor: Dr. Michael B. Eisen  
Thesis: *Computational and experimental studies of promoter architecture in yeasts*
- University of North Carolina, Chapel Hill** May 2000  
Bachelor of Science in Chemistry with Highest Distinction and Highest Honors
- Christ's College, University of Cambridge** 1998-1999  
First Class Honors, Natural Sciences Tripos Part IB (Junior year study abroad)

## AWARDS AND FELLOWSHIPS

- Howard Hughes Medical Institute Predoctoral Fellowship 2001-2005
- National Sciences and Engineering Research Council (Canada) Scholarship 2000-2001
- Arnold Edinborough Award, University Scholarships of Canada 2000
- Venable Medal in Chemistry, University of North Carolina 2000
- John Motley Morehead Award 1996-2000
- Walter S. Spearman Award, University of North Carolina 2000
- Phi Beta Kappa Honorary Society 2000
- Golden Key National Honor Society Undergraduate Scholarship 1999

## PUBLICATIONS

**Chiang D.Y.**, D.A. Nix, R.K. Shultzaberger, A.P. Gasch and M.B. Eisen (2005). Flexible promoter architecture requirements for coactivator recruitment. Manuscript in preparation.

Gasch A.P., A.M. Moses, **D.Y. Chiang**, H.B. Fraser, M. Berardini and M.B. Eisen (2004). Conservation and evolution of *cis*-regulatory systems in ascomycete fungi. *PLoS Biology* **2**: e398.

Moses A.M., **D.Y. Chiang**, D.A. Pollard, V.N. Iyer and M.B. Eisen (2004). MONKEY: Identifying conserved transcription-factor binding sites in multiple alignments using a binding site-specific evolutionary model. *Genome Biology* **5**: R98.

Moses A.M., **D.Y. Chiang** and M.B. Eisen (2004). Phylogenetic motif detection by expectation-maximization on evolutionary mixtures. *Pacific Symposium on Biocomputing* **9**: 324-335.

**Chiang D.Y.**, A.M. Moses, M. Kellis, E.S. Lander and M.B. Eisen (2003). Phylogenetically and spatially conserved word pairs associated with gene expression changes in yeasts. *Genome Biology* **4**: R43.

Moses A.M., **D.Y. Chiang**, M. Kellis, E.S. Lander and M.B. Eisen (2003). Position specific variation in the rate of evolution in transcription factor binding sites. *BMC Bioinformatics* **3**: 19.

**Chiang D.Y.**, P.O. Brown and M.B. Eisen (2001). Visualizing associations between genome sequences and gene expression data using genome-mean expression profiles. *Bioinformatics* **17**: S49-S55.

## INVITED PRESENTATIONS

“Inferring sequence rules of promoter organization by systematically evaluating biological hypotheses.” *Genomic Approaches to Transcriptional Regulation*, Cold Spring Harbor: March 4-7, 2004.

“Phylogenetically and spatially conserved word pairs associated with gene expression changes in yeasts.” *Seventh Annual International Conference on Research in Computational Molecular Biology*. Berlin: April 10-13, 2003.

“Visualizing associations between genome sequences and gene expression data using genome-mean expression profiles.” *Ninth International Conference on Intelligent Systems for Molecular Biology*. Copenhagen: July 21-25, 2001.

## TEACHING ASSISTANTSHIPS

Spring 2003

**MCB C246) Genomics and Computational Biology**, UC Berkeley

- Led discussions for graduate course on probabilistic sequence models
- Created and graded programming assignments, midterm and final exams

Fall 2001

**MCB 142) Survey of Genetics**, UC Berkeley

- Taught summaries of lecture material for weekly discussion sections
- Created and graded biweekly quizzes for 50 students

## PROFESSIONAL EXPERIENCE

Summer 2000

***Bioinformatics Analyst, Novartis Agricultural Biotechnology Research Institute***, Research Triangle Park, NC

*Created Oracle database for genome-wide insertional mutagenesis project*

- Designed database schema for physical mapping of sequence reads
- Automated sequence processing and BLAST analysis using Perl

Summer 1998

***ENBREL Marketing Intern, Amgen***, Seattle, WA

*Supported product launch efforts for ENBREL, a soluble TNF-alpha receptor*

- Interviewed 50 rheumatoid arthritis patients for media profiles
- Created relational databases for budgets and patient records

## COMPUTING EXPERIENCE

- Programming Languages: C++, Perl
- Statistical Software: R, MATLAB
- Database Implementations: mysql