

- CONTACT INFORMATION Department of Computer Science
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email: cmclean@stanford.edu
- RESEARCH INTERESTS Genetics of human-specific traits and diseases, vertebrate gene regulation, *cis*-regulatory element dispensability and functional analysis.
- EDUCATION **Stanford University**, Stanford, CA
Ph.D., Computer Science (advised by Gill Bejerano) (expected) **June 2011**
Massachusetts Institute of Technology, Cambridge, MA
M.Eng., Electrical Engineering and Computer Science **August 2004**
B.S., Computer Science and Engineering **June 2004**
Minor, Mathematics **June 2004**
- HONORS AND AWARDS Stanford Bio-X Graduate Fellow **2007–2010**
Stanford School of Engineering Graduate Fellow **2006–2007**
MIT VI-A Thesis Program Fellow **2002–2004**
Member, *Tau Beta Pi* Engineering Honor Society
Member, *Eta Kappa Nu* EECS Honor Society
- PUBLICATIONS **C.Y. McLean***, P.L. Reno*, A.A. Pollen*, A.I. Bassan, T.D. Capellini, C. Guenther, V.B. Indjeian, X. Lim, D.B. Menke, B.T. Schaar, A.M. Wenger, G. Bejerano, D.M. Kingsley. Human-specific loss of regulatory DNA and the evolution of human-specific traits. *Nature*, 471(7337):216-219, 2011. *Authors contributed equally.
C.Y. McLean, D. Bristor, M. Hiller, S.L. Clarke, B.T. Schaar, C.B. Lowe, A.M. Wenger, G. Bejerano. GREAT improves functional interpretation of *cis*-regulatory regions. *Nature Biotechnology*, 28(5):495-501, 2010.
C. McLean and G. Bejerano. Dispensability of mammalian DNA. *Genome Research*, 18(11):1743-1751, 2008. Publication accompanied by Genome Research press release.
- THESES **C.Y. McLean**. *Epidemic Modeling Techniques for Smallpox*. Master of Engineering thesis at MIT, 2004. Advised by A. Szpiro and L. Ohno-Machado.
- TALKS Human-Specific Loss of Regulatory DNA and the Evolution of Human-Specific Traits, *Cold Spring Harbor Biology of Genomes Conference*, Cold Spring Harbor, NY, 13 May 2010.
Genomics and the Evolution of Human-Specific Traits, *Georgia Tech and Oak Ridge National Lab International Conference on Bioinformatics*, Atlanta, GA, 13 November 2009. Plenary talk in substitution for Gill Bejerano.
Human-Specific Loss of Regulatory DNA and the Evolution of Human-Specific Traits, *Biomedical Computation at Stanford Symposium*, Stanford, CA, 7 November 2009. Second place for best talk award.
Genomics and the Evolution of Human-Specific Traits, *Stanford Bio-X Fellows Symposium*, Stanford, CA, 1 July 2009.

- POSTERS GREAT: Genomic Regions Enrichment of Annotations Tool, *Cold Spring Harbor Biology of Genomes Conference*, Cold Spring Harbor, NY, 14 May 2010.
- <http://great.stanford.edu>: A tool for functional interpretation of *cis*-regulatory data, *Gordon Conference on Human Genetics and Genomics*, University of New England, ME, 20 July 2009.
- Dispensability of Mammalian DNA, *Stanford Computer Forum Plenary Meeting*, Stanford, CA, 15 April 2009.
- Dispensability of Mammalian DNA, *Cold Spring Harbor Systems Biology: Networks Conference*, Cold Spring Harbor, NY, 29 March 2008.
- TEACHING Graduate Course Assistant, *CS273A: A Computational Tour of the Human Genome*, Spring 2007, Fall 2007, 2008, 2010.
- SERVICE External Reviewer, Association for Computing Machinery Conference on Computer and Communications Security (ACM CCS), 2009.
- RESEARCH **Stanford University**, Stanford, CA
EXPERIENCE *Graduate Student, Evodevo Group* **Fall 2006–Present**
Working with Prof. Gill Bejerano, examining vertebrate *cis*-regulation (ongoing).
- MIT Lincoln Laboratory**, Lexington, MA
 Research Assistant, Systems and Analysis Group **Summers 2002–2004**
Working with Dr. Adam Szpiro, created and tested simulators of disease progression. Designed, implemented, and tested various disease modeling techniques that implemented both differential equations and stochastic processes. Analyzed accuracy of probabilistic approximations in population-based models.
- PROFESSIONAL **Oracle Corporation**, Redwood Shores, CA
EXPERIENCE *Senior Applications Engineer, Oracle Supplier Network* **Fall 2004–Fall 2006**
Led US development team Nov. 2005–Sep. 2006, during which customer base and average weekly messaging volume grew over 50%. Created integration project of Oracle Supplier Network and Oracle iSupplier Portal to increase both customer bases. Created self-testing tool to reduce customer overhead when joining service. Enhanced functionality of product to enable downloading and resending of archived messages.
- Optobionics Corporation**, Palo Alto, CA
 Software Engineering Consultant **Spring 2005–Fall 2006**
Implemented and maintained data-processing tool that automatically verified, analyzed, and plotted patient data from multiple testing scenarios and displayed results on wiki. Worked closely with Director of Research, produced graphs that fulfilled multiple changing requests. Outputs used in company-wide presentations, steered direction of further company research. Increased clarity of data for interpretation by medical doctors.
- REFERENCES Available upon request.