Gregg Thomas

Email: grthomas@indiana.edu

EDUCATION

Doctor of Philosophy in Informatics
Doctor of Philosophy in Ecology, Evolution, and Behavior — August 2013-Present
Indiana University
Bloomington, IN

Master of Science in Bioinformatics — May, 2013
Indiana University, School of Informatics and Computing
Bloomington, IN

Bachelor of Science in Biology — May, 2010
Purdue University, School of Science
West Lafayette, IN

PUBLICATIONS

Thomas GWC, Hahn MW, and Hahn Y. 2017. The effects of increasing the number of taxa on inferences of molecular convergence. *Genome Biology and Evolution*. 9(1):213-221.

Warren WC, et al. 2015. The genome of the vervet (Chlorocebus aethiops sabaeus). *Genome Research*. 25(12):1921-1933.

Thomas GWC and Hahn MW. 2015. Determining the null model for detecting adaptive convergence from genomic data: a case study using echolocating mammals. *Molecular Biology and Evolution*. 32(5):1232-1236.

Foote AD, Liu Y, Thomas GWC, Vinař T, et al. 2015. Convergent evolution of the genomes of marine mammals. *Nature Genetics*. 47(3):272-275.

Neafsey DE, Waterhouse RM, et al. 2014. Highly evolvable malaria vectors: The genomes of 16 Anopheles mosquitoes. *Science*. 347.

Montague MJ, et al. 2014. Comparative analysis of the domestic cat genome reveals genetic signatures underlying feline biology and domestication. *PNAS*. 111(48):17230-17235.

Carbone L, et al. 2014. Gibbon genome and the fast karyotype evolution of small apes. *Nature*. 513:195-201.

Thomas GWC and Hahn MW. 2014. The human mutation rate is increasing, even as it slows. *Molecular Biology and Evolution*. 31(2):253-257.

Han MV, Thomas GWC, Lugo-Martinez J, and Hahn MW. 2013. Estimating gene gain and loss rates in the presence of error in genome assembly and annotation using CAFE 3. *Molecular Biology and Evolution*. 30(8):1987-1997.

EMPLOYMENT HISTORY

Associate Instructor
Information Infrastructure II (I211), School of Informatics and Computing
Indiana University, Bloomington, IN — August 2015 – May 2016

- Run and organize a lab to teach students advanced programming skills using the Python language
- Assigned as lead Associate Instructor in a large lecture class tasked with helping students code in group activities and monitoring their progress, attendance, and absences
- Guided the other Associate Instructors in their duties in the class

- Advanced the students beyond the syntax learning of basic programming and into advanced topics such as algorithms, regular expressions, interacting with the Web (HTML and CGI), and databases (SQL)

Associate Instructor
SNP Discovery and Population Genetics (I590), School of Informatics and Computing
Indiana University, Bloomington, IN August 2014 – December 2014

- Led a lecture to teach graduate students basic programming skills using the Python language
- Met with students weekly to aid in completion of their programming assignments
- Helped the students integrate population genetics methods and programming skills to write programs to perform specific tasks, such as calculating nucleotide diversity, detecting positive selection, calculating linkage disequilibrium and quality filtering

Research Assistant
Hahn Lab, Ecology, Evolution, and Behavior Department
Indiana University, Bloomington, IN January 2012 – August 2014

- Quantified multi-nucleotide mutations in *Saccharomyces cerevisiae* using computational methods and sequence data
- Assessed the effect of error on the estimation of gene gain and loss rates in many taxa
- Developed a program which estimates assembly and annotation error in genome assemblies using CAFE 3
- Performed simulations and integrated recent genomic data to disprove the presence of a generation-time effect in primates
- Collaborated with scientists from other institutions on projects regarding gibbons, cats, mosquitoes, and marine mammals

Associate Instructor
Information Representation (I308), School of Informatics and Computing
Indiana University, Bloomington, IN August 2011 – May 2012

- Taught students about binary representation and operations and basic database skills in a lab environment
- Interacted and aided students with their assignments and projects on a one-on-one basis
- Assisted the professor with creating and grading assignments, projects, and tests

ACTIVITIES

Jim Holland Summer Science Research Program Mentor
Indiana Universiry, Bloomington, IN July 2014

- Mentored and taught a student in a program designed to introduce underrepresented minority high school students to scientific research
- Designed a project to assess divergence time estimates within the scope of the one week program and the capabilities of my student
- Helped my student design and present her work during the program's poster session

Graduate Student Advisor
Indiana University Bioinformatics Club
Indiana Univiserty, Bloomington, IN January 2012 – Present

- Served as a founding member of the club and its first treasurer
- Keep track of funds and purchases through the club's Student Organization Account
- Facilitate club elections of officers
- Organize bi-weekly club meetings where current events in bioinformatics are discussed
- Act as a guide for the officers and members in planning club activities

PRESENTATIONS

Gene-tree reconciliation with MUL-trees for polyploidy analysis
Gregg Thomas, S. Hussain Ather, Matthew Hahn

Evolution Meeting
Austin, TX June 19, 2016

Accounting for Sequencing Error in Phylogenetics
Gregg Thomas
Society of Systematic Biologists
Ann Arbor, Michigan May 21, 2015

Inferring Molecular Convergence from Genomic Data
Gregg Thomas, Matthew Hahn
Midwest Ecology and Evolution Conference
Indiana University, Bloomington, Indiana March 28, 2015

Convergent Evolution of the Genomes of Marine Mammals
Gregg Thomas, Andrew Foote, The Marine Mammal Genome Consortium, Matthew Hahn
Society for Molecular Biology and Evolution
San Juan, Puerto Rico June 12, 2014

AWARDS

Genetics, Cellular, and Molecular Sciences Training Grant
Department of Biology
Indiana University, Bloomington, IN 2014-2015