

# Gregg Thomas

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## EDUCATION

Doctor of Philosophy in Informatics (Bioinformatics track) Doctor of Philosophy in Ecology, Evolution, and Behavior Indiana University Bloomington, IN	August 2013-Present
Master of Science in Bioinformatics Indiana University, School of Informatics and Computing Bloomington, IN	May, 2013
Bachelor of Science in Biology Purdue University, School of Science West Lafayette, IN	May, 2010

## PUBLICATIONS

Thomas GWC, Ather SA, and Hahn MW. 2017. Gene-tree reconciliation with MUL-trees to resolve polyploidy events. *Systematic Biology*. (in press).

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 University, 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 University, 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

### *The evolution of the genes and genomes of 76 arthropod species*

Gregg Thomas, Matthew Hahn, Stephen Richards  
Evolution Meeting  
Portland, OR

June 26, 2017

### *The evolution of the genes and genomes of 76 arthropod species*

Gregg Thomas, Matthew Hahn, Stephen Richards  
Arthropod Genomics Symposium  
South Bend, IN

June 9, 2017

### *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