
CONTACT INFORMATION	Department of Mathematics, University of Michigan Ann Arbor, MI 48109	Website jptyler@umich.edu
RESEARCH INTERESTS	Mathematical modeling of biological clocks.	
EMPLOYMENT	Postdoctoral Assistant Professor, University of Michigan Mentor: Daniel Forger	2019-2022
EDUCATION	Texas A&M University Mathematics Thesis Title: <i>Mathematical Modeling of Biological Clocks</i> Advisors: Anne Shiu and Jay Walton	Ph.D. , August 2019
	University of Kentucky Major: Mathematics, Minor in Biology <i>Magna Cum Laude</i> <i>Departmental Honors</i>	B.S. , May 2013
PREPRINTS	1. Tyler, J. , Shiu, A., and Walton, J. <i>Novel algorithms for estimating parameters of the repressilator.</i>	
PUBLICATIONS	1. Tyler, J. <i>Mathematical Modeling of Biological Clocks</i> , Ph.D. thesis, 2019. 2. Tyler, J. , Shiu, A., and Walton, J. <i>Revisiting a synthetic intracellular regulatory network that exhibits oscillations.</i> J MATH BIOL, 78:2341-2368, 2019. https://doi.org/10.1007/s00285-019-01346-3 .	
PROFESSIONAL EXPERIENCE	Systems Toxicology Intern Boehringer Ingelheim Supervisor: Seung Chung, Ph.D. I developed a comprehensive systems model of the gastrointestinal immune system. This included an extensive literature review of immunological mechanisms, translation to a mathematical model, running simulations, performing sensitivity analysis, and creating virtual population sets.	Summer 2018
AWARDS	Travel Awards Travel Award to present at Multiscale Modeling in Biology SIAM Travel Award – To present at SIAM LS18	Summer 2019 Summer 2018
	Student Awards — Texas A&M University, Department of Mathematics Outstanding Teaching Assistant Award Teaching Assistantship	May 2016 Fall 2014

Student Awards — University of Kentucky

Sally Pence Award in Mathematics 2012–2013

Chellgren Center for Undergraduate Excellence Student Fellow Fall 2011-Spring 2013

Presidential Scholar Fall 2009-Spring 2013

PRESENTATIONS **Mathematics Meetings**

Revisiting a synthetic intracellular regulatory network that is sufficient for oscillations,
Multiscale Modeling in Biology, Minneapolis, MN May 2019

Revisiting a synthetic intracellular regulatory network that is sufficient for oscillations,
SIAM Life Sciences 2018, Minneapolis, MN August 2018

Texas A&M University

Revisiting a synthetic intracellular regulatory network that is sufficient for oscillations,
Graduate Student Organization seminar, April 2019

Mathematical Modeling in the Pharmaceuticals, Industrial and Applied Math Seminar
October 2018

You're getting very sleepy... A Gig'em Conference (AMS Student Chapter) March 2018

Posters

A new approach to parameter estimation of biological oscillators, RTG Workshop on
Parameter Estimation for Biological Models, NC State July 2019

Revisiting a synthetic intracellular regulatory network that is sufficient for oscillations,
Frontiers in Mathematical Biology May 2018

*Study of accelerated evolutionary rates yields insights into adaptive evolution and
relaxed constraint,* Duquesne University Symposium Summer 2012

TEACHING AT MICHIGAN **Calculus I**, (Math 115), University of Michigan Fall 2019

PRIOR TEACHING **Mathematical Concepts – Calculus** (Math 131), Texas A&M Spring 2018

Teaching Assistant

Calculus I (MATH 113), University of Kentucky Fall 2013

Calculus II for Engineers (MATH 152), Texas A&M Spring 2015

Calculus I for Engineers (MATH 151), Texas A&M Fall 2015, 2016

Calculus II for Biological Sciences (MATH 148), Texas A&M Fall 2017

Calculus I for Biological Sciences (MATH 147), Texas A&M Fall 2018

Grader

Foundations of Mathematics (MATH 220), Texas A&M Fall 2014

Introduction to Mathematical Biology (MATH 469), Texas A&M Spring 2016, 2017, 2019

SERVICE **SIAM Student Chapter Treasurer** Fall 2018–Spring 2019
SIAM Student Chapter President Fall 2017– Summer 2018

I help organize social activities for the department, the Graduate Student Seminar, and the Industrial and Applied Math Seminar.

Mentor for Summer REU Students Summer 2017

I mentored students in a Mathematical Biology REU at Texas A&M University. I met with the students weekly to discuss the project and any upcoming reports or presentations.

Math Circle Fall 2015

Assist with the Department’s Math Circle – a fun, interactive day of mathematics learning for children in the local community held every Saturday.

ORGANIZATIONS **SIAM** Fall 2015–Present
AMS Fall 2015–Present

HARDWARE AND **Computer Programming:**
SOFTWARE SKILLS C++, Perl, Python, R, MATLAB, Mathematica, Sage, UNIX shell scripting

REFERENCES **Anne Shiu**

Assistant Professor Email: annejls@math.tamu.edu
Department of Mathematics
Texas A&M University

Jay Walton

Professor Emeritus Email: jwalton@math.tamu.edu
Department of Mathematics
Texas A&M University

Paul Hardin

Professor Email: phardin@bio.tamu.edu
Director of the Center for Biological Clocks Research
Department of Biology
Texas A&M University

Matthew Bogdanffy

Vice President Email: matthew.bogdanffy@boehringer-ingenelheim.com
Nonclinical Drug Safety
Boehringer Ingelheim

Peter Howard

Director of Graduate Studies, Professor Email: phoward@math.tamu.edu
Department of Mathematics
Texas A&M University