KYLE DAHLIN

150 North University St, Office 1033 \diamond West Lafayette, IN 47907 (808) \cdot 497 \cdot 8796 \diamond kdahlin@purdue.edu

August 2015

2017

EDUCATION

Purdue University M.S. in Mathematics

Ph.D. in Mathematics	$expected May \ 2020$
University of Hawai'i at Mānoa B.A. in Mathematics	May 2013
RESEARCH EXPERIENCE	
Modelling the Impact of Avian Malaria Transmission o	n
Hawaiian Honeycreepers	2015 - Present
Ph.D. candidate	Purdue University
\cdot Advised by Professor Zhilan Feng	
\cdot This dissertation project employs a system of ordinary differenti dynamics of avian malaria between mosquitoes and birds in the	ial equations to model the transmission e montane forests of Hawai'i
Competition Model Between the Invasive Sahara Must	ard and Native Plants
in the Sonoran Desert	2012
Undergraduate Research Fellow	Arizona State University
· Advised by Professor Karen Rios-Soto	
 A team project of four undergraduate students, including mysel Completed over the course of a few weeks at the Mathematical 	lf, and our faculty mentor and Theoretical Biology Institute
CAMEO: Multiscale Modeling of Coral Reef Ecosystem Undergraduate Research Fellow	ns 2010 - 2011 Hawai'i Institute of Marine Biology
· Advised by Megan Donahue, Ph.D.	
\cdot Provided data entry support for images collected from coral ree	f Quadrats
\cdot Produced code which converted PhotoShop image file data into	sorted MATLAB data files
Nuclear Magnetic Resonance Imaging: The Contrast P Undergraduate Research Assistant	Problem 2011 - 2013 University of Hawai'i at Mānoa
· Advised by Professor Monique Chyba	
\cdot Assisted with the creation of figures for presentations and publi	cations
FELLOWSHIPS AND AWARDS	
♦ Cagiantas Fellowship, Purdue University	2018
• Awarded to "a senior Ph.D. student who has demonstrated a hig their research and has participated in activities that have had a p of their department, University, or community."	gh level of accomplishment in positive impact on the climate

♦ AGEP Mentoring Award, Purdue University

Purdue University

Lighting the Pathway Fellowship, American Indian Science and Engineering Society 2016
 Alliances for Graduate Education and the Professoriate (AGEP) Scholarship, 2015 - 2018

\diamond	Purdue Doctoral Fellowship	2013
	• "designed for the recruitment of outstanding PhD-track students who will enhance the diversity of the graduate student body in the University's graduate programs through their diverse backgrounds, views and experiences"	
\diamond	Sloan Indigenous Graduate Partnership Scholar, Purdue University	2013
\$	SACNAS Undergraduate Student Poster Presentation Award, SACNAS National Conference \cdot with Erika Koenig, Amanda Laubmeier, and Austin Wehn	2012
\diamond	Mathematical and Theoretical Biology Institute Fellowship, Arizona State University	2012
\diamond	Undergraduate Math and Biology Research Program Fellowship, University of Hawai'i at Mānoa	2010

TEACHING ACTIVITIES

Purdue University

Summer 2018	GRE Quantitative Reasoning Preparation Instructor (AGEP)
Spring 2018	Online support (Piazza and LON-CAPA) for Applied Calculus courses
Fall 2017	Applied Calculus I (MA 16010)
Summer 2017	GRE Quantitative Reasoning Preparation Instructor (AGEP)
$Spring \ 2017$	Calculus II, IMPACT Active learning (MA 162)
Fall 2016	Calculus I, IMPACT Active learning (MA 161)
Summer 2016	GRE Quantitative Reasoning Preparation Instructor (AGEP)
Summer 2016	Calculus I (MA 161)
Spring 2016	Applied Calculus II (MA 16020)
Fall 2015	Multivariable Calculus (MA 261)
Summer 2015	GRE Quantitative Reasoning Preparation Instructor (AGEP)

University of Hawai'i at Mānoa

Calculus and Physics Tutor Native Hawaiian Science and Engineering Mentorship Program Tutor and Grader Natural Sciences Undergraduate Learning Emporium

PUBLICATIONS

Dahlin, Kyle and Z. Feng (2019). Modelling the population impacts of avian malaria on Hawaiian honeycreepers: bifurcation analysis and implications for conservation. In submission.

Dahlin, Kyle, E. Koenig, A. Laubmeier, A. Wehn, and K. Rios-Soto (2012). *Competition Model between the Invasive Sahara Mustard and Native Plants in the Sonoran Desert*. Mathematical and Theoretical Biology Institute Technical Reports 09-01M 2012.

PRESENTATIONS AND INVITED TALKS

K. Dahlin, Z. Feng. "Modelling the population impacts of avian malaria on Hawaiian honeycreepers: bifurcation analysis and implications for conservation." AMS Spring Central and Western Joint Sectional Meeting, University of Hawai'i at Mānoa. Mar 23, 2019.

 \diamond Invited speaker

K. Dahlin, Z. Feng. "Mathematical Modelling of Avian Malaria in Hawaiian Honeycreepers." University of Hawai'i - West O'ahu, Kapolei, OK. Nov 30, 2018.

♦ Invited speaker

K. Dahlin, Z. Feng. "Mathematical Modelling of Avian Malaria in Hawaiian Honeycreepers." AISES National Conference. Oklahoma City, OK. Oct 5, 2018.

K. Dahlin. "Mathematical Modelling of Avian Malaria in Hawaiian Honeycreepers." University of Wollongong. July 12, 2018.

 \diamond Invited speaker

K. Dahlin, Z. Feng. "Bifurcation Analysis of an Epizootiological Model of Avian Malaria." Society for Mathematical Biology Annual Conference. University of New South Wales, Sydney, Australia. July , 2018.

♦ Poster presentation, *Honorable Mention*

K. Dahlin, Z. Feng. "Bifurcation Analysis of an Epizootiological Model of Avian Malaria." 6th International Conference on Mathematical Biology. Beijing University of Civil Engineering and Architecture, Beijing, China. June 23, 2018.

K. Dahlin. "The Mathematics of Polynesian Wayfinding." Math Department Student Colloquium, Purdue University. West Lafayette, IN. Apr 4, 2018.

K. Dahlin, Z. Feng. "An Epizootiological Model of Avian Malaria." AMS Spring Central Sectional Meeting, Special Session on Parameter Analysis and Estimation in Applied Dynamical Systems. Ohio State University, Columbus, OH. Mar 17, 2018.

 \diamond Invited speaker

K. Dahlin, S. Fatemi. "Natural Connections: From West Lafayette to Hawai'i." Hands of the Future, Inc. West Lafayette, IN. Feb 18, 2018.

K. Dahlin. "The (Unofficial) Fundamental Theorem of Mathematical Epidemiology." Math Department Student Colloquium, Purdue University. West Lafayette, IN. Nov 15, 2017.

K. Dahlin. "An Epizootiological Model of Avian Malaria." Graduate Student Research Day, Purdue University. West Lafayette, IN. Nov 19, 2016.

K. Dahlin. "Reproduction Numbers for Compartmental Models of Disease Transmission: Analysis and Application to a Model for Avian Malaria." Math Department Student Colloquium, Purdue University. West Lafayette, IN. Mar 2, 2016.

K. Dahlin. "Sharkovsky's Theorem: A Proof and Applications." Math Department Student Colloquium, Purdue University. West Lafayette, IN.

K. Dahlin, E. Koenig, A. Laubmeier, A. Wehn, K. Rios-Soto. "Competition Model between the Invasive Sahara Mustard and Native Plants in the Sonoran Desert." Society for the Advancement of Chicanos and Native Americans in Science National Conference. Seattle, WA. Oct 11, 2012

GRANTS

Landahl Travel Award, Society for Mathematical Biology (\$250)	2019
Landahl Travel Award, Society for Mathematical Biology (\$500)	2018
College of Science Graduate Student International Travel Award (\$700)	2018

LEADERSHIP AND PROFESSIONAL MEMBERSHIP

American Associations for the Advancement of Science	
Member (Program for Excellence in Science)	2019 - present
Society for Mathematical Biology	
Member	2018 - present
Mini-symposium Co-organizer with Lauren Childs	2018
\cdot Mathematical modeling of malaria: Dynamics within-host and between-hosts	
Mini-symposium Co-organizer with Joan Ponce	2019
\cdot Mathematical models for infectious diseases at population and individual levels	

Mathematical Association of America Graduate Student Member	2013 - present
Society for the Advancement of Chicanos and Native Americans in Science Member	2018 - present
Mathematical Biology Seminar, Purdue University Organizer	2017, 2018
American Indian Science and Engineering Society, Purdue Chapter	
Treasurer Vice President Judge, Student Research Competition	2015 - 2018 2014 - 2015 2013
Native American Student Association, Purdue Chapter Treasurer	2015 - 2018
American Mathematical Society, Purdue Graduate Student Chapter Presiden	nt <i>2016</i>
Purdue University Mathematics Department Graduate Representative	2016 - 2017
C. Richard Petticrew Forum, Purdue Collegiate Debate Team Assistant Debate Coach	2013 - 2016
TEDx Purdue U Speaker Liaison	2013

WORKSHOPS ATTENDED

Applied Management Principles. Krannert Executive Education Programs, Purdue University, West Lafayette, IN. May 14 - 19, 2018.

Disease Ecology and Eco-epidemiology, Emphasis Workshop. Mathematical Biosciences Institute, Ohio State University, Columbus, OH. Mar 26 - 30, 2018.

Industrial Mathematical and Statistical Modeling Workshop. Statistical and Applied Mathematical Sciences Institute, North Carolina State University, Raleigh, NC. July 16 - 27, 2017.

Dynamics of Biological Systems. Seminaire de Mathematiques Superieure, University of Alberta, Alberta, Canada. May 30 - June 11, 2016.

Uncertainty, Sensitivity, and Predictability in Ecology: Mathematical Challenges and Ecological Applications, Current Topic Workshop. Mathematical Biosciences Institute, Ohio State University, Columbus, OH. Oct 26 - 30, 2015.

JOURNALS REVIEWED

Mathematical Biosciences