

Associate Professor of Computer Science
 Colby College
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Education

2008	Ph.D.	U.C. Santa Barbara	Computer Science Emphasis in Computational Science and Engineering Advisor: Linda R. Petzold, Dept. of C.S. Co-Advisor: Francis J. Doyle III, Dept. of Chem. Engr.
1998	B. S.	Gordon College	Mathematics and Computer Science (double major) <i>Summa Cum Laude</i>

Appointments

2016-	Associate Professor	Computer Science	Colby College
2008-2016	Clare Boothe Luce Asst. Prof.	Computer Science	Colby College
2005-2006	Adjunct Instructor	Computer Science	Westmont College
2003-2008	NSF IGERT Fellow	Systems Biology	U.C. Santa Barbara
1998-2003	Software Engineer	Research & Development	JEOL, U.S.A.
1996-1998	Paid Student Intern	Research & Development	JEOL, U.S.A.

Publications (undergraduate co-authors in bold)

Peer-Reviewed Journal Articles

1. SR Taylor, TJ Wang, D Granado-Fuentes, ED Herzog, Resynchronization dynamics reveal that the ventral entrains the dorsal suprachiasmatic nucleus, *J. Biol. Rhythm.*, 32:35-47, 2017.
2. NJ Kingsbury, SR Taylor, MA Henson, Inhibitory and excitatory networks balance cell coupling in the suprachiasmatic nucleus: a modeling approach, *J. Theor. Biol.*, 397:136-144, 2016.
3. PC St John, SR Taylor, JH Abel, FJ Doyle III, Amplitude metrics for cellular circadian bioluminescence reporters, *Biophys. J.*, 107:2712-2722, 2014.
4. SR Taylor, **A Cheever**, **SM Harmon**, Velocity response curves demonstrate the complexity of modeling entrainable clocks, *J. Theor. Biol.*, 363:307-317, 2014.
5. SR Taylor, How to Get Oscillators in a Multicellular Clock to Agree on the Right Period, *Biophys. J.*, 106:1839-40, 2014.
6. AB Webb*, SR Taylor*, KA Thoroughman, FJ Doyle III, ED Herzog, Weakly Circadian Cells Improve Resynchrony, *PLoS Comput. Biol.*, 8:e1002787, 2012 (*Equal contribution)
7. H Mirsky, SR Taylor, RA Harvey, J Stelling, FJ Doyle III, Distribution-Based Sensitivity Metric for Highly-Variable Biochemical Systems, *IET Syst. Biol.*, 5:50-57, 2011

8. SR Taylor, AB Webb, **K Smith**, LR Petzold, FJ Doyle III, Velocity Response Curves Support the Role of Continuous Entrainment in Circadian Clocks, *J. Biol. Rhythm.*, 25:138-49, 2010
9. SR Taylor, FJ Doyle III, LR Petzold, Oscillator Model Reduction Preserving the Phase Response: Application to the Circadian Clock, *Biophys. J.*, 95:1658-1673, 2008
10. N Bagheri*, SR Taylor*, K Meeker, LR Petzold, FJ Doyle III. Synchrony and Entrainment Properties of Robust Circadian Oscillators, *J. R. Soc. Interface*, 5:S17-28, 2008 (*Equal contribution)
11. SR Taylor, R Gunawan, LR Petzold, and FJ Doyle III. Sensitivity Measures for Oscillating Systems: Application to Mammalian Circadian Gene Network, *IEEE Trans. Automat. Contr.*, 153:177-188, 2008
12. MN Zeilinger*, EM Farre*, SR Taylor, SA Kay, and FJ Doyle III. A novel computational model of the circadian clock in *Arabidopsis* that incorporates PRR7 and PRR9. *Mol. Syst. Biol.* 2:58, 2006 (* Equal contribution)

Refereed Conference Publications

1. M Minnes, BA Maxwell, SR Taylor, P Barry, Writing in CS: Why and How?. SIGCSE 2018 (ACM Special Interest Group on Computer Science Education), Baltimore, MD Feb 2018 (Panel session).
2. BA Maxwell & SR Taylor, Comparing Outcomes Across Different Contexts in CS1. SIGCSE 2017 (ACM Special Interest Group on Computer Science Education), Seattle, WA Mar 2017 (acceptance rate 30%).
3. SR Taylor*, N Bagheri*, K Meeker, LR Petzold, FJ Doyle III. Robust Timekeeping in Circadian Networks: From Genes to Cells. FOSBE 2007 (Foundations of Systems Biology in Engineering), Stuttgart, Germany, Sep 2007 (*Equal contribution)
4. N Bagheri, SR Taylor, FJ Doyle III, and J Stelling, A Finite Differences Approach to Phase-Based Sensitivity Analysis of Biological Oscillators, FOSBE 2005 (Foundations of Systems Biology in Engineering), U.C. Santa Barbara, Santa Barbara, CA, Aug 2005

Posters and Abstracts

1. NJ Kingsbury, SR Taylor, and MA Henson, The Differential Roles of GABA and VIP in Synchronization and Entrainment of the Suprachiasmatic Nucleus: A Mathematical Modeling Study, AICHe Annual Meeting, Atlanta, GA, Nov 2014
2. SR Taylor, Understanding the network of oscillators in the mammalian circadian clock, 2014 SIAM Annual Meeting, Chicago, IL, Jul 2014 (**oral presentation**)
3. SR Taylor, **D Cormack**, T Wang, SCN network inference, 2014 Meeting of the Society for Research on Biological Rhythms, Big Sky, MT, Jun 2014
4. SR Taylor, **Z Cecere**, **R Gheorghe**, Mathematical modeling of synchronization in the SCN, Gordon Research Conference on Chronobiology, Newport, RI, Jul 2013
5. **Z Cecere** and SR Taylor, Slow and Steady: Increasing oscillation amplitude in rhythmic cells decreases their sensitivity, Maine Biological and Medical Science Symposium, Salisbury Cove, ME, Mar 2013
6. SR Taylor, AB Webb, **D Quigley**, Linking phase and amplitude dynamics in an SCN network model allows heterogeneous neurons to period-synchronize with realistic phase differences, 2012 Meeting of the Society for Research on Biological Rhythms, Sandestin, FL, May 2012

7. SR Taylor, AB Webb, Modeling Circadian Entrainment and Synchronization, Workshop on Robustness in Biological Systems, Mathematical Biosciences Institute at OSU, Columbus, OH, Feb 2012
8. SR Taylor, Modeling Entrainment and Synchronization, Gordon Research Conference on Chronobiology, Lucca, Italy, Jun 2011
9. SR Taylor, AB Webb, R Harang, Tracking Phase in a Network of Heterogeneous SCN Cells, Third World Congress of Chronobiology, Puebla, Mexico, May 2011 (**oral presentation**)
10. **SM Harmon, AM Cheever**, SR Taylor, Velocity response curve analysis of *Drosophila melanogaster* circadian clock models, Maine Biological and Medical Science Symposium, Salisbury Cove, ME, Apr 2011
11. AB Webb, SR Taylor, LR Petzold, FJ Doyle III, and ED Herzog. Origins and consequences of heterogeneous neurons in a molecular oscillator model of the mammalian circadian clock, International Workshop on Timing and Dynamics in Biological Systems, Max Planck Institute for the Physics of Complex Systems, Dresden, Germany, Sep 2010
12. H Mirsky, SR Taylor, J Stelling, and FJ Doyle III. A Distribution-Based Sensitivity Analysis Metric for Highly Variable Biochemical Systems, ICSB 2009 (The Tenth International Conference on Systems Biology), Stanford, CA, Aug 2009
13. SR Taylor, AB Webb, FJ Doyle III, and LR Petzold. Velocity Response Curves Support the Theory of Continuous Circadian Entrainment, Foundations of Systems Biology in Engineering 2009, Denver, CO, Aug 2009
14. SR Taylor, FJ Doyle III, and LR Petzold. Phase Response-Based Model Reduction Improves Analysis of Clock Models, Society for Research on Biological Rhythms 11th Biennial Meeting, Sandestin, FL, May 2008
15. PS Chang, SR Taylor, S An, ED Herzog, LR Petzold, and FJ Doyle III, Phase Dependent Gating of the Vasoactive Intestinal Polypeptide Signaling Pathway in the Suprachiasmatic Nucleus, ICSB 2007 (The Eighth International Conference on Systems Biology), Long Beach, CA, Oct 2007
16. SR Taylor, R Gunawan, F J Doyle III, and LR Petzold. Analyzing Phase Dynamics of Limit Cycle Systems with Application to the Circadian Clock, Meeting of the National Centers of Integrative and Systems Biology 2007, Boston/Cambridge, MA, Jun 2007
17. SR Taylor, R Gunawan, FJ Doyle III, and LR Petzold. Analyzing Phase Dynamics of Limit Cycle Systems with Application to the Circadian Clock, Stanford 50: State of the Art and Future Directions of Computational Mathematics and Numerical Computing, Palo Alto, CA, Mar 2007
18. SR Taylor, R Gunawan, FJ Doyle III, and LR Petzold. Phase Sensitivity Analysis of Circadian Clocks, SIAM Conference on Computational Science and Engineering 2007, Costa Mesa, CA, Feb 2007 (**oral presentation**)
19. HP Mirsky, R Gunawan, SR Taylor, and FJ Doyle III, Sensitivity Analysis of Mammalian Circadian Clocks, AIChE Annual Meeting, San Fransisco, CA, Nov 2006
20. SR Taylor, FJ Doyle III, and LR Petzold, Analyzing the Phase Behavior of the Circadian Clock in *Arabidopsis thaliana*, The First Annual Graduate Student Conference, Dept of CS, U.C. Santa Barbara, Oct 2006 (**oral presentation**)
21. SR Taylor, FJ Doyle III, and LR Petzold, Sensitivity Analysis in Systems Biology, 2006 IGERT Project Meeting, Arlington, VA, May 2006

22. SR Taylor, N Bagheri, R Gunawan, and F J Doyle III, Capturing Phase Dynamics of Circadian Clocks, 2006 ICB Army-Industry Collaboration Conference, U.C. Santa Barbara, Santa Barbara, CA, May 2006
23. R Gunawan, SR Taylor, and FJ Doyle III, Sensitivity Analysis in Biological Modeling: an Application in the Model Development of Staphylococcal Enterotoxin B Pre-Apoptotic Pathways, AIChE Annual Meeting, Cincinnati, OH, Nov 2005
24. SR Taylor, R Gunawan, and FJ Doyle III, BioSens : Sensitivity Analysis Toolkit for Bio-SPICE, 2005 ICB Army-Industry Collaboration Conference, U.C. Santa Barbara, Santa Barbara, CA, Apr 2005

Book Chapters

1. H Mirsky, J Stelling, R Gunawan, N Bagheri, SR Taylor, E Kwei, JE Shoemaker, FJ Doyle III. "Automatic Control in Systems Biology" in *Handbook of Automation*, ed. SY Nof, Springer-Verlag, Berlin Heidelberg 2009
2. JE Shoemaker, PS Chang, EC Kwei, SR Taylor, and FJ Doyle III. "Robustness and Sensitivity Analysis in Cellular Networks" in *Control Theory and Systems Biology*, eds. B Ingalls and P Iglesias, MIT Press, 2009
3. SP Hildebrandt, N Bagheri, R Gunawan, HP Mirsky, J Shoemaker, SR Taylor, LR Petzold, and FJ Doyle III. "Systems Analysis of Biological Networks" in *Systems Biomedicine: Concepts and Perspectives*, eds. ET Liu, GP Nolan, DA Lauffenburger, Academic Press, 2009

Mathematical Software

Title	Authors	Description	My Responsibilities
DASPKAdjoint	Shengtai Li Linda R. Petzold	Sensitivity analysis solver for differential algebraic equation (DAE) systems using the adjoint method	Provided user access to adjoint variable, added support for building on Cygwin, added example programs. Years involved: 2006–2007
BioSens	Stephanie R. Taylor Rudiyanto Gunawan Kapil Gadkar Francis J. Doyle III	A general purpose sensitivity analysis toolkit with a Matlab graphical user interface with DASPK as the sensitivity analysis computational engine	Chief architect and developer. Years involved: 2005–2008

External Grants Received

Year	PIs	Title	Agency	Budget
2011–2015	Frank Doyle Erik Herzog Mike Henson Linda Petzold Stephanie Taylor	<i>Mechanisms and Modeling of Networked Circadian Pacemaker Synchronization</i>	NIH NIGMS	\$953,370
2016–2019	Erik Herzog Mike Henson Ioannis Kevrekidis Stephanie Taylor (third party code evaluator)	<i>Multiscale Modeling of the Mammalian Circadian Clock: The Role of GABA Signaling</i>	NIH NIGMS	\$1,809,385

External Grants Under Review

Submitted	PIs	Title	Agency	Budget
Apr 2018	Michelle Farkas Stephanie Taylor	<i>Chemical Modulation of Circadian Rhythms for Cancer Study and Treatment</i>	American Cancer Society	\$55,000 to Colby

Unfunded External Grants

Submitted	PIs	Title	Agency	Budget
Oct 2017	Michelle Farkas Stephanie Taylor	<i>Chemical Modulation of Circadian Rhythms for the Study and Treatment of Cancer</i>	NIH NCI	\$156,000 to Colby

Awards

Year	Award
2008 – 2016	Clare Boothe Luce Program of the Henry Luce Foundation, Colby College
2003 – 2008	Integrative Graduate Education and Research Traineeship Fellowship, UCSB
2006	Second Place Poster, Institute for Collaborative Biotechnologies Army-Industry Collaboration Conference
1998	Inducted into Phi Alpha Chi (Gordon College's honor society)
1997 – 1998	Wood Memorial Scholarship in the Natural Sciences, Gordon College
1994 –1998	Dean's Scholarship, Gordon College

Invited Presentations*Research*

Year	Title	Location
2018	Circadian Time-Keeping in Human Breast Cancer Cells	Bowdoin Women in CS Brunswick, ME
2017	Using Augmented Phase-Amplitude Oscillators to Infer Directed Connections between Regions of the Mouse Circadian Clock	Association for Women in Mathematics Research Symposium 2017 Los Angeles, CA
2016	Computational Models are Critical to Understanding Circadian Clock Networks	CS Dept., Williams College, Williamstown, MA
2016	Using Augmented Phase-Amplitude Oscillators to Infer Directed Connections between Regions of the Mouse Circadian Clock	Fall Eastern Sectional Meeting of the American Mathematical Society at Bowdoin College Brunswick, ME
2013	When weaker is better: A computational study of the mammalian circadian clock	Math CS Dept., Gordon College, Wenham, MA
2013	Computational models reveal strategies for synchrony in the mammalian circadian clock	Bigelow Laboratory for Ocean Sciences, East Boothbay, ME
2012	Computational models unlock the secrets of our internal clocks	Noontime Faculty Forum, Colby College
2012	Points of sensitivity in circadian cells and networks	Mathematical Biosciences Institute at OSU, Columbus, OH
2012	When weaker is better: A computational study of the mammalian circadian clock	CS Dept., Carleton College, Northfield, MN
2011	Do you have the time? Yes, you do!:Network Complexity in the Mammalian Circadian Clock	Colby College Science Division Lunch, Waterville, ME
2011	Tracking Phase in a Network of Heterogeneous SCN Cells	Third World Congress of Chronobiology, Puebla, Mexico
2010	Clarifying the Role of Damped Oscillators in the Mammalian Circadian Clock	Maine Biological and Medical Science Symposium, Salisbury Cove, ME
2009	The Best Made Clocks of Mice and Men	Math Dept., Bowdoin College, Brunswick, ME
2009	Panelist for a session titled "Computational biology: Trends and Careers"	Grace Hopper Celebration of Women in Computing, Tucson, AZ
2009	Optimization-based Model Reduction of Circadian Clock Models	SIAM Conference on Applications of Dynamical Systems, Snowbird, UT
2008	Circadian Clock Model Reduction or: All the Precision at 20% the Cost	CS Dept., Bowdoin College, Brunswick, ME
2008	Plant Circadian Clock Model	The iPlant Collaborative Mechanistic Modeling Grand Challenge Workshop, Oracle, AZ
2007	Timing is Everything: Using Computer Science to Understand Circadian Clocks	CS Dept., Colby College, Waterville, ME

Research (cont.)

Year	Title	Location
2007	Analyzing Circadian Networks with Parametric Impulse Phase Response Curves	2007 Biomedical Engineering Society Fall Meeting, Hollywood, CA
2006	Plants, Clocks, Math, and Computers	Natural and Behavioral Sciences Seminar, Westmont College, Santa Barbara, CA
2006	Numerical Analysis in Systems Biology	Math and CS Grad. Seminar, Cal. State Channel Islands, Camarillo, CA

Education

Year	Title	Location
2018	Panelist for WEC in Science and Engineering	Writing Enriched Curriculum Institute at UMN
2016	Teaching Systems Biology of the Circadian Clock with Journal Articles and Matlab	International Symposium on Biomathematics and Ecology Education and Research Charleston, SC

Departmental Service Activities

I have been an active member of the computer science department at Colby since the fall of 2008. Because we are a small department, we all contribute when we see needs. Below, I summarize my contributions to several major departmental endeavors.

- *Increasing participation of women and minorities.* My contributions include individual mentoring, hiring female research assistants, hosting social events, and organizing trips to conferences for women and minorities.
- *Managing teaching assistants.* My contributions include hiring and scheduling student teaching assistants, responding to feedback from both teaching assistants and the students they are assisting, and managing student graders.
- *Organizing departmental events.* My contributions include contacting students and handling the advertising for departmental social gatherings and colloquia. Two of these events merit additional comments:
 - In 2013, we held our first annual celebration of computer science at Colby: we invite 6-8 recent alumni to spend the day at Colby running career-advice sessions for current students. The day ends with a banquet and panel discussion. My role was to participate in scheduling, to invite several alumni, and to handle follow-up communication with them.
 - Each year, we hold a dinner for our graduating seniors. My role has been either to organize it at a restaurant or host it at my house.
- *Enhancing writing within the discipline.* In the summer of 2015, we submitted a Writing in the Disciplines grant proposal to the Colby Writing Program, which was accepted. I am the department liaison, which means I wrote the proposal, write reports, and am organizing the activities necessary for carrying out the work in the grant.

Institutional Service Activities

Year	Activity	Description
2017–2018	Presidential Task Force on Free Expression and Free Inquiry	determine community values and develop policy to reflect them
2017–2018	Search Committee	search for a tenure-track asst. prof. in statistics
2017–2018	Search Committee	search for two tenure-track profs in comp. sci.
2017–	Colby ACM-W Student Chapter	faculty sponsor
2016–	Distribution Requirements Task Force	evaluate the distribution requirements
2016–2017	Search Committee	search for a tenure-track asst. prof. in statistics
2016–2017	Search Committee	search for a tenure-track prof. in comp. sci.
2012–2017	Independent Study Committee	Co-chair
2016	Search Committee	search for multilingual writing specialist
2016	Search Committee	search for a visiting asst. prof. in theater and dance
2016	Search Committee	search for new Chief Information Officer
2015–2016	Search Committee	search for a tenure-track asst. prof. in statistics
2015–2016	Search Committee	search for a visiting asst. prof. in comp. sci.
2009–2016	Course Evaluation Committee	appointed as a statistician
2014–2015	Search Committee	search for a tenure-track asst. prof. in comp. sci.
2013–2014	Search Committee	search for a tenure-track asst. prof. in physics
2012–2013	Search Committee	search for a visiting asst. prof. in comp. sci.
2012, 2014	Recruitment of Presidential Scholars	co-led natural sciences workshop
2010–2011	Search Committee	search for a visiting asst. prof. in comp. sci.
2009–2011	Colby Juggling Club	faculty advisor
2009–2010	Library Strategic Planning Committee	member
2009–2010	Search Committee	search for a visiting asst. prof. in psychology
2009–2010	Search Committee	search for a visiting asst. prof. in biology
2009–2010	Search Committee	search for an HHMI Post-doc in CS

Disciplinary Service Activities

Year	Activity	Organization
2018– 2017	Member of Editorial Board Invited Session Co-organizer	<i>Processes</i> Association for Women in Mathematics Research Symposium 2017
2014, 2016, 2017	Member	Poster Committee for the Grace Hopper Celebration of Women in Computing
2015	Poster Session Co-Chair	Foundations of Systems Biology in Engineering 2015
2015	Member	Faculty Track Committee for the Grace Hopper Celebration of Women in Computing
2014	Poster Session Coordinator	Organizing committee of the New England Undergraduate Computing Symposium
2014	Session chair	2014 Meeting of the Society for Research on Biological Rhythms
2009, 2013, 2014, 2015	Judge	ACM Student Research Competition at the Grace Hopper Celebration of Women in Computing
2010	Judge	New England Undergraduate Computing Symposium

Reviewing

Years	Conference or Journal
2017 –	<i>Processes</i>
2017–	Nature Communications
2016–	ACM Special Interest Group on Computer Science Education (SIGCSE) Conference
2013–	Biophysical Journal
2013–	Bioinformatics
2010–	American Control Conference
2010–	SIAM Journal on Scientific Computing
2009–	Journal of Biological Rhythms

Courses Taught

The introductory and 200-level courses have both lectures and labs, usually with one professor teaching the lab and the other the lecture. In that sense, when I am teaching such a course, I have a co-teacher. I list the co-teachers below.

Semester	Title	Enrollment	Co-teacher
Spring 2017	CS151: Computational Thinking (Lecture) A	40	Ying Li
	CS152: Computational Thinking (Lab) A	8	Dale Skrien
	CS152: Computational Thinking (Lab) B	14	Dale Skrien
	CS251: Data Analysis & Visualization (Lecture)	34	Bruce Maxwell, Zadia Codabux
	CS484: Honors Research	2	
Jan Plan 2017	CS291: Independent Study	2	
	CS483: Honors Research	2	
Fall 2016	CS152: Computational Thinking (Lecture)	37	Bruce Maxwell
	CS231: Data Structs/Algorithms (Lab) A	18	Bruce Maxwell
	CS231: Data Structs/Algorithms (Lab) B	19	Bruce Maxwell
	CS231: Data Structs/Algorithms (Lab) C	15	Bruce Maxwell
	CS231: Data Structs/Algorithms (Lab) D	7	Bruce Maxwell
	CS232: Computer Organization (Lab) A	8	Ying Li
	CS232: Computer Organization (Lab) B	7	Ying Li
	CS483: Honors Research	2	
Spring 2016	CS251: Data Analysis & Visualization (Lecture)	31	Bruce Maxwell
	CS336: Parallel/Dist Processing	18	
	CS441: Systems Biology II A	7	
	CS441: Systems Biology II B	12	
	CS484: Honors Research	2	
Jan Plan 2016	CS090: Internship	1	
	CS291: Independent Study	1	
	CS483: Honors Research	2	
Fall 2015	CS151: Computational Thinking (Lab) A	17	Bruce Maxwell
	CS151: Computational Thinking (Lab) B	23	Bruce Maxwell
	CS151: Computational Thinking (Lab) C	21	Bruce Maxwell
	CS151: Computational Thinking (Lab) D	20	Bruce Maxwell
	CS342: Systems Biology I	25	
	CS483: Honors Research	1	
Spring 2015	CS151: Computational Thinking (Lecture) A	39	Bruce Maxwell
	CS151: Computational Thinking (Lecture) B	40	Bruce Maxwell
	CS251: Data Analysis & Visualization (Lecture)	36	Bruce Maxwell
	CS482: Minor Capstone	1	
	CS492: Independent Study	1	
Jan Plan 2015	CS090: Internship	2	
	EC090: Independent Study	1	

Semester	Title	Enrollment	Co-teacher
Fall 2014	CS151: Computational Thinking (Lab) A	20	Dale Skrien
	CS151: Computational Thinking (Lab) B	19	Dale Skrien
	CS231: Data Structs/Algorithms (Lab) A	15	Dale Skrien
	CS231: Data Structs/Algorithms (Lab) B	12	Dale Skrien
	CS231: Data Structs/Algorithms (Lab) C	19	Dale Skrien
	CS333: Programming Languages	21	
	CS481: Minor Capstone	1	
	CS491: Independent Study	2	
Spring 2014	CS232: Computer Organization (Lab) A	14	Kyle Burke
	CS232: Computer Organization (Lab) B	12	Kyle Burke
	CS251: Data Analysis & Visualization (Lecture)	36	
	CS251: Data Analysis & Visualization (Lab) A	18	
	CS251: Data Analysis & Visualization (Lab) B	18	
	CS336: Parallel/Dist Processing	15	
	CS484: Honors Research	1	
	CS492: Independent Study	2	
Jan Plan 2014	CS090: Internship	2	
	CS091: Independent Study	1	
	CS291: Independent Study	1	
Fall 2013	CS151: Computational Thinking (Lecture)	38	Kyle Burke
	CS231: Data Structs/Algorithms (Lecture)	30	Kyle Burke
	CS483: Honors Research	1	
	CS491: Independent Study	2	
Spring 2013	CS151: Computational Thinking (Lab) A	10	Dale Skrien
	CS151: Computational Thinking (Lab) B	13	Dale Skrien
	CS151: Computational Thinking (Lab) C	15	Dale Skrien
	CS151: Computational Thinking (Lab) D	13	Dale Skrien
	CS251: Data Analysis & Visualization (Lecture)	15	Bruce Maxwell
	CS441: Systems Biology II	6	
	CS484: Honors Research	1	
Jan Plan 2013	CS090: Internship	1	
	CS483: Honors Research	1	
Fall 2012	CS151: Computational Thinking (Lecture)	38	Bruce Maxwell
	CS341: Systems Biology I	6	
Spring 2011	CS151: Computational Thinking (Lecture) A	21	Bruce Maxwell
	CS151: Computational Thinking (Lecture) B	13	Bruce Maxwell
	CS336: Parallel/Dist Processing	4	
	CS492: Independent Study	3	
Fall 2010	CS484: Honors Research	1	
	CS491: Independent Study	2	
Spring 2010	CS151: Computational Thinking (Lecture) A	23	Bruce Maxwell
	CS151: Computational Thinking (Lecture) B	16	Bruce Maxwell
	CS441: Systems Biology II	10	
	CS483: Honors Research	1	
	CS492: Independent Study	2	
Jan Plan 2010	CS291: Independent Study	1	

Semester	Title	Enrollment	Co-teacher
Fall 2009	CS151: Computational Thinking (Lab) A1	13	Dale Skrien
	CS151: Computational Thinking (Lab) A2	3	Dale Skrien
	CS151: Computational Thinking (Lab) B1	9	Dale Skrien
	CS151: Computational Thinking (Lab) B2	5	Dale Skrien
	CS341: Systems Biology I	15	
	CS491: Independent Study	2	
Spring 2009	CS151: Computational Thinking (Lecture) A	30	Bruce Maxwell
	CS151: Computational Thinking (Lecture) B	25	Bruce Maxwell
Fall 2008	CS151: Computational Thinking (Lab) A	8	Dale Skrien
	CS151: Computational Thinking (Lab) B	13	Dale Skrien
	CS231: Data Structs/Algorithms (Lab)	9	Dale Skrien
	CS336: Parallel/Dist Processing	7	

Supervised Projects

Year	Student	Project
Summer 2017	Maan Qraitem	Estimating a non-stationary period from Circadian data
Summer 2017	Lucia Wang and Iris Lian	Understanding Entrainment of the Circadian Multi-oscillator
2016–2017 Academic Year	Ryan Salerno	Understanding Malicious use of the Domain Name System (DNS), co-advised with Dan Siff
2016–2017 Academic Year	Michael Remondi	Developing, Deploying, and Analyzing the use of a New Restaurant Ratings App
2016–2017 Academic Year	Vivek Sah	Deep Learning
2016 Summer	Neil Sefah and Makoto Kinoshita	Understanding Entrainment of the Circadian Multi-oscillator
Fall 2016	Carl-Philip Majgaar	Deep Learning To Identify Empty Parking Spaces
Fall 2016	Robert Campbell	Support Vector Machines
2015–2016 Academic Year	William Kearney	Genetic Algorithms to Evolve Artificial Neural Networks
2015–2016 Academic Year	Jack Walpuck	Convolutional Neural Networks
2015 Summer	Itrat Akhter & Joseph Malionek	Modeling the core and shell of the mammalian clock
2014 Summer	Olivia Lang	Improving a model of the fly circadian clock
2014 Summer	Itrat Akhter	Network inference of the mammalian circadian clock
2013–2014 Academic Year	Devon Cormack	Network inference of the mammalian circadian clock
2013–2014 Academic Year	Audrey Lyman	Analysis of circadian clock and Zetaproteobacteria data
2013 Summer	Roxana Gheorghe	Network inference of the mammalian circadian clock
2013 Summer	Olivia Lang	Improving a model of the fly circadian clock
2012 Summer – 2013 Spring	Zachary Cecere	Synchronization of clock networks
2011 Summer and Fall	David Quigley	Period determination in clock networks
2011 Spring	Allyson Cheever and Sarah Harmon	Comparative phase analysis of fly circadian clock
2011 Spring	Nathan Katsiaficas	Learning Matlab
2010 Summer and Fall	Allyson Cheever	Phase analysis of fly circadian clock
2009–2010 Academic Year	Andrew Cox (Honors)	Multi-oscillator model of the mammalian circadian clock
	Sarah Harmon	Human-Robot interaction
2009–2010 Academic Year	Hannah Coulson	Analysis of mammalian circadian clock model
2009 Summer	Katherine Smith	Theory of entrainment for circadian clocks
	Olena Marchenko	Augmenting a model of the plant circadian clock

Workshops and Conferences Attended

Date	Location	Title	
Apr 2018	Minneapolis, MN	Writing Enriched Curriculum Institute at UMN	
Feb 2018	Baltimore, MA	ACM Technical Symposium on Computer Science Education (SIGCSE)	
Mar 2017	Seattle, WA		
Mar 2015	Kansas City, MO		
Mar 2013	Denver, CO		
Mar 2009	Chattanooga, TN		
Oct 2017	Pittsburgh, PA	CS Education Summit: Addressing the challenges of increasing interest in computing at the undergraduate level through institutional transformation	
Jul 2017	Stowe, VT	Gordon Research Conference: Chronobiology	
Jul 2013	Newport, RI		
Jun 2011	Lucca (Barga), Italy		
Apr 2017	Los Angeles, CA	Association for Women in Mathematics Research Symposium 2017	
Mar 2017	Portland, ME	New England Celebration of Women in Computing	
Oct 2016	Charleston, SC	International Symposium on Biomathematics and Ecology Education and Research	
Sep 2016	Brunswick, ME	Fall Eastern Sectional Meeting of the American Mathematical Society	
May 2016	Tampa, FL	Society for Research on Biological Rhythms Biennial Meeting	
Jun 2014	Big Sky, MT		
May 2012	Sandestin, FL		
May 2008	Sandestin, FL		
Oct 2015	Houston, TX	Grace Hopper Celebration of Women in Computing	
Oct 2014	Phoenix, AZ		
Oct 2013	Minneapolis, MN		
Oct 2012	Baltimore, MD		
Sep 2009	Tucson, AZ		
Oct 2008	Keystone, CO		
Oct 2006	San Diego, CA		
Aug 2015	Boston, MA		Foundations of Systems Biology in Engineering
Aug 2009	Denver, CO		
Aug 2005	Santa Barbara, CA		
Apr 2015	Boston, MA	New England Undergraduate Computing Symposium	
Apr 2010			
Oct 2014	Worcester, MA	Clocks Club of New England	
Jun 2014			
Apr 2013	Salisbury Cove, ME	Maine Biological and Medical Science Symposium	
Apr 2011			
Apr 2010			
Feb 2013	La Jolla, CA	UCSD Center for Chronobiology 2013	
Feb 2012	Columbus, OH	Workshop on Robustness in Biological Systems, Mathematical Biosciences Institute	

Workshops and Conferences Attended (cont.)

Date	Location	Title
Jan 2012	Fairfield, CT	Performance, Science, and Science Education: Cultivating Ensembles in STEM Education and Research
May 2011	Puebla, Mexico	Third World Congress of Chronobiology
May 2009	Snowbird, UT	SIAM Conference on Applications of Dynamical Systems
Mar 2009	Chattanooga, TN	CRA-W Managing the Academic Career for Faculty Women at Undergraduate Computer Science and Engineering Institutions Workshop
Nov 2008	Biosphere 2, Oracle, AZ	The iPlant Collaborative Mechanistic Modeling Grand Challenge Workshop
Sep 2007	Hollywood, CA	Biomedical Engineering Society (BMES) Fall Meeting
Jul-Aug 2007	Santa Barbara, CA	Biological Switches and Clocks Program, Kavli Institute for Theoretical Physics
Jun 2007	Boston/Cambridge, MA	Meeting of the National Centers of Integrative and Systems Biology
Mar 2007	Palo Alto, CA	Stanford 50: State of the Art and Future Directions of Computational Mathematics and Numerical Computing
Feb 2007	Costa Mesa, CA	SIAM Conference on Computational Science and Engineering
May 2006	Santa Barbara, CA	Institute for Collaborative Biotechnologies Army-Industry Collaboration Conference
May 2005	Tokyo, Japan	SBML Hackathon
Jan 2005	Menlo Park, CA	Bio-SPICE Engineering Product Development Task Force Hackathon

Professional Affiliations

Society for Research on Biological Rhythms	Regular Member since 2010
Association for Computing Machinery	Member since 2008
Society of Industrial and Applied Mathematics	Member since 2005

Recent Collaborators

Dr. Francis J. Doyle III	Harvard University
Dr. Linda R. Petzold	U.C. Santa Barbara
Dr. Erik D. Herzog	Washington University St. Louis
Dr. Michael A. Henson	University of Massachusetts, Amherst
Dr. Eva Farré	Michigan State University
Dr. Michelle Farkas	University of Massachusetts, Amherst