Youngmin Park

Personal Data

Date of Birth:	28 October 1988
Citizenship:	USA
Address:	301 Thackeray Hall Pittsburgh, PA 15260
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Education

Aug. 2013 – May 2018	(Expected) PhD Mathematics, **University of Pittsburgh** Thesis: TBD | Advisor: G. Bard Ermentrout
Sep. 2016	Advanced Computational Neuroscience **Max Planck Institute for Dynamics and Self Organization** Göttingen, Germany
Aug. 2015	Methods in Computational Neuroscience **Marine Biological Laboratory**, Woods Hole, MA
Aug. 2012 – Aug. 2013	MS Applied Math **Case Western**, Cleveland, OH [a]Thesis: Infinitesimal Phase Response Curves for Piecewise Smooth Dynamical Systems | Advisor: Peter J. Thomas
Aug. 2008 – Aug. 2013	BS Applied Math **Case Western**, Cleveland, OH

Publications

[a]**Park, Y.**, Ermentrout, G.B. "Microscopic Synchronization in the Mean Field Description of Oscillators with Slowly Varying Synapses (In preparation)

[a]**Park, Y.**, Ermentrout, G.B. "Scalar Reduction of a Neural Field Model with Spike Frequency Adaptation." SIADS (Submitted)

[a]**Park, Y.**, Shaw, K.M. Chiel, H.J. Thomas, P.J. "The Infinitesimal Phase Response Curve of Oscillators in Piecewise Smooth Dynamical Systems." EJAM. (Submitted)

[a]**Park, Y.**, Ermentrout, G.B. "Weakly Coupled Oscillators in a Slowly Varying World." Springer Journal of Computational Neuroscience 40.3 (2016): 269–281.

[b]Shaw, K.M., **Park, Y-M.**, Chiel, H.J., Thomas, P.J. "Phase Resetting in an Asymptotically Phaseless System: On the Phase Response of Limit Cycles Verging on a Heteroclinic Orbit." SIAM Journal on Applied Dynamical Systems 11.1 (2012): 350–91.

Book Chapters

[a]**Park, Y.**, Heitmann, S., Ermentrout, G.B. "The Utility of Phase Models in Studying Neural Synchronization." Book chapter in "Computational Models of Brain and Behavior". Wiley-Blackwell (2017): 493–505. (In press)

[a]Source code: `https://github.com/youngmp`
[b]Source code: `https://github.com/CWRUChielLab/Shaw_et_al_2012_code`

Invited Presentations

"The Infinitesimal Phase Response Curve of Oscillators in Piecewise Smooth Dynamical Systems". Oral presentation at SIAM Annual Meeting, Pittsburgh, PA, July 11, 2017.

"Weakly Coupled Oscillators in a Slowly Varying World". Oral presentation at SIAM Conference on Applications of Dynamical Systems, Snowbird, Utah, May 24, 2017.

"Weakly Coupled Oscillators in a Slowly Varying World". Oral presentation at SIAM Conference on the Life Sciences, Boston, MA, July 13, 2016.

Teaching

University of Pittsburgh

Year	Term	Type	Class
2017	Summer	**Lecture**	Differential Equations (MATH 0290, 14 students)
	Spring	Grading	Differential Equations 1 (MATH 1270) x2
		Grading	Differential Equations 2 (MATH 1280)
		Grading	Complex Variables and Applications (MATH 1560)
		Recitation	Comput. Neurosci. (MATH 1370, 21 students)
2016	Fall	Recitation	Business Calculus (MATH 0120, 20–24 students each) x3
	Summer	**Lecture**	Differential Equations (MATH 0290, 23 students)
	Spring	Recitation	Calculus 3 (MATH 0240, 28 students)
		Grading	Ordinary Differential Equations 1 (MATH 1270) x2
2015	Fall	Recitation	Calculus 1 (MATH 0220, 25 students)
		Recitation	Calculus 2 (MATH 0230, 25 students)
		Grading	Ordinary Differential Equations 1 (MATH 1270)
	Summer	**Lecture**	Matrices and Linear Algebra (MATH 0280, 27 students)
	Spring	**Lecture**	Discrete Math. Structures (MATH 0400, 33 students)
		Grading	Matrices and Linear Algebra (MATH 0280) x2
2014	Fall	Recitation	Calculus 1 (MATAH 0220, 25 students each) x3
	Summer	**Lecture**	Differential Equations (MATH 0290, 9 students)
2013	Fall	Recitation	Business Calculus (MATH 0120, 23 students)
		Grading	Differential Equations (MATH 0290) x2

Oberlin College

2013 Winter Assistant Computational Neuroscience (Keith Downing)

Honors and Awards

2017-2018 Andrew Mellon Predoctoral Fellowship
2016 Elizabeth Baranger Teaching Award (nominated)
2012 SPUR (Summer Program for Undergraduate Research)/P-SURG

Computer Skills

Web: Drupal, HTML/CSS
Research: MCell/DReAMM, R, NEURON, UNIX, Mathematica, XPP
Languages: Python (Numpy, Scipy, Matplotlib), MATLAB