# Youngmin PARK

## PERSONAL DATA

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| DATE OF BIRTH: | 28 October 1988 |
| CITIZENSHIP: | USA |
| ADDRESS: | 301 Thackeray Hall Pittsburgh, PA 15260 |
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## EDUCATION

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|---|---|
| AUG. 2013 – MAY 2018 | (Expected) PhD Mathematics, **University of Pittsburgh**<br>Advisor: Bard Ermentrout |
| SEP. 2016 | Advanced Computational Neuroscience<br>**Max Planck Institute for Dynamics and Self Organization**<br>Göttingen, Germany |
| AUG. 2015 | Methods in Computational Neuroscience<br>**Marine Biological Laboratory**, Woods Hole, MA |
| AUG. 2012 – AUG. 2013 | MS Applied Math **Case Western**, Cleveland, OH<br>[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. "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.**, Heitmann, S., Ermentrout, G.B. "The Utility of Phase Models in Studying Neural Synchronization." Wiley-Blackwell 2018. (In press)

[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.

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[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) |
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## Honors and Awards

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

## Computer Skills

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