

# GRANT FIDDYMENT

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## CAREER SUMMARY

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I am a data scientist proficient in machine learning with Matlab, Python, and R. As a graduate student, I worked with a team of epilepsy researchers to develop a data-driven pipeline for human seizure analysis. I also have experience simulating neural systems and analyzing networks using graph-theoretic tools. Currently, I apply these techniques to study the movement of basketball players.

## EDUCATION

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- Ph.D., Computational Neuroscience SEPTEMBER 2016  
Boston University, Boston, MA GPA: 3.87/4  
“Point process modeling as a framework to dissociate intrinsic and extrinsic components in neural systems”  
Advisors: Mark Kramer, Uri Eden
- M.A., Mathematics MAY 2011  
University of Georgia, Athens, GA GPA: 3.9/4  
Exams in numerical analysis & complex analysis  
Advisor: Caner Kazanci
- B.S., Mathematics MAY 2009
- A.B., English GPA: 3.86/4  
University of Georgia, Athens, GA  
Magna cum laude with high honors

## AWARDS AND HONORS

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Finalist, ESPN Hackathon Open Division, Sloan Sports Analytics Conference	2016
Participant, Summer Workshop on the Dynamic Brain, Allen Institute for Neuroscience	2015
Pre-Doctoral Training Grant #330118, Epilepsy Foundation “Data-Driven Modeling of Seizure Termination”	2015
CompNet Travel Award, Boston University	2013
Graduate Medical Sciences Scholarship, Boston University	2011
NSF VIGRE Internship	2010
Graduate Teaching Assistantship, University of Georgia	2009
Phi Beta Kappa, University of Georgia	2006
Hollingsworth Award, Dept. of Mathematics, University of Georgia	2006
Charter Scholarship, University of Georgia	2005
National Merit Scholar	2005

## PUBLICATIONS AND POSTERS

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- Fiddyment GM, James NM, Martinet LE, Cash SS, Eden UT, Kramer MA (2016). Point process modeling reveals a unique type of enhancement during human seizures. *Journal of Neuroscience Methods* (in prep).
- Martinet LE, Fiddyment GM, Madsen JR, Eskandar EN, Eden UT, Cash SS, Kramer MA (2016). Human seizures couple across spatial scales through traveling wave dynamics. *Nature Communications* (submitted).
- Fiddyment GM, Martinet LE, Madsen J, Eskandar E, Eden UT, Cash SS, Kramer MA (2016). Two categories of ictal discharges propagate with different spatiotemporal dynamics during human seizure. *Journal of Neuroscience* (submitted).
- Fiddyment GM, Sokolowski S, Kramer MA (2015). Functional Network Observations of Diseased Brain States. In Jaeger D, Jung R (Eds.) *Encyclopedia of Computational Neuroscience*, Vol. 1, pp xx-xx. Springer New York Heidelberg Dordrecht London.
- Fiddyment, GM, Ahmed O, Martinet LE, Eden UT, Cash SS, Kramer MA (2015). Statistical and computational modeling of meso- and microscale human seizure. *Society for Neuroscience Abstracts*, 2015.
- Fiddyment, GM, Ahmed O, Martinet LE, Eden UT, Cash SS, Kramer MA (2015). Point process modeling of human seizure. *Statistical Analysis of Neural Data (SAND 7) Conference Abstracts*.
- Fiddyment, GM, Yazdanbakhsh A (2013). Large-scale, anatomically-constrained simulation of the visual hierarchy. *ICCNs Abstracts*, 2013.

## WORK EXPERIENCE

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- Data Scientist, Philadelphia 76ers DEC 2016-PRESENT  
Working with the Analytics & Strategy team, I analyze data and develop tools that inform game strategies and player performance.
- Adjunct Professorial Lecturer, American University DEC 2016-PRESENT  
Instructor for Predictive Analytics ITEC 621 in the Kogod School of Business.
- Graduate Researcher, Boston University SEPT 2011-SEPT 2016  
PIs: Mark Kramer, Uri Eden. Working with a team of mathematicians and epilepsy clinicians, developed a model-driven pipeline for analyzing spike-wave seizures. Research was awarded doctoral training grant from Epilepsy Foundation.
- Graduate Teaching Assistant, University of Georgia AUG 2009-MAY 2011  
Instructor for Precalculus MATH 1113 and Calculus MATH 2200.
- NSF VIGRE Research Internship, University of Georgia SUMMER 2010  
PI: Andrew Sornborger. Built high-performance Matlab simulations of networks of LIF neurons. By visualizing voltage and calcium activity, discovered regime where applied current leads to recurrent wavefronts in a tubular network.
- Grader, University of Georgia JAN 2006-MAY 2009  
Graded weekly homework for Multivariable Calculus, Sequences & Series, and Intro to Higher Mathematics.
- Online Author & Editor, Houghton Mifflin Company MAY-DEC 2007  
Wrote interactive online content for high-school math textbook. Later invited to edit text and problems for a series of math textbooks.
- Co-director, Mathnasium SUMMER 2006  
Taught mathematics in an innovative, gym-style learning environment and managed day-to-day operations.

## COMPUTER SKILLS

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Advanced Knowledge: Matlab, Python, R, SQL, Linux/Unix, Latex, Maple  
 Basic Knowledge: Flask, Java, Javascript, Perl, HTML/CSS, Mathematica

## INTERESTS AND ACTIVITIES

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- Point process models, generalized linear models
- Neural networks, deep learning
- Numerical analysis, high-performance computing, quantum computing
- Sports analytics, basketball