

# GRANT FIDDYMENT



I am a data scientist proficient in machine learning with Matlab, Python, and R. As a graduate student, I worked with a clinical epilepsy researchers to develop statistical models and simulations of human seizures. I've also built biophysical neural models, analyzed biological networks with graph theory, and denoised images. Currently I apply similar techniques to study the game of basketball.

## EDUCATION

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- Ph.D., Computational Neuroscience Sept 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; A.B., English May 2009  
University of Georgia, Athens, GA GPA 3.86/4  
Magna cum laude with high honors

## WORK EXPERIENCE

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- Data Scientist, Philadelphia 76ers Dec 2016 - Present  
Working with the Research & Development department, I develop tools to analyze team training, performance, and in-game strategies.
- Adjunct Professorial Lecturer, American University Dec 2016 - Present  
Instructor for Predictive Analytics ITEC 621 and Python Programming ITEC 596/696
- Graduate Researcher, Boston University Sept 2011 - Sept 2016  
Working with a team of mathematicians and epilepsy clinicians, developed a model-driven pipeline for analyzing spike-wave seizures. Research earned a doctoral training grant from Epilepsy Foundation. PIs: Mark Kramer, Uri Eden.
- Graduate Teaching Assistant, University of Georgia Aug 2009 - May 2011  
Instructor for Precalculus MATH 1113 and Calculus MATH 2200.

## 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

## AWARDS AND HONORS

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Outstanding Teaching by an Adjunct, American University Kogod School of Business	2019
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
Graduate Teaching Assistantship, University of Georgia	2009
Phi Beta Kappa, University of Georgia	2006
Hollingsworth Award, Dept. of Mathematics, University of Georgia	2006

## PUBLICATIONS AND POSTERS

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- Kass RE, Amari SI, Arai K, Brown EN, Diekmann CO, Diesmann M, Doiron B, Eden UT, Fairhall AL, Fiddymment GM, Fukai T, Grun S, Harrison MT, Helias M, Nakahara H, Teramae J, Thomas PJ, Reimers M, Rodu J, Rotstein HG, Shea-Brown E, Shimazaki H, Shinomoto S, Yu BM, Kramer MA (2018). Computational neuroscience: Mathematical and statistical perspectives. *Annual Review of Statistics and its Application* 5: 183-214.
- Martinet LE, Fiddymment GM, Madsen JR, Eskandar EN, Truccolo W, Eden UT, Cash SS, Kramer MA (2017). Human seizures couple across spatial scales through traveling wave dynamics. *Nature Communications* 8: 14896.
- Fiddymment GM (2016). Point process modeling as a framework to dissociate intrinsic and extrinsic components in neural systems. PhD thesis, Boston University.
- Fiddymment 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 1234-1236. Springer New York Heidelberg Dordrecht London.
- Fiddymment, 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.
- Fiddymment, 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*.
- Fiddymment, GM, Yazdanbakhsh A (2013). Large-scale, anatomically-constrained simulation of the visual hierarchy. *ICCN Abstracts*, 2013.

## 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, ultimate frisbee
- Saxophone, piano