

GRANT FIDDYMENT



I am a mathematical modeler, software developer, and educator. Currently, I model and analyze basketball, building tools to help our coaches, scouts, sports scientists, and executives. As a graduate student, I worked with a team of 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.

Work Experience

- Manager of Research — Philadelphia 76ers 2019 -
- Data Scientist — Philadelphia 76ers 2016 - 2019
Working with the Research & Development team, I develop predictive models and web applications to help support coaches, scouts, executives, and sports scientists
- Adjunct Professorial Lecturer — American University 2017 -
Instructor for Predictive Analytics ITEC 621 and Python Programming ITEC 600 / 696
- Graduate Researcher — Boston University 2011 - 2016
Built statistical models to analyze and understand human seizure termination
- Graduate Teaching Assistant — University of Georgia 2009 - 2011
Instructor for Precalculus MATH 1113 and Calculus MATH 2200

Education

- PhD, Computational Neuroscience — Boston University 2016
[Point process modeling as a framework to dissociate intrinsic and extrinsic components in neural systems](#)
- MA, Mathematics — University of Georgia 2011
Comprehensive exams in numerical analysis & complex analysis
- BS, Mathematics / AB, English — University of Georgia 2009
Magna cum laude with high honors

Awards & Honors

- Outstanding Teaching by an Adjunct, American University Kogod School of Business 2019
- Finalist, ESPN Hackathon Open Division, Sloan Sports Analytics Conference 2016
- Pre-Doctoral Training Grant #330118, Epilepsy Foundation 2015
("Data-Driven Modeling of Seizure Termination")
- 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

Computer Skills

Python
Java

JavaScript
Mathematica

SQL
Maple

Stan
Linux / Bash

R
AWS

Matlab
L^AT_EX

Publications & Posters

- Kass RE, Amari SI, Arai K, Brown EN, Diekman 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. *ICCNS Abstracts*, 2013.

Interests & Activities

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