Joseph Thurman

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EDUCATION

Stony Brook University *Aug 2011 – Present*
Ph.D. Candidate in Mathematics, Graduation Expected May 2018 Stony Brook, NY
GPA 4.00/4.00

Vanderbilt University *May 2011*
B.S. in Mathematics with Honors Nashville, TN
GPA 3.96/4.00, *summa cum laude*

WORK EXPERIENCE

Graduate Research Assistant, Stony Brook University *Aug 2011 - Present*

- Performed independent research in differential geometry at a top 5 US graduate program
- Refined existing techniques to give explicit constructions for a new class of Kähler metrics
- Proved a new characterization of the hyperkähler Swann bundle associated to a quaternion-Kähler manifold using the twistor spaces associated to each space
- Completed coursework in a variety of topics in advanced mathematics, including linear algebra, differential equations, probability and measure theory, differential geometry, and abstract algebra

Graduate Teaching Assistant, Stony Brook University *Aug 2011 - Present*

- Effectively communicated mathematical ideas, from pre-calculus to graduate-level topics, to students with a wide variety of abilities and backgrounds
- Consistently received excellent rating in student feedback

Private Tutor, Self-Employed *June 2015 - Present*

- Provided one-on-one tutoring in mathematics, physics, and standardized testing preparation for high school students

SKILLS

Data Analysis and Quantitative Skills

- Statistical analysis – Hypothesis and significance testing, generalized linear models, principal component analysis and dimension reduction
- Machine Learning Techniques – Neural networks, k-means clustering, random forests, feature engineering, cross-validation

Programming Languages and Software

- Python, including numpy, pandas, scipy, matplotlib, seaborn, and scikit-learn
- R, including tidyverse, and caret
- Mathematica
- LaTeX

ACADEMIC HONORS AND AWARDS

- **Graduate Council Fellowship**, Stony Brook University, 2011- 2016
- **Richard Larsen Award for Achievement in Undergraduate Mathematics**, Vanderbilt University, 2011