

NIJ Fellowship Applications

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Application Process

Description of Solicitation

Title: Graduate Research Fellowship in Science, Technology, Engineering, and Mathematics

- ▶ Work must have demonstrable implications for addressing the implications of preventing or controlling crime, and/or the fair and impartial administration of criminal justice in the U.S.
- ▶ Areas of interest:
 - ▶ Reducing crime (particularly violent)
 - ▶ Protecting police officers and other peeps
 - ▶ Issues concerning the opioid abuse epidemic
 - ▶ Victimization (human trafficking)
 - ▶ “Supporting prosecutors in their efforts to meet their mission”
 - ▶ Illegal immigration issues
- ▶ Those considering forensic evidence research should look at:
 - ▶ OSAC Research Needs
 - ▶ NIJ Technology Working Group list of research areas
 - ▶ NIJ Core Science and Technology Research Objectives

Why we were chosen to apply (student status)

- ▶ Up to 3 years of funding for a dissertation
- ▶ Eligibility: Enrolled in a doctoral STEM program, proposal of dissertation that is relevant
- ▶ Why us?
 - ▶ Literally, WHY US?
- ▶ Early in the process of dissertation research
 - ▶ Doesn't help to apply if you're almost done
 - ▶ All had a vague idea of a dissertation that seemed to fit the solicitation

How Amy's research fits in

Title: Handwriting and stuff

How Nate's research fits in

Title: Spatio-temporal point processes for crime (STOPPR)

- ▶ Crime modeling and prediction
- ▶ Bayesian spatio-temporal point process models
- ▶ Provide a framework and hopefully a tool for others (criminologists, law enforcement) to make predictions or test hypotheses

How Kiegan's research fits in

Title: Strengthening foundational validity of 3D imaging in bullet examinations: persistence and variability of scans

- ▶ Secondary Analysis of Striation Persistence Data
- ▶ High-Resolution Microscopy Variability Study
- ▶ Comparison of several currently proposed methods for analysis
- ▶ Adding more information to the world of 3D bullet imaging
- ▶ Testing out sensitivity of methods on new/different data!

The Process

- ▶ Many documents that needed to be prepared:
 - ▶ Budget detail / narrative (Marc and Stacy prepared these)
 - ▶ Conflict of interest form (template)
 - ▶ Project Abstract (400 words)
 - ▶ Statement of Support from Committee Chair (thanks everyone!)
 - ▶ Undergraduate Transcripts (WHY...?)
 - ▶ Graduate Transcripts
 - ▶ Enrollment Verification
 - ▶ **Research Narrative AND APPENDICES**
 - ▶ Bibliography/References (supposed to be fairly comprehensive)
 - ▶ Curriculum Vitae/Resumes (of student and advisors)
 - ▶ Personal Statement (2 pages, including career goals)
 - ▶ List of dissertation committee (template)
 - ▶ Proposed timeline/milestones (we honestly have no idea)
 - ▶ Privacy Certificate (weird form)
 - ▶ Letters of Cooperation from outside collaborators (Thanks Gary and Vic!)

Research Narrative

- ▶ Structure:
 - ▶ 12 pages max (minus title page, contents)
 - ▶ Title page (surprisingly complicated)
 - ▶ Table of contents (easy enough)
 - ▶ Statement of Problem and Research Questions
 - ▶ Project Design and Implementation
 - ▶ Capabilities and Competencies
- ▶ Things to remember:
 - ▶ Research need in area of study
 - ▶ Current gaps in data, research, and knowledge
 - ▶ Discuss previous research relevant to the problem
 - ▶ Data acquisition methods (in detail)
 - ▶ Demonstrate validity and relevance of data to be collected
 - ▶ Justify methods of data analysis
 - ▶ Address feasibility and speculate potential challenges, plans to mitigate them
 - ▶ Plans to make results available to interested parties
 - ▶ Capabilities of the student and the advisor
 - ▶ Academic environment and supporting resources
 - ▶ Project management plan

Pros of the Process

Pros

- ▶ We had a lot of help!! (Thanks Stacy, Sarah, Marc, and Harlie!)
- ▶ Forced us to form a research plan
 - ▶ What the research questions are
 - ▶ How we are going to address the questions we have
- ▶ Gave us each a semi?-comprehensive lit review (base for going forward)
- ▶ Now we all have these materials ready to work off of moving forward
- ▶ Know what the process looks like
- ▶ Would be really good for CSAFE as an organization
 - ▶ Expanding on current research
 - ▶ Adding a cool new type of research to the pot

Cons of the Process

Cons

- ▶ HUGE amount of time and energy - developing research narrative
- ▶ HUGE amount of time and energy - all the appendices/documents
 - ▶ Big organizational challenge
 - ▶ Large group of people involved - gets messy!
- ▶ Short notice
- ▶ Lack of familiarity with the process

Outline of Research Narratives

Kiegan: Bullet Data

How did I decide on my research questions?

- Have been working with bullet data
- Automated methods for groove identification in 3D bullet land scans