

# 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
- ▶ Learning more about the current state of research at conferences, etc.
- ▶ Some interest in 'relevant populations', and doing comparisons with representative data to back it up.