Applying for NSF CAREER Grants

Spring ADVANCE Pre-Tenure Workshop
May 5, 2025

W ADVANCE CENTER FOR INSTITUTIONAL CHANGE
UNIVERSITY *of* WASHINGTON

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Updates on National Science Foundation (NSF) Priorities
(April 25, 2025)

> **Can I still propose broadening participation activities (e.g., outreach) in fulfillment of the Broader Impacts criterion?**

— "Investigators should prioritize the first six broader impacts goals as defined by the America COMPETES Reauthorization Act of 2010. Investigators wishing to address goal seven — expanding participation in STEM for women and underrepresented groups — must ensure that all outreach, recruitment, or participatory activities in NSF projects are open and available to all Americans. Investigators may conduct these types of engagement activities to individuals, institutions, groups, or communities based on protected characteristics only as part of broad engagement activities."

> **Will NSF consider proposals directed to a legally mandated NSF program/funding opportunity?**

— "NSF will continue to operate programs that contain elements of broadening participation for individuals based on protected characteristics that are explicitly established in law and prioritized in NSF appropriations language. The research and broader impacts activities proposed in response to these programs should align with the relevant statutory language and aim to generate knowledge broadly impactful to Americans from all backgrounds and regions in the country."

Source: https://www.nsf.gov/updates-on-priorities

UW ADVANCE NSF CAREER Workshop

Brian J Harvey
Associate Professor
School of Environmental and Forest Sciences

the **Harvey Lab**

Fire and disturbance ecology of forest landscapes

Photo credit: Mark Stone

My journey to the NSF CAREER

- Started at UW in 2017
- Submitted 3 NSF proposals prior to CAREER
  - 1 RAPID with more senior colleague (funded 1st time, 2017)
  - 1 Collaborative as lead PI, but with more senior colleagues (submitted twice and funded 2nd time, 2019)
- Was hitting my stride in 2019-2020 AY....and then...
- Clock was ticking for CAREER, given tenure clock, 2 false starts
- Summer 2022, realized that I had two remaining shots to apply, so I hurriedly assembled an attempt
- Not selected in 2022, but received positive and constructive feedback
- Served on NSF review panels in 2023
- Submitted 2nd time in 2023 (months before P & T) and......
- Was awarded CAREER in 2024

Some helpful advice that I had received (and used!)

- Take feedback seriously and integrate into revisions (even highlight)

- Integration of Education and Research components

- Demonstrate foundation (i.e., you can do this) and launch (i.e., catalyzing)

- Use visuals and make sure it jumps off the page in a way that is exciting

- Demonstrate support from partners with letters
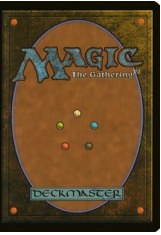
Advice from a CAREER Panelist

Nate Sniadecki

Professor in Mechanical Engineering

CAREER Panel

Relevant Bio:
- NSF CAREER in 2008
- Served on 5 CAREER panels
- Fun: Been playing MtG since '95

- **Similar to regular NSF panel but slightly different**
  - Program Director forms panel from NSF contact list, e.g., "old" program awardees
  - Reviews from Lead (presenter), Scribe (summary writer), and 2+ others
  - Same scoring: E, V, G, F, P or half-steps, e.g., V/G
- **Strong emphasis on Intellectual Merit that will elevate your career**
  - Be transformative: novel ideas are exciting and will open future research areas for you
  - Be truthful: make sure your plans are feasible, e.g., methods, resources, expertise, workload, and costs!
- **Integration of Research and Teaching ≠ Broader Impact**
  - Common examples include classroom talks, new class/module, K-12 and public outreach, and/or research experience for teachers, so be thoughtful and creative
  - "Integration" also means synergy: how do education efforts support your research?
  - Need for assessment: surveys, feedback, external evaluators, coaches, etc.

Proposal Tips

- **Make important stuff easy to find**:
  - Reviewers are busy (like you), so they rely on skimming
  - Text: use section headers, bold key sentences, add some color, box a summary paragraph
  - Images: published and unpublished data, diagram of research plans, photos of past outreach, table of tasks and timelines for research *and* education at the end
- **Don't be sloppy:**
  - Check for typos
  - Replace low resolution figures
  - Missing references
- **Get your letters:**
  - Chair's letter needs to echo your proposal, highlight your talents in research and education, and express their commitment to your success
  - Letters from collaborators are simple boilerplate paragraph

Getting Back Up

- **True experts can be overly critical**
  - Reviewers in your field often focus on proper methods, negative controls, etc.
  - Reviewers adjacent to your field are often more naïve to scientific nuances and focus on the big picture
- **Sometimes good ideas find the wrong audience**
  - Panel summary and reviewer score do not reflect how close you were
    - Primary Consideration ("*must fund*"): 1 or 2 proposals
    - Secondary Consideration ("*maybe fund*"): majority of proposals with top-to-bottom ranking
    - Do No Consider: proposals with serious flaws
  - Your proposal needs strong champions on panel
- **Next panel has no memory**
  - Composition of reviewers will be vastly different
  - No access to previous panel summary