**NSF Conference 2017: General Tips**

**Proposal Success Rate**

* NSF has an average 20% success rate over all programs. (1 out of 5).
* This varies by program (e.g., AISL funded only 6% last year).
* Funding rate has remained relatively stable (estimated at 19% for 2018).

*Current Focus is on cross-disciplinary research*

**Most Important Parts of Proposal**

* Intellectual Merit (how project advances knowledge)
* Broader Impacts (how project benefits society)
* First page

**Read** **Proposal Guide (PAPPG)** before planning. New guide in effect Jan. 28, 2018.

* Summary of changes at: <https://www.nsf.gov/pubs/policydocs/pappg18_1/sigchanges.jsp>
* Part 1: Proposal prep and submission guidelines
* Part 2: Award management guidelines.
* Those with funded NSF grants should use the guide for Q’s rather than asking PO.

**Data Management Plan**

* **REQUIRED for all proposals**.
* Up to 2 pages (*see NSF info page on this)*
* Describe how it conforms to NSF guidelines on dissemination of results
* Consider what data will be generated, how you plan to disseminate it.
* Varies by directorate, requirements of discipline.

**Letters of Collaboration**:

* If significant collaboration will occur.
* Differs from letter of support.
* See PPAPG for suggested format.

**Post Doc Mentoring Plan**:

* **MUST** be included if post docs are mentioned in proposal.
* FastLane won’t accept applications without the plan if post docs are used.
* Up to 1 page

**Examples of successful proposals:**

* Contact PI and ask for a copy.
* Or run a Google search on your topic / competition
* Demo proposals on NSF site: [FastLane demo system](https://www.fastlane.nsf.gov/jsp/homepage/demo_site.html).
* Abstracts on NSF site: <https://www.nsf.gov/awardsearch/>

Suggested Reviewersis *very important (nearly required in full proposals).* Helps them set up your review panel, identify conflicts of interest

Resubmissions and Duplicates:

* Won’t review 2 proposals from same person if substantially similar, even for different programs.
* Won’t review resubmissions unless they’re *substantially revised*.

**Proposal Sections:**

Project Summary: This section is very important (first and sometimes only section some reviewers see). *They suggest writing proposal first, and project summary after*.

Project Description:

* Usually 15 pages max.
* Pitch your idea in first 1 or 2 pgs. (Big picture)
* Gaps in the field that you’re addressing
* Specific aims.

Broader Impacts

* **MUST include separate Broader Impacts section (**or returned without review**).**

References

* Need over 15 references.
* Don’t leave out a seminal piece of work
* Don’t cite mostly your own work.

Bio sketches:

* Expertise. How well qualified is team?
* Don’t use general WSU biosketch
* Adapt your biosketch for project / competition
* Follow specific NSF format

Current and Pending Support

* To show that PI’s and Co-PIs are not over-committed (you have time for the project).
* Also shows that you’re not receiving duplicate funding.

Budget

* Does PI have adequate resources to carry out activities?
* Is budget realistic (what reviewers would propose themselves)?
* Use 3 page budget justification (for prime and sub-awardees)
* Don’t ask for NSF limit. Ask for only what you need to carry out project.
* Don’t do voluntary committed cost-sharing unless it’s in solicitation. Work with PO’s.

**How to contact Project Officers**

* Best to email, not call (Nowadays, they prefer this)
* Or email to set up call for later

**Top 3 Things POs want to know about a project idea:**

If you don’t know where your project fits, email the Project Officer a ***one pager*** *on:*

* Big-picture idea
* Gaps in literature
* How you’ll address gap to advance science in the field

**Merit Review**

What do reviewers look for? Potential for project to:

* Advance knowledge and understanding (Intellectual Merit)
* Benefit society or advance desired societal outcomes (Broader Impacts)
* Explore creative, original, or transformative concepts?
* Is plan well-reasoned, well-organized, based on sound rationale? Mechanism to assess success?
* How well qualified is PI, team, or institution to conduct the activities?
* Are adequate resources available (at home institution or through collaborations)?

Common reasons for “return w/o review”

1. Need separate sections for Intellectual Merit and Broader Impacts
2. Include prior NSF support (as PI or co-PI) (from past 5 years)
3. Data Management plan missing
4. Post-doc Mentoring Plan missing, if applicable
5. Insufficient lead time (start date too close to submission)
6. Not invited for full proposal (if LOI was required)
7. Similar to another of your proposals under review (2 directorates, same research project)
8. Page limits, formatting, not responsive to solicitation, etc.
9. Previously reviewed and declined, and wasn’t substantially revised.

**Review Process**

Informed *within about 6 months* about outcome of proposal. (75%).

* If PO says “recommended for an award,” it is not certain yet.
* Sometimes “*no news is good news*” (often those not accepted hear first).

Types of review

* Ad hoc reviewers: from 3 to 7 reviewers
* Panel review: face to face or virtual.
* Most reviews are combo of panelists and ad hoc reviewers.
* Co-review: (*common for EHR or SBE*): Can ask for this on cross-cutting projects. Submit once.

Frequent reasons for rejection:

1. Intellectual Merit and Broader Impact sections weak
2. NSF doesn’t have enough funding for all of the best projects.
3. Already funded several projects from one institution, geographical area, or topic.

Reconsideration process: *Very rarely used*. If a proposal reviewed very well but declined, call PO to find out why. They can tell you whether you should resubmit as a new proposal.

***PI is responsible for annual and final reports. If reports are overdue, NSF can’t continue the award.***

**Q & A**

Q: For programs with no deadline, are there opportune times to submit?

*A: NSF can’t make awards between July and October. They make more awards in the 4th quarter.*

Q: Is there program-specific info on funding rates?

*A: Yes, NSF will provide this online after the conference. Merit Review Report also provides this.*

Q: What start date should we use in our proposal timeline?

*A: Generally about 6 months after you submit. However, be realistic. If you’re funded, NSF will work with you. (Proposals are not accepted with insufficient lead time).*

Q: How do target dates and deadlines differ?

*A: Deadline: hard date. This includes LOI’s and the end of a “submission window”.*

*Target date: possible extension of a few days. See solicitation.*

*Dear Colleague Letters (DCLs): usually no deadline. Contact PO before submitting.*

*Preliminary proposals: Required for some solicitations. If you’re invited to go further, you receive panel reviews, with opportunity to revise and resubmit by a certain date.*

**Conference Grants:**

* Only if results can’t be obtained with regular professional society meetings.
* Ask for funds at least 1 year in advance.

**RAPID, EAGER:**

* Email PO to explain why it doesn’t fit as a regular proposal, and why it’s a good fit
* Get permission to submit.

**GOALI:**

* Academic liaison w industry. Shared interests of researchers and industrial partners
* e.g., faculty conduct research in industrial setting).
* Need at least one industrial co PI.
* No funds for industrial partners.

**IDEAS Lab:**

* 5 day lab, 25 to 30 people selected for team. For intractable problems.
* Recent topics: quantum computer challenge, origins of life w NASA, leadership diversity, etc.
* NSF selects panelists to serve as mentors, and then invites preliminary proposals.

**Office of International Sci and Ed: (OISE)**

Science is a highly international activity. NSF is a highly international entity.

\*NSF funds only the US side of intl. collaborations.

* Intl. engagement must be integral and provide added benefit.
* Clearly describe mutual benefits.
* Involve US students and early career researchers in intl. activities.
* Link research networks to pull together intl. resources.
* Can also do a supplement for intl. activities for funded awards

*All NSF directorates will fund intl. activities if they fit the above criteria.*

**Partnership for Intl. Research in Ed (PIRE):** Average size: $4.5 million, *highly competitive, does not run every year*. 5 year projects.

* For all directorates / fields.
* Many are interdisciplinary
* Next one is planned for 2019.
* Integrates research and education.
* International teams address a research theme,
* Create a plan re complimentary expertise to advance research and support education,
* Provide opps for US students and early career researchers to conduct research overseas.

**Intl. Research Experiences for Students**

* Supports globally engaged science and engineering workforce.
* Supports cohorts of undergrads / grads for overseas experiences.
* A new track supports experiences for grad students in intl. research and development.
* For undergrads, there are REU opps.
* NSF PI’s or proposers can submit ideas for REU sites that have an intl. dimension.
* **PI’s must apply for the students.**Must be U.S. citizens, permanent residents or nationals.

*Need cutting edge research question that is critical to the field.*

*For intl. projects, contact PO at OISE (for country you’ll be working in) and the PD for your directorate.*

* Show how intl. collaboration advances the research.
* Show how intl. collaboration makes use of intellectual contributions of partners
* Include US early career and US students.
* Show how it broadens participation (diversity)
* Include documentation to back up expertise of collaborators

**Partnership for Enhanced Engagement in Research (PEER)**

*This is US AID, but NSF is involved.* Supports researchers in developing countries and specific research areas. If foreign collaborator receives US AID funding, then NSF awardees can receive a supplement.

**RAISE (new program): Research Advanced by Interdisciplinary Science & Engineering**

**Re: Office of Inspector General**

* You are representing WSU as a PI or co PI. Keep good records and complete all reports.
* ***Document your expenditures****. If in doubt, ask PO’s. Keep in touch with WSU budget staff as well.*
* They audit funded awards using cash drawdowns, analytics.
* Then they decide whether to look for risk at specific institutions.
* They can request your policies and procedures. They look at travel, transactions, spend-outs, transfers, pre and post award transactions, etc.
* NSF has an anonymous tip hotline, but they need detailed complaints.
* They protect confidentiality to the fullest extent of the law.