



NAVIGATE
UNIVERSITY OF MICHIGAN

National Science Foundation (NSF)

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Welcome and Introduction

Today's Guest Speakers

Becky O'Brien

Director of Research Administration
School of Information

Kellie Buss

Project Representative
Government Sponsor Team, Office of Research & Sponsored Projects



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Today's Discussion



- NSF at a Glance
- Proposal Development & Submission
- Proposal Components
- Post Submission and Post Award
- Q&A



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NSF at a Glance

\$220,479,000
total NSF
awards to the
state of
Michigan in
FY18

Federal
Agency
created by
Congress
in 1950.

93% of \$8 billion
annual budget
committed to
research,
education and
related activities

\$82,800,000
awarded to
U-M FY18
(~38%)

Funds research
& education in
most fields of
science &
engineering,
except medical
sciences.



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Leadership and Organization

Leadership

National Science Board comprised of 24 members

- appointed by the President
- establishes policies and oversees the Director

NSF Director

- appointed by the President
- responsible for NSF staff and management; program creation / administration; daily operations; budget.

Organization

Organized into **7 Directorates**

Each Directorate is comprised of divisions with specific research agendas and budget priorities.

Resources:

<https://www.nsf.gov/news/factsheets/ataglance.pdf>

https://www.nsf.gov/staff/organizational_chart.pdf

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Mission

To promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense.

From The National Science Foundation Act of 1950 (P.L. 81-507)

	Federal Overview	NSF Specifically	Directorates
WHAT they fund	Research Service Demonstration	All fields of fundamental science and engineering, except for medical sciences	Review directorate/division/program pages to see what they fund
FOCUS	Common Welfare, National or Universal significance	Keeping the US at the leading edge of discovery in these areas	Transformative in the area of focus for that directorate/division/program
HOW they review	Other scientists	New panel of scientists for each review	May be from relatively broad fields that fit under directorate



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Proposal Development & Submission

Funding Opportunities

- NSF's active list of [Program Announcements](#)
- PAPPG ([Proposal & Award Policy & Procedures Guide](#))
 - PAPPG is updated every year, usually around the end of January.
 - Update includes a summary of the changes.

Types of Open Calls Within the PAPPG

Research	DDRIG Doctoral Dissertation Research Improvement Grant	RAPID Rapid Response Research
EAGER Early Concept Grants for Exploratory Research	RAISE Research Advanced by Interdisciplinary Science & Engineering Proposal	GOALI Grant Opportunities for Academic Liaison with Industry
Conference	Equipment	Travel



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Funding Opportunities

- Types of funding opportunities
 - [Program Announcements/Solicitation](#)
 - [Dear Colleague Letters](#)
 - [Program Descriptions \(PD\)](#)
- Letters of Intent (LOI)
- Pre-Proposals
- Limited Submissions
- Collaborative Proposals



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Systems

Systems

- Fastlane.nsf.gov
- Research.gov
- Grants.gov/Workspace



Access

- NSF has one ID that works for both Fastlane & Research.gov
- Users register directly in Research.gov
- OSRP assigns roles once ID is established
- OSRP has a webpage to assist with Account set-up
 - <https://orsp.umich.edu/announcements/important-new-nsf-user-accounts-coming-monday-march-26-2018>



Deadlines

Deadlines

- Vary by program - not institution-wide standard dates like NIH
- 5pm of institution's timezone (not one second over)
 - Collaborative - each institution's piece due by 5pm their institution's timezone
- Key Dates:
 - Deadline
 - Submission Windows
 - Target Dates
 - Open Call
 - Rolling Call



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Roles in NSF Proposals

Roles in NSF Proposals

Senior Personnel

- Key Personnel
 - Principal Investigator (contact PI)
 - Responsible for scientific or technical direction of the project
 - All NSF communication will go to PI
 - Co-Principal Investigator
 - Jointly responsible with the PI for project
- Non-Key
 - Senior Personnel/Faculty Associate
 - Faculty (or equivalent) who will participate in the project being supported



Roles in NSF Proposals

Other Personnel

- Postdoctoral Fellow
- Other Professional
- Graduate Student
- Undergraduate Student
- Secretarial/Clerical
 - Not often included
 - Must be well justified



Roles in NSF Proposals

Subaward

- See ORSP page with more detail on subaward vs. hybrid
 - <http://orsp.umich.edu/subaward>

Consultants

- Professional and consultant services rendered by persons who are members of a particular profession or possess a special skill
 - Cannot be officers or employees of proposing organization



Proposal Components

Proposal Components

Internal Checklist

ORSP Checklist:

<https://orsp.umich.edu/tools-resources/sponsor-specific-resources/working-nsf>

Unit Checklist Example (Source UMSI):

<https://orsp.umich.edu/sites/default/files/resource-download/checklist - nsf template 2019.pdf>

NSF Proposal Review Checklist

ORSP will check the items on this [NSF Proposal Review Checklist](#) on a standard unsolicited proposal to one of the National Science Foundation's standing scientific programs (i.e., proposals to which the only application guideline is the above [NSF's Proposal & Award Policies & Procedures Guide \(PAPPG\)](#), provided a finalized proposal is received within ORSP's internal deadline and Sponsored Research Office (SRO) Access has been granted in FastLane.



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Proposal Components



- Single Copy Documents
- Cover page
- Project Summary
- Project Description
 - Intellectual Merit, Broader Impacts, Results of Prior NSF Support
- References
- Biosketches
- Budget & Justification
- Current and Pending Support (including this proposal)
- Facilities, Equipment, and other Resources
- Supplementary Documents:
 - Data Management Plan, PostDoctoral Mentoring Plan, Letters of Collaboration



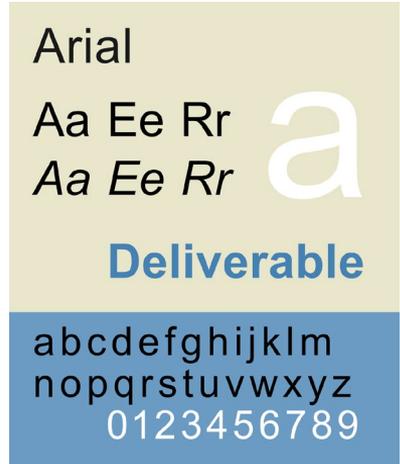
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Submission Formatting

Proposal Font, Margin, and Pagination Requirements

- Font and Font Size (options):
 - Arial (not Arial Narrow), Courier New, or Palatino Linotype - 10 points or larger
 - Times New Roman - 11 points or larger
 - Computer Modern family of fonts - 11 points or larger
- Margins - a least an inch in all directions
- Pagination -
 - FastLane does not automatically paginate
 - Each proposal section must be paginated prior to upload
 - Research.gov automatically paginates



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Proposal Components *(continued)*

Single Copy Documents

- Collaborators and Other Affiliations - MUST use NSF Excel template

15	Table 1: List the individual's last name, first name, middle initial, and organizational affiliation in the last 12 months.				
16	1	Your Name:	Your Organizational Affiliation(s), last 12 mo	Last Active Date	
17		Alphaman, Alan K	Test University XYZ		
18			Test University ABC (adjunct)	1/1/2017	
19			Test University DEF (interviewed)	12/12/2016	
20					
21					
22	Table 2: List names as last name, first name, middle initial, for whom a personal, family, or business relationship would otherwise preclude their service as a reviewer.				
23	would otherwise preclude their service as a reviewer.				
24	R:	Additional names for whom some relationship would otherwise preclude their service as a reviewer.			
25		<i>to disambiguate common names</i>			
26	2	Name:	Type of Relationship	Optional (email, Department)	Last Active
27	R:	Alphaman, Alexander	Family		
28					
29					

Source: <https://www.nsf.gov/bfa/dias/policy/coa.jsp>



Proposal Components *(continued)*

Cover Page

- List PI & Co-PIs
 - PI or Co-PI, sponsor approval is needed: to reduce effort by 25% or more, an absence of 3 months or more from institution, or to remove from project.
- Collaborative with multiple institutions
 - Ensure titles, dates, solicitation numbers match across institutions
 - Ensure total combined budget across institutions meets solicitation requirements
 - Linking collaborative proposals
 - Do not have to submit at same time but ensure admin pieces match
 - Cannot withdraw without breaking link. Only file updates once other institutions have submitted their pieces.
- Foreign travel locations
- Indicate Human Subjects or Animal Use
- Beginning investigator is something very specific (not just a junior faculty member)

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Proposal Components *(continued)*

Project Summary

- Plain text entered into system in three categories:
Overview, Intellectual Merit, Broader Impacts
 - Only upload a file if using special characters
 - Approximately 4600 characters (including spaces)
- Double check print view to ensure 1 page and confirm characters/text converted correctly



Proposal Components *(continued)*

Project Description

- Generally 15 pages (double check specific solicitations)
- Separately labeled required sections using exact wording:
 - Intellectual Merit
 - Broader Impacts
 - Results of NSF Prior Support (must include all required items - see [PAPPG](#))
 - No urls allowed
 - Some solicitations require additional labeled sections
- Graphs and charts must fit within required margins, but font on figures can be smaller than the minimum required font size



Proposal Components *(continued)*

References

- Required to have names of all authors
 - Do not use *et al.*
- Must properly cite, but can use any acceptable format
- No page limit



Proposal Components (*continued*)

Biosketches

- List all authors (do not use *et al*)
- Do not include pictures or personal information
- Potential move to requiring SciENCv (more info to come)
- Must follow required format
 - Professional Preparation
 - List (oldest to newest), including location of institution
 - Appointments (newest to oldest)
 - Products
 - Up to 5 closely related to project
 - Up to 5 other significant
 - Synergistic Activities
 - Up to 5 distinct examples
 - Not 5 categories with many examples under each category



Proposal Components *(continued)*

Biosketches - Synergistic Activities Examples

Not Allowed: Categories with Many Examples

- **Selected Conference Activities:** WSDM (Conference Co-chair, 2012), ICWSM (Co-founder, General Chair 2014, Conference Chair 2008, Co-Chair 2007, Steering Committee Member), Workshop on the Weblogging Ecosystem, WWW (Co-organizer 2004, 2005, 2006), Eytan has also co-organized panels (2015) and workshops (2016 and 2017) at the IEEE Vis conference on visualization pedagogy.
- **I have served as Program Co-chair for** Collective Intelligence 2016, Conference Co-chair for AAAI ICWSM (2014), and ACM EC (2007). I chaired the steering committee for ACM RecSys (2013-2015) and serve on the steering committees for AAAI ICWSM and Collective Intelligence.

Allowed: Distinct Activities

- **Service to Computer Science Education Community:** I lead Brave Initiatives – Detroit, a non-profit teaching coding and computational thinking skills to high school girls in the U.S. and internationally.
- **Service to the Accessibility Academic Community:** I have served on the Program and Organizing Committees for the ACM's SIGACCESS Conference on Computers and Accessibility.



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Proposal Components *(continued)*

Budget and Justification *(continued)*

- NSF speaks in total budget
 - Includes direct + indirect
- 5 page limit for justification
 - Per institution for collaborative or subawardee proposal structure
- Voluntary cost share is not allowed



[Example budget justification template](#)



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Proposal Components *(continued)*

Budget and Justification *(continued)*

- NSF proposals use # of months vs. % effort
 - Can include annual base salary increases in calculations and **no salary cap**
 - No more than 2 months per year per investigator across all of their NSF funding (without prior sponsor approval)
 - Must include information regarding how U-M defines a year (see standard language in justification example)



Proposal Components *(continued)*

Budget and Justification *(continued)*

- Participant Support
 - Direct costs for trainees or workshop participants
 - Stipends, travel, subsistence, registration fees, etc. (paid on behalf of participants or trainees)
 - What is not included under Participant Support
 - Human Subjects, hosting, room or AV rental, travel for employees or investigators on project or presenters at workshop
 - Travel for employees/presenters belong under section E. “Travel”
 - Subjects, hosting, and room/av rental belong on line G6 under “Other Direct Costs”
 - No indirects costs allowed on participant support costs



Proposal Components *(continued)*

Budget and Justification *(continued)*

- Equipment
 - Defined as tangible personal property (including information technology systems) having a useful life of more than one year and a per-unit acquisition cost which equals or exceeds the lesser of the capitalization level established by the proposer for financial statement purposes, or \$5,000.
- Travel
 - Break down travel & indicate locations (particularly foreign)
- Subawardee (if proposal is collaborative from a single institution)
 - Subaward budget & justification is needed for each institution (each justification has up to 5 pages)



Proposal Components *(continued)*

Budget and Justification *(continued)*

- Indirect Costs
 - Requires indirect cost total dollar amount to be listed on the budget justification
 - Best Practice is to include the indirect cost rate and type of rate (class) applied to this proposal

Facilities & Administrative (F&A) or Indirect Costs

Facilities & Administrative (F&A) costs (also referred to as Indirect Costs and/or IDC) may not be directly charged to a project, but exist as real costs of university operations. Sponsored projects can budget a percentage of the total project costs to cover these expenses. That percentage is determined by [University of Michigan's F&A rates \(or indirect cost rates\)](#), which are established through an agreement with the federal government and the University of Michigan, in accordance with the federal Uniform Guidance. Costs incurred for common or joint objectives, AND cannot be identified readily and specifically with a particular sponsored project, a particular university-funded research project, an instructional activity (including departmental research), any other institutional activity,

These activities are F&A or indirect costs to U-M:

1. Departmental Administration
2. Plant Operations and Maintenance
3. Space Related Costs (Utilities, Depreciation)
4. Network Costs Definition: Hardware, software, personnel services and other related costs to enable University personnel to share software or data, or communicate with other individuals electronically.

For more about indirect costs, see
<https://orsp.umich.edu/direct-vs-indirect-costs>



Proposal Components *(continued)*

Current and Pending Support

- Enter into system or upload a document following the NSF format
 - Potential changes coming requiring entering into the system directly
 - Make sure to double check overall current commitment (should not be over 100% effort)
- Include
 - All current and pending sponsored research
 - This proposal
 - Research gifts and internal awards
 - Per PAPPG “...from whatever source (e.g., Federal, State, local, foreign, public or private foundations, industrial or other commercial organizations, or internal funds allocated toward specific projects) must be listed.”



Proposal Components *(continued)*

Facilities, Equipment, and Other Resources

- No financial commitments
 - Do not include any dollar amounts or quantified effort
- Include space, resources
 - Include subaward facilities information (only if subaward structure is used in submission)
 - Include people that investigators have access to who are not included in the budget (i.e., no effort)
 - Example: Include information about unpaid consultants



Proposal Components *(continued)*

Facilities, Equipment, and Other Resources *(continued)*

Per PAPPG:

“Proposers should describe only those resources that are directly applicable. Proposers should include an aggregated description of the internal and external resources (both physical and personnel) that the organization and its collaborators will provide to the project, should it be funded. Such information must be provided in this section, in lieu of other parts of the proposal (e.g., Budget Justification, Project Description). The description should be narrative in nature and must not include any quantifiable financial information.”



Proposal Components *(continued)*

Supplementary Documents

- Data Management Plan
 - Limited to 2 pages
 - Resources for faculty
 - [UM Library Data Management Planning](#)
 - [ICPSR Data Management Guidelines](#)
- PostDoc Plan (if applicable)
 - Required if funding postdoc on proposal
 - Limited to 1 page
 - If collaborative, only lead uploads for entire proposal
- Occasionally Requested Documents
 - Broadening Participation in Computing (see [white paper with examples](#))
 - Collaboration or Management Plans



Proposal Components *(continued)*

Supplementary Documents *(continued)*

- Letters
 - Demonstrate proof of collaboration or access
 - **Cannot** be letters of support (unless the solicitation states otherwise)
 - Recommend following NSF language in PAPPG
 - *“If the proposal submitted by Dr. [insert the full name of the Principal Investigator] entitled [insert the proposal title] is selected for funding by NSF, it is my intent to collaborate and/or commit resources as detailed in the Project Description or the Facilities, Equipment and Other Resources section of the proposal.”*
 - If not in compliance, NSF can request to remove letter and will not allow a substitute letter or mark the proposal non-compliant.
 - Include any subaward letters of commitment (should follow same structure)



Post Submission & Post Award

Post Submission

Responses from NSF



Notification of recommendation

- Only the PI receives this e-mail notice
- May ask for revised budget
 - Would need to go through ORSP to submit file update via NSF system
- IRB approval
- Public Abstract
- Other Program Officer Requests

Once budget finalized at Recommended stage, typically fully funded

- May be incrementally authorized, but no changes and has automatic carryforward



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Post Submission

Responses from NSF



Notice of turn down

- PI and ORSP Project Rep receive notice
- Status in NSF system is not changed until after the email is sent from the Program Officer to the PI
- Reviews typically available in NSF system shortly after email received (PI view)
 - Ratings: Excellent / Very Good / Good / Fair / Poor
 - If no reviews in system then Poor / not discussed in the review panel session
- Once NSF system is changed to *turn down*, ORSP is automatically notified and updates the PAF status.



Post-Award

Prior Approval Required For:

- Rebudget involving Restricted categories
 - Participant Support Costs
 - Uniform Guidance-monitored
- No-Cost Time Extensions
 - First extension (submit at least 10 days prior to current end date)
 - Example: Project ends on Aug. 31; extension notice needs to be submitted by ORSP by Aug 20.
 - Second extension (submit at least 45 days prior to current end date)
- Key Personnel: change in who or reduction in effort
- Full list is found in the FDP Prior Approval Matrix



Post-Award

Prior Approval

- Prior approval requests require PI/RA actions:
 - In Research.gov (create and forward to SPO) or Fastlane, *and*
 - In eRPM (ORSP Action Request with a completed PACR form)
- Each type of prior approval request has different materials that need to be provided with the PACR.
 - Refer to ORSP's Post-Award Change web page for the detailed requirements: <https://orsp.umich.edu/post-award-change-request-form>



Post-Award

Reports

- **Annual Technical Report** (required)
 - Due 90 days before the next budget period starts
 - The report is considered overdue once the next budget period starts
 - Submitted in Research.gov
 - Overdue technical reports will hold up yearly increments or new funding for anyone on the project team
- **Interim Project Report**
 - Not required but sometimes used to provide an update on progress of a project
 - It is in addition to - not a replacement for - annual or final report
 - Submitted via email to the Program Officer



Post Award

Reporting & Closeout

- **Final Technical Report**
 - Annual report for the final year - not a report of the entire project
 - Due within 120 days after end date
 - Submitted in Research.gov
- **Project Outcomes Report**
 - Due within 120 days after end date of grant
 - Submitted in Research.gov
 - Meant to be shared with the public
- **Financial**
 - Sponsored Programs submits based on completion of Financial Status Report (FSR) by PI and unit RA



Resources

ORSP Website:

<https://orsp.umich.edu/tools-resources/sponsor-specific-resources/working-nsf>

Proposal & Award Policies & Procedures Guide (PAPPG)

https://www.nsf.gov/pubs/policydocs/pappg19_1/index.jsp

NSF Funding Information

<https://www.nsf.gov/funding/aboutfunding.jsp>

Research.gov Help Guides

https://www.research.gov/common/robohelp/public/WebHelp/Research.htm#Welcome_to_the_Research_gov_Help_System.htm



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