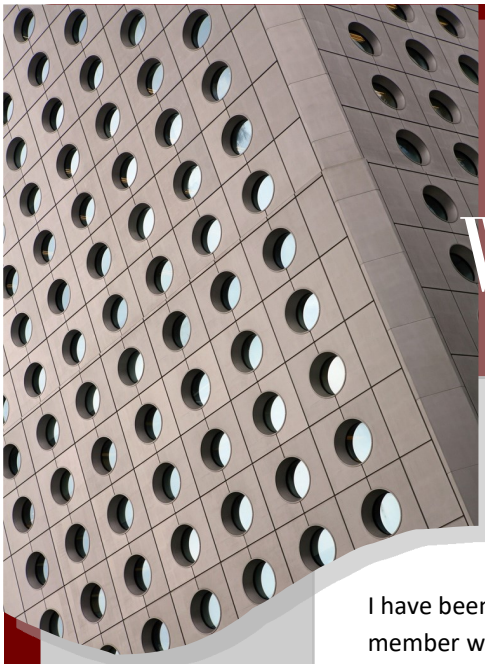
OFFICE OF SPONSORED PROGRAMS



Windows of Opportunity

VOLUME 8, ISSUE 2 SUMMER 2021

IN THIS ISSUE:
A Special Focus on the National Science Foundation

Insights from the NSF

Stefan Robila
Professor of Computer Science, NSF Program Director (IPA) 2018-2021

I have been a Montclair State University faculty member with a research agenda focused on computational science for close to two decades. I was, thus, cognizant of the role that the National Science Foundation (NSF) has in supporting through funding the foundational science and education in the United States. I have applied for and received several NSF awards, reviewed proposals, and served in review panels and engaged with NSF staff in various professional venues. Joining NSF as rotating Program Director (PD) in January 2018 allowed me to see the other side of the funding process and consider how a better understanding of the Foundation and its functioning can help researchers improve their funding efforts.

The first insight is to always communicate. It is tremendously helpful to talk to PDs and seek their advice on the fit of your project idea to the programs they manage or are familiar with. Such communication can start with an email that includes a short summary (often called a one-pager) and maybe a request for a meeting. While in the past PIs also visited in person or sought meetings at professional conferences, the current pandemic resulted in all my interactions being virtual (via Zoom), and not surprisingly the number of meetings also increased. Another effect of the pandemic is the increase of virtual events (such as office hours or program webinars) where PDs come and present new opportunities but also answer questions from the participants. The NSF Events page is very helpful here.

Starting the communication is important; even if the work is not aligned with their programs, PDs can still help by forwarding the message to their colleagues or suggesting other contacts. One should also understand the limits of the communication. In general, PDs cannot offer opinions on the potential for funding or evaluate the merits, as this may suggest that they would bypass the review process. A PD cannot discuss or share others' proposals or information that is not publicly available. I would also encourage colleagues to consider discussing the declined proposals. Such discussion will provide one with information on the context of the review, including what aspects prevented a funding recommendation. While in some cases this could simply be lack of sufficient funds, in others the PD could point out a fundamental drawback that, if not addressed, will also prevent future proposals from being recommended for funding. Finally, when receiving an award, communication should continue and not be limited only to discussions related to funds administration. As a federal agency NSF is interested to learn how the projects lead to accomplishments (be it research results or impact on students and

Continued on next page

the community). It often generates news releases emphasizing such accomplishments; such materials originate with communications from PIs.

A second insight is to learn the NSF structure. My appointment was with the Office of Advanced Cyberinfrastructure (OAC), one of the four Divisions and Offices that form the Directorate of Computer Information Science and Engineering (CISE). CISE is one of the seven NSF scientific directorates that are responsible for the funding. Foundational discipline-specific research programs are often managed by groups of PDs from within the same division, while interdisciplinary programs are managed by groups that cut across divisions or directorates. A small number of activities (such as the Major Research Instrumentation program) are coordinated by the Office of Integrative Activities and not from within a directorate. Even then, the best starting contact would still be a PD with understanding of your work. Interdisciplinary programs will often include specific requirements that may not be found in regular programs, so understanding what type of program you are targeting will allow you to prepare a proposal that is responsive to the funding call. As an example, one of the programs that I managed focused on supporting creation of scientific software for broad community use. Here the emphasis was on the software development innovation, or on the innovation that the software would enable. Proposing to develop a software library for a new method that was not yet validated and accepted by the community was usually evaluated to be out of scope.

A third insight is to always consider the diversity of the funding opportunities. While a significant part of the NSF funding is still allocated to foundational, discipline-specific research, a growing proportion emphasizes the convergence or interweaving of multiple disciplines in solving problems. As an example, in the last few years, NSF has released calls for projects that align with the Big Ten Ideas with each idea having at least $30M in funding dedicated to it. Other programs focus on fostering the professional development of researchers. Beyond the renowned CAREER, some directorates have their own research initiation programs (e.g., CRII in CISE or ERI in ENG). Others are issued in response to current events (such the COVID-19 pandemic) and carry their own specific requirements. Finally, awards can be supplemented with additional funding to support undergraduate researchers and teachers (through REU or RET supplements) or, in some cases, immersion of graduate students in industrial settings.

In pursuing the funding needed for completion of the projects, today's academics are playing a more holistic role than simply excelling in research or teaching. They must have a good grasp of the funding environment, understand the structure and functioning of the sponsor organizations, communicate often, and be ready to adapt and respond to changing opportunities. I hope that the insights provided above will help colleagues in charting their project paths.

What Is the HERD Survey?

The Higher Education Research and Development (HERD) survey is the primary source of information on national research and development (R&D) expenditures at U.S. colleges and universities. The survey collects information on R&D expenditures by field of research and source of funds, and also gathers information on types of research, expenses, and headcounts of R&D personnel. The survey results help the federal government and other sponsors determine future funding priorities. This information also forms the basis of a report which ranks institutions according to their R&D expenditures.

Due to its significance, MSU completes the HERD survey annually. When submitting an IPF in Cayuse SP, PIs/PDs must complete a question in the 'Proposal Summary' section that asks what field best describes the type research being proposed and this data point is used for the HERD survey.

Just What Is a "Participant" Anyway?

Kate Dorsett
Post-Award Officer, OSP

If you've ever studied the formulas in the OSP internal budget Excel sheets (and who hasn't?), you'll notice that "participant support costs" are not charged indirect costs. And if you're familiar with re-budgeting on an NSF award, you know that the NSF gives us a lot of leeway to re-budget UNLESS you want to move funds out of participant costs. So, what is the deal with participant support costs? What are they?

Participant support costs have a unique definition in Uniform Guidance §200.75:

> *Participant support costs means direct costs for items such as stipends or subsistence allowances, travel allowances, and registration fees paid to or on behalf of participants or trainees (but not employees) in connection with conferences, or training projects*

Let's break down some key takeaways from this short and simple definition:

1. Participant support costs are meant to defray the costs to the participants.
2. A participant is the recipient, not the provider, of a service or training opportunity.
3. Participants are **not** employees. Did you notice there was no mention of salaries & wages in the list of allowable direct costs? Participants do not have a job description. Their only "deliverable" is meeting the program requirements.
4. Participant support costs are typically incurred for projects that include an education or outreach component, such as a workshop, conference, seminar, symposium, etc.
5. Participant support costs are NOT the same as incentive payments to research subjects. The latter, also called human subject payments, are considered an "Other Direct Cost" and are part of an approved IRB protocol.

Some examples to consider:

- Montclair State University is awarded a grant to host an educational workshop on campus. Postdoctoral fellows will apply for financial support to attend the conference. The financial support will cover the costs to travel to and attend the workshop. Travel reimbursement costs, lodging/per diem during the event, and registration fees would be considered participant support costs. However, costs of hosting the event, such as room rental, AV equipment rental, or catering, **would not be** allowable as participant support costs.
- MSU received an NSF award for a new REU Site project. The award will enable 10 undergraduate students to participate in a summer research project. The students will receive a stipend and subsistence (meals and housing). Additionally, all students will participate in a field trip, and the corresponding registration fee is also supported by the award. All of these costs would be considered participant support costs. However, the field trip registration fee for the PIs (MSU faculty) **would not be** allowable as a participant support cost.
- MSU is part of an NSF collaboration involving PIs from several different institutions. The MSU PI hosts a meeting with her Co-PIs and other scientists to discuss project progress. Collaborators must travel to Montclair to attend the meeting. The costs for this meeting of scientific collaborators to discuss the project **would not be** considered participant support costs.

To reiterate, classifying expenses as participant support costs can have major post-award implications, both in terms of the budget (again, they are not charged indirects), as well as *how* payments to the participants should be processed. It is important to understand the underlying principles of participant costs, but of course, there are always unique situations. When in doubt, don't hesitate to reach out to OSP for help!

Awardee Profile: Bharath Samanthula

Dr. Bharath Samanthula, Assistant Professor in the Department of Computer Science, was recently awarded a three-year, $395,470 grant from the National Science Foundation in response to a proposal he sent to their Research Experiences for Undergraduates (REU) program. As part of our Awardee Profile series, we asked Dr. Samanthula to share his insights about the proposal submission and award process.

What are the major aspects of your awarded project?

Given the scarcity of qualified cybersecurity workers globally, our REU Site will train students to solve real-world cybersecurity problems and aspires them to be next generation cybersecurity professionals. Specifically, we recruit ten junior-level undergraduate students every summer and nurture them with immersive research experiences in three broad areas of Cybersecurity—namely, applied cryptography, machine learning for cybersecurity, and enhancing user behavior to build trusted software. Our project aims to recruit students predominantly from underrepresented groups, especially women and minorities, at institutions where research opportunities for undergraduates are limited.

What were your first thoughts after having received the news that you were awarded?

We were so excited when we first heard the news that our proposal had been recommended for funding. We thought this new grant would help my efforts to promote MSU as the next-generation Cybersecurity research hub. Although the focus of this project is primarily undergraduate research, we thought this project would also help MSU graduate students with rich mentoring experiences. Most importantly, we thought this project would create a new, vibrant atmosphere where MSU faculty mentors can create sustainable collaborations with participating students and their home institutions.

What are some of the challenges involved in projects like yours? How are you tackling these?

I think the main challenge is to host the summer program virtually. Due to the Covid-19 pandemic, we have decided to run our program fully virtual this summer. As a result, establishing the community bonding or social aspects of the cohort will be challenging to achieve in an online environment.

We plan to adopt different communication channels (e.g., Slack and WhatsApp), virtual social meetings, seminars, and brain-storming sessions to keep the students connected and engaged.

How would you advise colleagues interested in submitting a grant application?

I think every program has a specific mission and goals. Therefore, I would encourage anyone preparing for a grant application to first clearly understand the objectives of the program to which they are applying for. Then, I would advise them to develop a theme (aligning with the program objectives) and ideas centered on that theme to build an exciting proposal. It is also equally important to make sure that the broader impacts and intellectual merits of the proposal are very strong.

"MSU NSF Facts"

Over the past three fiscal years....

- The NSF is MSU's leading federal sponsor, in both number of awards received and dollars awarded.
- There have been 92 unique MSU PIs or Co-PIs on NSF submissions.
- There were106 NSF submissions during that time period, 30 have been Collaboratives.
- In FY19, MSU had 3 faculty members with active CAREER awards. The following year, the NSF awarded yet another MSU faculty member with the prestigious award.

Effort Certification Replaced by Quarterly Expense Validation

Trisha Sardesai
Director, Office of Grants Accounting

In an effort to provide more visibility to a Principal Investigator on his or her sponsored research projects, Montclair State University has moved toward validating all expenses, including payroll, as a part of the quarterly expenses verification/validation for all Principal Investigators (PI) who have sponsored projects. The purpose of this verification/validation is twofold. First, it replaces the existing Effort Certification that previously occurred each academic term. Second, this is a means of providing the PI with consistent financial reporting that allows him or her to easily review and communicate with Grants Accounting.

PIs are now required to validate the amount paid to each employee working on a grant on a quarterly basis, in addition to validating all expenses incurred on that grant for the current quarter. In the month following the calendar quarter end, an announcement will feature in your Workday inbox—in addition to an email from Finance and Treasury—informing you that the validation is available for you to approve. This process is accessible only to Principal Investigators who are the recipients of grant funds from an external sponsor and, as such, only someone in this capacity can review and validate the expenses using this report.

We will also inform you via email of training schedules, in case you would like to attend as a reminder on what the process is from start to finish. This process is mandatory for all PIs and for all their sponsored projects, regardless of the sponsor type. The added advantage of validating all expenses on a quarterly basis is that it reduces the risk of multiple cost transfers taking place after the ninety-day limit, thus reducing the risk of an audit finding. As a reminder, you always have access to your grant information in Workday at any point in time using the R134 report- Grant summary by ledger account.

Featured Awards

Dr. Joshua Sandry of the Department of Psychology received the first year of a $125,522 subaward from the Kessler Foundation for the National Institutes of Health-funded R01 project *"MRI Markers of Feedback Timing during Learning in Individuals with TBI with and without Clinical Depression."* The project will conduct a study to examine the influence of feedback timing on learning and brain activity in individuals with traumatic brain injury and clinical depression and quantify the link between diagnostic clinical assessments and feedback timing benefits. This project is one of the first to experimentally investigate the relationship between clinical depression and learning in persons with moderate to severe TBI.

Dr. Shaon Ghosh of the Department of Physics and Astronomy has been awarded $150,000 by the National Science Foundation in support of his project "*RUI: WoU-MMA: Multi-Messenger Astronomy and Astrophysics with Gravitational-Wave Data."* The award will support improvements to gravitational wave detectors for a fourth observing run of LIGO-Virgo collaboration. The first three observing runs have already yielded more than fifty detections of gravitational waves from binaries of orbiting neutron stars and black holes. Dr. Ghosh will also commit part of his time to developing and running teacher development workshops for high-school physics teachers.

Dr. Jinshan Gao of the Department of Chemistry and Biochemistry received a $315,000 award from the National Science Foundation for his project "RUI: Development of Fluorescence Free-Radical Tags for N-Glycan Quantitation and Characterization using UPLC-MS/MS." This project will develop a reliable, efficient, sensitive, and accurate approach for simultaneous glycan quantitation via fluorescence detection and characterization using mass spectrometric radical-directed dissociation, and provide research opportunities for underrepresented minority first-generation undergraduate and graduate students.

Your NSF Report Is Due: Now What?

Catherine Bruno
Post-Award Officer, OSP

As funded PIs know all too well, an award means both conducting the funded research or program and also reporting on it. Very rarely is there a funder that does not want any sort of report/update/final write-up about what they funded. Most PIs would agree that the NSF has one of the most streamlined reporting requirements of any of the funders. The NSF requires an annual report during the period of performance of the award, a final report, and a project outcomes report at the end of the period.

In 2013, the NSF implemented the Research Performance and Progress Report (RPPR) template, which PIs have been using when completing their annual and final reports in Research.gov. The RPPR is comprised of six major sections:

- Accomplishments
- Products
- Participants/Organizations
- Impacts
- Changes/Problems
- Special Requirements

The RPPR template has not changed since its implementation, until this past fall. The NSF now has additional, new requirements. They include:

- PIs must notify the NSF when active other support has changed since the award was made, or since the most recent annual report. PIs notify the NSF via an updated Current and Pending Support uploaded into the RPPR. The Office of Sponsored Programs (OSP) highly recommends that PIs utilize SciENcv for this. SciENcv is a free web-based tool that assists researchers with assembling the professional information needed to create a Current and Pending Support document. You can find detailed information about SciENcv on OSP's website.
- New questions:
  - Percentage of the award's budget that was spent in a foreign country.
  - Change in primary performance site location from that originally proposed.
  - The impact on teaching and educational experiences.

The timely submission of NSF reports is critical and may have significant negative impacts on the PI, any Co-PIs, and the University. NSF emails PIs reminders before reports are due and when reports have become overdue. In overdue report emails, the NSF states: *"Failure to submit timely reports will delay NSF review and processing of pending proposals and processing of additional funding and administrative actions for all identified PIs/PDs and co-PIs/co-PDs on this award."* In terms of final reports, if a PI does not submit all final reports within one year of the period of performance end date, the NSF is required by the Office of Management and Budget to report the institution's failure to the Federal Awardee Performance and Integrity Information System (FAPIIS). Federal agencies are required to evaluate FAPIIS information prior to issuing new awards. Therefore, being reported to FAPIIS can possibly affect ***any*** future federal awards to an institution.

In conclusion, here are some tips:

- PIs should log into Research.gov often to see when their next report is due.
- Start work on your report sooner rather than later.
- Submit your report by the deadline.
- Ask OSP for help if needed!

NSF RUI Eligibility Update

Ted Russo
Director, OSP

Over the years, MSU has been awarded numerous grants from the National Science Foundation's Research in Undergraduate Institutions program. Per the RUI solicitation, the program supports "research by faculty members at predominantly undergraduate institutions (PUIs)." Special attention is paid by reviewers to the RUI impact statement, and RUI proposals are "evaluated and funded by NSF programs in the disciplinary areas of the proposed research and are funded at their discretion."

As a result of the number of graduate degrees conferred in NSF-supported fields (averaging more than twenty over a two-year period), MSU—as of this writing—is no longer to use the RUI designation in its applications to NSF. For some, this may be disappointing news, yet considering the evolution and growth of MSU's research enterprise, classification as a Carnegie Research 2 Doctoral Granting University, and State of NJ designation as Public Research University, it was inevitable. Active RUI awards are not in any way impacted, nor are pending RUI applications. Additionally, MSU remains eligible for NSF's Research Experiences for Undergraduates (REU) program, and NIH's Research Enhancement Award (R15), which uses much different criteria based on NIH expense data. If you have any questions about this change in eligibility, please let us know.

OSP Spotlight: National Science Foundation

Minority-Serving Institutions Funding Opportunities

Improving Undergraduate STEM Education: Hispanic Serving Institutions (IUSE:HSI)

The goals of the IUSE:HSI program are to enhance the quality of undergraduate science, technology, engineering, and mathematics (STEM) education and to increase the recruitment, retention, and graduation rates of students pursuing baccalaureate degrees in STEM. Intended outcomes of the HSI Program include broadening participation of students that are historically underrepresented in STEM and expanding students' pathways to continued STEM education and integration into the STEM workforce.

Computer and Information Science and Engineering Minority-Serving Institutions Research Expansion Program (CISE-MSI)

This program seeks to expand engagement from MSIs in CISE-funded research projects. MSIs are central to inclusive excellence: they foster innovation, cultivate current and future undergraduate and graduate computer and information science and engineering talent, and bolster long-term U.S. competitiveness.

Build and Broaden 2.0: Enhancing Social, Behavioral and Economic Science Research and Capacity at Minority-Serving Institutions

B2 2.0 encourages research collaborations between scholars at MSIs and scholars in other institutions or organizations. NSF seeks to support research activities in the Social, Behavioral, and Economic sciences at MSIs.

Alliances for Graduate Education and the Professoriate (AGEP)

AGEP aims to increase the number of underrepresented faculty in specific STEM disciplines by advancing knowledge about career success pathways. The program supports development and implementation of innovative models of doctoral education, postdoctoral training, and faculty advancement. Strategic collaborations are encouraged as part of the program with multiple academic partners as well as with outside groups. While this opportunity is not specifically meant for MSIs, they are encouraged to lead AGEP projects.

NSF's New PAPPG Update

The National Science Foundation published their Proposal & Award Policies & Procedures Guide (PAPPG) (NSF 22-1), which will apply to any proposals that are due on or after October 4, 2021. The Office of Sponsored Programs believes that there are a number of changes on the horizon which NSF proposal submitters should be aware of.

To begin, NSF is introducing a new proposal type and a new supplemental request—*Planning* and *Career-Life Balance (CLB)*:

- Planning proposals are specifically in support of initial conceptualization, planning and collaboration activities for future large-scale projects submitted to NSF. The PAPPG makes it very clear that this will not support seed funding for an already declined proposal or preliminary research connected to already-established programs. PIs will need to contact a Program Officer related to the proposal topic well in advance so that the PO can determine if the work is suitable to the proposal type, and email documentation will need to be uploaded to the application. The PAPPG also states that there will be a maximum request of $100,000 per year for up to two years.
- The other addition—Career-Life Balance—can be requested for existing awards in order to support the hiring of additional personnel to sustain research when a PI, Co-PI, Senior Personnel, a post doc, or a graduate student need to take family leave for primary dependent or other direct family responsibilities. This will also apply to post-doctoral fellowships and Graduate Research Fellowship Program (GRFP) awardees. The request may include funding for up to six months of salary support or stipend for a maximum of $30,000 in direct costs. Fringe benefits and associated indirect costs, but not tuition, may be included in addition to the salary costs.

Sam Wolverton
Pre-Award and Outreach Specialist, OSP

Regarding preparation of a proposal, NSF has included revisions and clarifications for the Biographical Sketch and Current and Pending Support sections, which are now required to be prepared using one of two NSF-approved formats. NSF has also created a useful table—NSF Pre-award and Post-award Disclosures Relating to the Biographical Sketch and Current and Pending Support—that provides a handy reference for the information that must be included in each document.

Regarding the Biographical Sketch, the section now has a maximum of three pages. In addition, the inclusion of "et. al" is now allowed in the Products section. Also, the PAPPG has included further clarification about what is expected to be included in the Appointments section—namely, all current domestic or foreign professional appointments outside of the individual's academic, professional, or institutional appointments at the proposing organization.

For Current and Pending Support, a significant addition is that a brief statement for each proposal or in-kind contribution must be included. It should also include a description of any potential overlap with the proposed project and any active or pending proposal or in-kind contribution, which includes scope, budget, or person-months planned or committed. This information will be used be reviewers to identify any potential conflicts.

Finally, in their draft of the PAPPG, NSF did include a comment in the Proposal Font, Spacing and Margin Requirements section that they are currently analyzing their existing font policy. If this results in any changes, they will publish an announcement in the Federal Register for public comment, and OSP will reach out to the MSU community with new guidance.

MONTCLAIR STATE UNIVERSITY
Office of Sponsored Programs

Ted Russo, *Director* ▪ Catherine Bruno, *Post-Award Officer* ▪ Kate Dorsett, *Post-Award Officer* ▪ Amanda Lopez, *Junior Pre-Award Specialist* ▪ Dana Natale, *Pre-Award Services Manager* ▪ Sam Wolverton, *Pre-Award and Outreach Specialist*

E-mail: *osp@montclair.edu* ***Telephone:*** *973-655-4128*

The School of Nursing and The Graduate School 415