Welcome to the DMS Virtual Office Hour. We will begin soon.

Please submit questions via the Q&A box available to you on Zoom.
Division of Mathematical Sciences (DMS)  
Welcome to our Virtual Office Hours!

Program Directors in attendance today

• Juan C. Meza (Division Director)
• Stefaan De Winter, Tiziana Giorgi, Cesar Silva, and Sandra Spiroff (Research Experiences for Undergraduates)
• Huixia (Judy) Wang (Smart Health)
• Michelle Manes (Tips for new PIs)
• Moderators: Michelle Manes, Malgorzata Peszynska, Christopher Stark

Subscribe to DMSNEWS:
Send email to listserv@listserv.nsf.gov
In the body of the message, put the following command: subscribe dmsnews [your name]

Suggest a topic for future VOH:
Send email to dms-voh@nsf.gov
Division of Mathematical Sciences (DMS)

Questions during VOH:

• Submit your questions via the Q&A box
  • Questions can be submitted anonymously.
  • We will focus on questions of interest to a wide audience.
  • For specific questions about a particular project, contact a cognizant Program Officer.

• For recently asked questions/copy of slides, see
  https://www.nsf.gov/mps/dms/presentations.jsp

• Next DMS Virtual Office Hour: Tuesday, February 23, 2PM EST
  • Topics include: Math Bio program, NIGMS, Combinatorics and Foundations programs.
  • Questions can be submitted in advance on the registration form.
Division of Mathematical Sciences (DMS) Virtual Office Hour Topics today:

• Update from the Division Director.

• Research Experiences for Undergraduates (REU).
  https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5517&org=DMS&from=home

• Smart Health and Biomedical Research in the Era of Artificial Intelligence and Advanced Data Science (SCH).
  https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504739&org=DMS&from=home

• Tips for New PIs

• Q&A
Division of Mathematical Sciences (DMS)
Opportunities and upcoming deadlines:

• Funding opportunities
  https://www.nsf.gov/funding/programs.jsp?org=DMS

• Upcoming deadlines link
  https://www.nsf.gov/funding/pgm_list.jsp?ord=date&org=NSF&sel_org=DMS&status=1

• Upcoming due dates
  • Quantum Leap Challenge Institutes: February 1, 2021
  • ADVANCE: February 4, 2021
  • HDR Data Science Corps: January 26 – February 12, 2021
  • Smart Health: February 16, 2021
  • Algorithms for Threat Detection: February 17, 2021
  • National Science Foundation Research Traineeship Program: February 25, 2021
DMS UPDATE

JANUARY 2021

BUDGET UPDATE

COVID-19 IMPACTS AND DMS RESPONSE

AGEP-GRS SUPPLEMENTS
AGEP-GRS Supplements

• EHR supports "Alliances for Graduate Education and the Professoriate" (AGEP) and DMS participates in a current offering of Graduate Research Supplements for AGEP-associated institutions.

• See the Dear Colleague Letter NSF 20-083 for more information, including links on eligibility. DMS Contact: Stefaan De Winter(sgdewint@nsf.gov)

• AGEP-GRS student candidates must be US citizens, nationals, or permanent residents. One-year supplements are potentially renewable for up to three years.

• Some masters-degree students are eligible.
Research Experiences for Undergraduates (REU) Overview

• Website: https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5517

• Program Officers for DMS:
  Stefaan De Winter (sgdewint@nsf.gov)
  Zhilan Feng (zfeng@nsf.gov)
  Tiziana Giorgi (tgiorgi@nsf.gov)
  Cesar Silva (csilva@nsf.gov)
  Sandra Spiroff (sspiroff@nsf.gov)

• A directory of active sites: http://www.nsf.gov/crssprgm/reu/reu_search.cfm

• Submission Deadline: August 25, 2021 (for REU Sites, apply to NSF 19-582)
Research Experiences for Undergraduates (REU) Purpose

The REU program, through both Sites and Supplements, aims to provide appropriate and valuable educational experiences for undergraduate students through participation in research.

• **REU Sites:** independent proposals
  - About 8-10 students per year, most recruited from outside the host institution.
  - Total project costs should not exceed $1,350 per student per week.

• **REU Supplements:** part of a new or ongoing NSF-funded research project
  - One or two students from the host institution.

• **RET Component:** research experiences for K-12 STEM teachers
  - Coordinate with REU projects
  - Contact REU program officer for guidance
Research Experiences for Undergraduates (REU) Review Criteria

• Appropriateness and value of the educational experience: quality of research project(s), nature of the students' participation.

• Quality of research environment: Facilities, research mentor(s), professional development opportunities.

• Appropriateness of recruitment/selection plans: students from underrepresented groups, outside the host institution, institutions with limited STEM research opportunities.

• Quality of plans for student preparation and for follow-through.

• Appropriateness of the budget, effectiveness of the plans for project management and evaluation of outcomes.

• For renewals: effectiveness of the previous Site.
Smart Health and Biomedical Research in the Era of Artificial Intelligence and Advanced Data Science (SCH) Overview

- **Website:** [https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504739](https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504739)

- **Program Officer for DMS:** Huixia (Judy) Wang ([huiwang@nsf.gov](mailto:huiwang@nsf.gov))

- A cross-cutting program supported by NSF and NIH (NSF 21-530)

- **Goal:** support high-risk, high-reward research in basic science to address pressing questions in the biomedical and public health communities

- The program funds:
  - ≤ $1,200,000 total cost, up to 4 years
  - Interdisciplinary teams
  - Contribution to fundamental science from at least two NSF sciences: computer and information science, engineering, mathematics/statistics, behavioral and/or cognitive science
Smart Health and Biomedical Research in the Era of Artificial Intelligence and Advanced Data Science (SCH)

More information

• **Some research themes**
  - Information infrastructure
  - Transformative data science
  - Novel multimodal sensor system
  - Effective usability
  - Automating health
  - Medical image interpretation
  - Unpacking health disparities

• **Submission Deadlines:** February 16, 2021; November 10, 2021; November 10, 2022

• **More information---Recorded webinar and presentation slides:**

• **Send a one-page summary** about the IM of the project to:
  sch-correspondence@nsf.gov
Division of Mathematical Sciences (DMS)

Tips for new PIs: Basics of the Process

• NSF: funding opportunity

• PI: submit proposal to program

• Program officers: arrange for review (panel, ad-hoc, internal)

• Reviewers / panel: give advice

• Review criteria:  
  • Intellectual merit  
  • Broader impacts

• Program Officers: make recommendation

• Higher level review

• PI: receives award or declination with feedback

• Whole process: 6 months for most decisions
Division of Mathematical Sciences (DMS)
Tips for new PIs: Do this!

• Read & follow PAPPG & solicitation
• Start early / proofread carefully
• Put your research in context
• Do the background work
• Be specific:
  • “Question”
  • “Conjecture”
  • “Target Theorem”
  • What tools & approaches you’ll use
  • Also for Broader Impacts!
• Be ambitious but realistic
• Write for the reviewers
  • Experts in your general field
  • Reading a lot of proposals
• Get help / mentorship
• Read reviews & other feedback
• Answer:
  • Why this research?
  • Why you?
  • Why now?
Division of Mathematical Sciences (DMS)  
Tips for new PIs: Don’t do that!

• Start at the last minute
• Be vague:
  • “Investigate”
  • “Explore”
  • “Study”
• Dive into technicalities
• Fake it / lip service
  • “potential applications to cryptography”
  • “mentor students from under-represented groups”
• Do the next obvious step
• Neglect broader impacts
• Misunderstand broader impacts
  • Not applications to other areas of math or science
  • Not everyday duties of faculty
  • Not collaborating with women

Most of all, don’t give up!
Virtual Office Hour: Questions from registration

1. General topic:
   A. How is DMS handling conference funding (both awarded grants & new ones)?
   B. Has DMS moved to research.gov? Do I need to do my grant reporting via research.gov?
   C. Any changes to grant submission process or deadlines due to COVID-19?
   D. How are grants impacted that budgeted for travel that cannot be used during the pandemic?

2. REU program:
   A. Impact of COVID-19 on existing & new REUs?
   B. How would an interdisciplinary REU be reviewed?
   C. What can early career researchers (first year faculty) be doing now to prepare themselves to apply for REU funding?

3. SCH program:
   A. Is preliminary data required?
   B. Are clinical researchers required in the team?
   C. Opportunities for AI, machine learning, etc.?

4. New PIs:
   A. Are there any upcoming (or recurring) funding opportunities specifically for early career faculty?
   B. Typical timeline from submission to final decision?
   C. Is there any difference in rating CAREER and regular proposals?
Division of Mathematical Sciences (DMS)
Virtual Office Hour: Thank you

• For slides and recently asked questions, see https://www.nsf.gov/mps/dms/presentations.jsp

• Submit questions/suggestions to DMS-VOH@nsf.gov

• Submit questions through event registration form

• For specific questions about your project, contact a Program Officer

• For future Virtual Office Hour topics, see https://www.nsf.gov/events/index.jsp?org=NSF&event_type=12&orgToSearch=MPS&month=&year=2020

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