

# Division of Mathematical Sciences (DMS)

## Virtual Office Hour

Date: May 12, 2022

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

Please submit questions via the Q&A box available in Zoom.

Moderators (VOH team): Jennifer Connell, J. Matthew Douglass,  
Constanze Liaw, LaWanda Myers, Swatee Naik, **Adriana Salerno**,  
Chris Stark, David Waldner

**Be sure to stay for the Q&A session at the end of the meeting!**



# Division of Mathematical Sciences (DMS)

## Housekeeping

- Submit your questions via the Q&A box
  - Q&A session is held at the end of the office hour.
  - 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 previous slides and recently asked questions, see <https://www.nsf.gov/mps/dms/presentations.jsp>
- Next DMS Virtual Office Hour: June 15, 2:00-3:00 PM Eastern Time
  - Division-wide Q&A session – ask us anything!
  - Questions can be submitted in advance on the registration form.



# Division of Mathematical Sciences (DMS)

## Today's Agenda

- Opportunities and upcoming deadlines
- Rotating Program Director Positions – **Hank Warchall**
- Tips for new PIs on writing proposals – **Ravi Shankar**
- Q&A

### Subscribe to DMSNEWS:

Send email to [listserv@listserv.nsf.gov](mailto: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](mailto:dms-voh@nsf.gov)



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## Opportunities and upcoming deadlines

- Upcoming events

<https://www.nsf.gov/events/index.jsp?org=DMS>

- Funding opportunities

<https://www.nsf.gov/funding/programs.jsp?org=DMS>

- Upcoming deadlines

[https://www.nsf.gov/funding/pgm\\_list.jsp?ord=date&org=NSF&sel\\_org=DMS&status=1](https://www.nsf.gov/funding/pgm_list.jsp?ord=date&org=NSF&sel_org=DMS&status=1)

- [Research Training Groups in the Mathematical Sciences \(RTG\)](#): June 7
- [Mathematical Sciences Infrastructure Program](#): August 2



# DMS Rotating Program Director Positions

**Background:** The NSF Division of Mathematical Sciences annually processes more than 3,000 proposals that request support for research in mathematics and statistics, as well as for training through research involvement of the next generation of mathematical scientists.

This work is accomplished by a team of 28 Program Directors, who work collaboratively to review proposal submissions and make award recommendations.

## Rotators:

- Half of the DMS program directors have time-limited appointments, known as rotator positions
- Rotators bring new ideas and fresh viewpoints to DMS
- Serving as a rotator is valuable, enjoyable professional development
  - Get an overview of NSF funding in the mathematical sciences
  - Get insight into federal government support for science/engineering generally



# DMS Rotating Program Director Positions

## **Rotator Appointment:**

- Usually 2 years, extendable to 3 by mutual agreement
- Full-time job
- Independent Research/Development program available
- Generally open only to applicants with tenure or equivalent
- Need to be a US citizen or national, or a permanent resident seeking citizenship

## **Application Procedure:**

- Send message indicating interest to DMS DD; include your CV
- Not openings in every DMS program every year, but good to have your interest noted



# DMS Rotating Program Director Positions

## More Information

- About NSF rotator program:

<https://beta.nsf.gov/careers/rotator-programs>

- About DMS rotator positions (job ad):

<https://beta.nsf.gov/careers/openings/mps/dms/dms-2022-38120>

- About DMS funding programs:

<https://www.nsf.gov/funding/programs.jsp?org=DMS>



# DMS Rotating Program Director Positions

## From DMS Rotator Job Ad:

NSF Program Directors bear the primary responsibility for carrying out the Agency's overall mission. To discharge this responsibility requires not only

- knowledge in the appropriate disciplines, but also
- a commitment to high standards,
- a considerable breadth of interest and receptivity to new ideas,
- a strong sense of fairness,
- good judgment, and
- a high degree of personal integrity.

Candidates must have

- a Ph.D. in a field of Mathematical Sciences, plus after award of the Ph.D.,
- six or more years of successful research, research administration, and/or managerial experience pertinent to the position.





# DMS Rotating Program Director Positions

## From DMS Rotator Job Ad (continued):

- Applicants should have
  - a broad knowledge of one of the relevant disciplinary areas of the Division of Mathematical Sciences,
  - a knowledge of the general scientific community,
  - skill in written communication and preparation of technical reports,
  - an ability to communicate orally, and
  - successful independent research normally expected of the academic rank of associate professor or higher.
- Some administrative experience and experience working in teams are desirable.
- Appointees are expected to function effectively both within specific programs and as a member of crosscutting and interactive teams.
- Skills in multidisciplinary research are highly desirable.



# 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!**



# Questions?



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