

# NSF Trailblazer Engineering Impact Award (TRAILBLAZER)

October 12, 2023



# Webinar Housekeeping

1

The webinar is being recorded and the recording will be posted online

2

The webinar slides will be posted online

3

Questions will be addressed using the Q&A function

4

Send any questions not addressed in the webinar to [TRAILBLAZER@nsf.gov](mailto:TRAILBLAZER@nsf.gov)

5

The Chat Function has been disabled

For more TRAILBLAZER details, please read the solicitation [NSF 23-629](#)



# Webinar Agenda

Welcome – Dr. Susan Margulies

TRAILBLAZER Synopsis

Preparing a TRAILBLAZER Proposal

Review Process

Q&A



# TRAILBLAZER Synopsis

- The NSF Trailblazer Engineering Impact Award (TRAILBLAZER) program will support individual engineers and scientists who propose novel research projects with the potential to innovatively and creatively address major societal challenges, advance US leadership, and catalyze the convergence of engineering and science domains
- TRAILBLAZER will emphasize the qualities of the investigator that illustrate they can conceive of and support transformative research projects



# TRAILBLAZER Synopsis (cont'd)

- The TRAILBLAZER program will support individual engineers and scientists that demonstrate a capacity for research excellence and creativity
- TRAILBLAZER is intended to support individual engineering researchers to undertake projects that have the potential to address new areas of fundamental research
- Proposed projects must be a new research direction for the PI
- Engineering-wide program



# Preparing a TRAILBLAZER Proposal (NSF 23-629)

## Eligibility

- Institutions:
  - Institutions of Higher Education
  - Non-profits, non-academic organizations
- PI:
  - Must hold a tenured or tenure-eligible faculty appointment at the Associate or Full Professor rank
  - Appointment in an Engineering School/College *and/or*
  - Hold an Engineering Doctoral degree
  - Single PI



# Preparing a TRAILBLAZER Proposal

Concept Outline – Due November 9, 2023

- Each prospective PI interested in submitting a TRAILBLAZER proposal must submit a Concept Outline to the EFMA office using the Program Suitability and Proposal Concept Tool (ProSPCT) webform at <https://suitability.nsf.gov/s/>
- Concept Outline Narrative (6,000-character limit):
  - PI eligibility
  - Evidence of research excellence
  - Summary of proposed project
  - Suitability to the TRAILBLAZER program



# Preparing a TRAILBLAZER Proposal

Concept Outline – Due November 9, 2023

- Concept Outlines will be evaluated internally by NSF Program Directors for programmatic responsiveness and suitability to the TRAILBLAZER program
- Prospective PIs will receive an email from the cognizant NSF program officer that specifies whether a full proposal may be submitted. Full proposals submitted without the PO concurrence email will be Returned Without Review
- The email confirming approval to submit a TRAILBLAZER proposal must be uploaded by the prospective PI as a Supplementary Document as a component of proposal submission



# Preparing a TRAILBLAZER Proposal

Full Proposals– Due February 15, 2024

- The title for the proposed TRAILBLAZER project must begin with "TRAILBLAZER"
- Project Summary (1-page limit):
  - In the **intellectual merit** section include a summary of evidence of investigator-led innovative activities, the nature of the proposed research, and the significant leap or paradigm shift in fundamental engineering knowledge; and
  - In the **broader impacts** section, include the potential long-term impact on a grand challenge. Include a summary of the Broadening Participation Plan.



# Preparing a TRAILBLAZER Proposal

Full Proposals– Project  
Description (15-page limit)

## Intellectual Merit

- Evidence of Research Excellence and Innovation
- Research Approach and Research Plan
- TRAILBLAZER Suitability
- Distinction from Current and Previous Research
- Management Plan



# Preparing a TRAILBLAZER Proposal

Full Proposals– Project  
Description (15-page limit)

## Broader Impacts

- Significant shift in fundamental engineering knowledge
- Integration of education, outreach, and community engagement
- Broadening Participation Plan



# Preparing a TRAILBLAZER Proposal

## Full Proposals– Budget

- A Budget and Budget Justification are required
  - Up to \$3 mil over 3 years
- Funds may be requested for:
  - Personnel
  - Supplies
  - Equipment
- Because a significant commitment of PI time is expected, PIs may request up to six months of salary support annually.
- 5 awards



# Preparing a **TRAILBLAZER Proposal**

## Supplementary Documentation

- Unattributed Project Summary
- PO Concurrence email
- Results from Prior NSF Support
- Mechanisms for sharing outcomes
- Department Head Letter



# Preparing a TRAILBLAZER Proposal

For full TRAILBLAZER details, please refer to the solicitation [NSF 23-629](#)



# Review Process

- Concept Outlines – Due **November 9, 2023**
  - Reviewed by NSF Program Directors
  - PIs receive email specifying whether a full proposal may be submitted
- Full Proposals – Due **February 15 , 2023**
  - Based on ad hoc and panel review, selected PIs will be invited for an interview
- Interview – Anticipated to be conducted in April/May 2024
  - Review criteria for the Interview Panel will be identical to those applied to the written proposal



# Review Process

- During full proposal review and interview stages of the Merit Review Process, Reviewers will be asked to evaluate proposals using the two National Science Board-approved merit review criteria - Intellectual Merit and Broader Impacts
- Additional Program-Specific Criteria will also be considered
  - Investigator
  - Leadership
  - Transformative
  - National Need or Grand Challenge
  - Broadening Participation Plan
  - Management Plan



# Key Details

- TRAILBLAZER will support engineers and scientists with excellent records of innovation and creativity with successful outcomes to pursue new groundbreaking research directions
- PI eligibility
- Concept Outline – Due November 9, 2023
- Full Proposal – Due February 15, 2024



Questions?

