



PD 25-345Y Fire Science Innovations through Research and Education (FIRE) Program

Wildland Fire Initiative Working Group

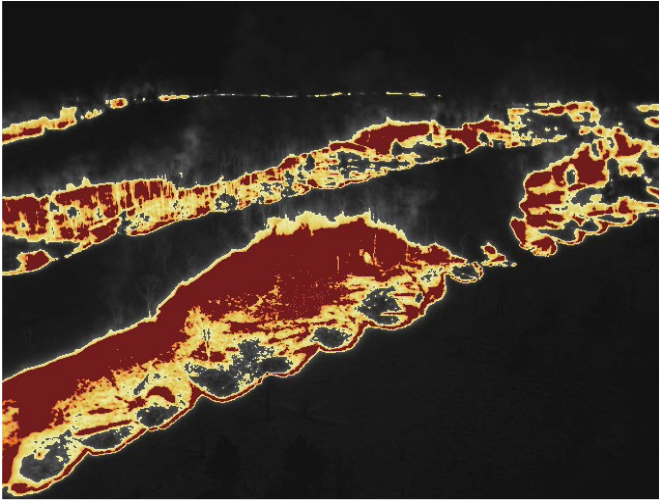
 **wildlandfire@nsf.gov**

U.S. National Science Foundation (NSF)

18 March 2025

Funding Innovative Fire Science

Proposals should demonstrate strength in at least one focal area



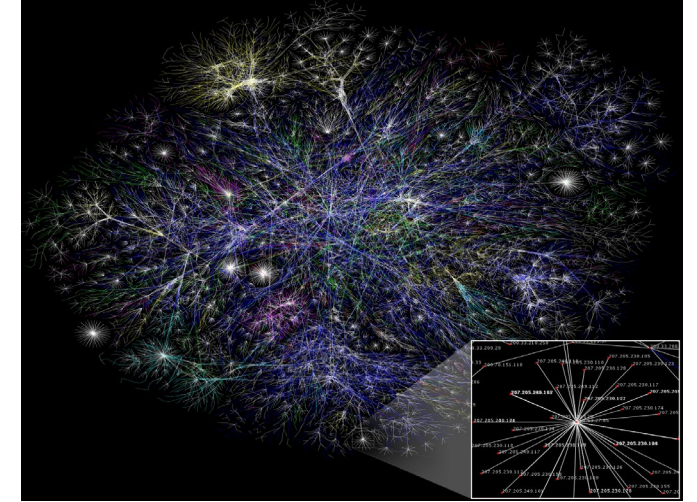
FIRE-MODEL

New modeling and computational approaches to understand wildland fire



FIRE-WUI

Decreasing the vulnerability of built infrastructure at the Wildland-Urban Interface



FIRE-NET

Promoting an innovative and forward-looking approach to wildland fire science through research and education network building

Proposal submission must comply with the [PAPPG](#)
First target window: June 12-20, 2025



Highlighting the interdisciplinary nature of fire science, all eight NSF directorates are participating



**Directorate for
Biological Sciences
(BIO)**



**Directorate for
Computer and
Information Science
and Engineering (CISE)**



**Directorate for
STEM Education (EDU)**



**Directorate for
Engineering (ENG)**



**Directorate for
Geosciences (GEO)**



**Directorate for
Mathematical and
Physical Sciences (MPS)**



**Directorate for Social,
Behavioral and
Economic Sciences
(SBE)**



**Directorate for
Technology,
Innovation and
Partnerships (TIP)**



**Office of Integrated
Activities (OIA)**



**Office of International
Science and
Engineering (OISE)**



Convergence research

Driven by a specific and compelling problem, whether that problem arises from deep scientific questions or pressing societal needs.



It shows deep integration across disciplines. For the FIRE program, integration across sectors is also encouraged.

Visit www.nsf.gov/funding/learn/research-types/learn-about-convergence-research for more information.



Proposals responsive to this program should generally include:



A plan to generate new knowledge of the interactions among biological, social, geoscientific, and engineering processes encompassing multiple fields, scales, and perspectives on wildland fire



Strategies to collaborate among stakeholders (e.g., academics, educators, scientists, community members, students, industry partners, practitioners, resource managers and Tribal representatives)

Example activities and outcomes



Advances in approaches to collection, storage, and sharing of data relevant to wildland fire dynamics



New modeling/computational approaches to understand wildland fire (includes AI and ML approaches)



New understanding of the cross-scale interactions of wildland fire across local, regional, and global contexts



New insights into community adaptation and governance related to wildland fire



New approaches to reduce the vulnerability of built infrastructure, natural fuels, and social systems to wildland fire



Engagement of a variety of community members and stakeholders to promote a forward-looking approach to wildland fire science



FIRE-MODEL: Next Generation Coupled Fire Models

**New modeling and
computational
approaches to
understand wildland
fire**

Successful proposals:

- Develop innovative models and new predictive approaches that capture the full spatial and temporal range of fire dynamics
- Systematically address model uncertainties and holistic validation
- Identify and improve key model parameters and effectively address missing data
- Create novel mathematical and statistical methodology or artificial intelligence tools (e.g., surrogate models, digital twins, etc.)



FIRE-WUI: Fire Resilience in the Wildland-Urban Interface

Decreasing the vulnerability of built infrastructure at the Wildland-Urban Interface (WUI)

Successful proposals:

- Address gaps to improve community-level governance and adaptation to wildland fire
- Decipher complex landscapes for decision-making and communication through examination of public perceptions of wildland fire
- Improve understanding of socio-economic disparities in communities in relation to wildfire impacts
- Test and model behaviors of building materials and infrastructure under fire loads and for use in building retrofitting and remediation
- Develop accurate models to predict community impacts under different fire risk scenarios



FIRE-NET: FIRE Networks

**Promote an innovative
and forward-looking
approach to wildland
fire science through
research and education
network building**

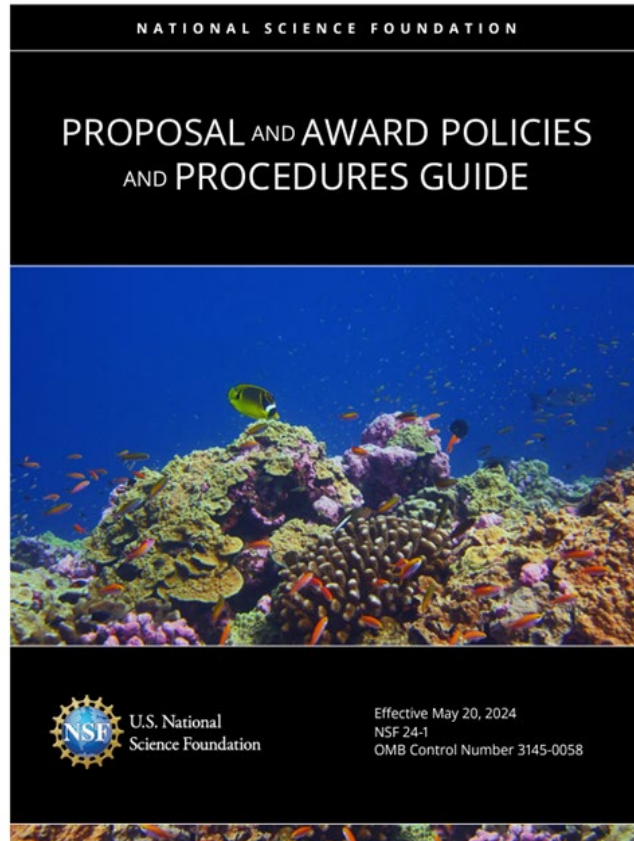
Successful proposals:

- Leverage existing and developing data resources to support the development of new wildfire related research directions and educational activities
- Use novel networking strategies, collaboration tools, and mechanisms to share ideas and information that will enhance coordination across fields and sectors
- Develop community standards for data and meta-data use and management including bringing disparate datasets together
- Advance wildfire-related science and education through communication, data analysis, novel collaborations, and workforce development



Be sure to follow the PAPPG Proposal Prep Instructions

See Part 1, Chapter II



Submit to funding
opportunity PD 25-345Y



How are proposals evaluated?

- NSF will apply standard merit review criteria for intellectual merit and broader impacts.
- NSF will only consider proposals that do not fit under existing NSF programs.
- NSF may share proposals and unattributed reviews with the partner organizations, as appropriate.



What are the merit review criteria for intellectual merit and broader impacts?

Intellectual Merit

- Potential to advance knowledge within/across fields
- Creative, original, potentially transformative concepts
- Well-reasoned and organized ideas and experiments
- Qualified investigators
- Access to adequate resources

Broader Impacts

- Potential to benefit society
- Promote training and education
- Enhance infrastructure, resources
- Engage in outreach to community



How is the FIRE Program different than other fire-related programs?



- The FIRE Program encourages convergence research that allows for a variety of scope, scale, and approach. It also identifies specific priority areas for proposals to address.
- There are many existing programs at NSF. NASA, SERDP and the Moore Foundation also have existing programs for fire-related research.
- The FIRE program will only consider proposals that do not fit under existing programs.

Should PIs submit a concept outline first?



- Yes! PIs are encouraged to submit a research concept outline with the following information:
 - Core research questions(s) or objectives
 - Methodological approach
 - Specific focus area elements to be addressed
 - Partnerships to be developed (if applicable)
 - Types of data, knowledge, models, or networks envisioned
 - Approximate total budget request and project duration (no need for itemization)
- Send the outline (up to 2 pages) to wildlandfire@nsf.gov no later than 30 days before a full proposal submission

Other questions you may have about eligibility

Who is eligible to apply?

FIRE program follows the generic eligibility criteria contained in Chapter I.E of the PAPPG.

What about international collaboration?

Partners outside of the United States (US) can participate in FIRE projects, subject to the limits described in the PAPPG, Chapter I.E.

What types of proposals are accepted?

The FIRE Program is accepting research proposals and conference proposals. Other types of proposals such as RAPID and EAGER are not accepted this year.



Other questions you may have about proposals

What is the budget size for proposals?

Requested budgets should be commensurate with the proposed scope. Proposers are encouraged to discuss potential budget in the concept outline submission.

What is the duration of an award?

Project duration should be commensurate with the proposed scope. The maximum duration of NSF awards is typically 5 years. Proposers are encouraged to discuss potential project duration in the concept outline submission.

Is there a deadline for submissions?

No, but there is a target window for submission. The target window for full proposal submissions to the FIRE Program Description for fiscal year 2025 between June 12, 2025, and June 20, 2025. Thereafter the target submission window will be annually between February 3 and February 10.

Can you cover Data Management and Sharing Plans?

Data Management and Sharing Plans should follow the guidelines in the PAPPG, Chapter II.D.2.i (ii), Data Management and Sharing Plan. We encourage you to also check out NSF's guide on Preparing Your Data Management and Sharing Plan.





Further Questions:
wildlandfire@nsf.gov