



Caltech Risk Mitigation 2026

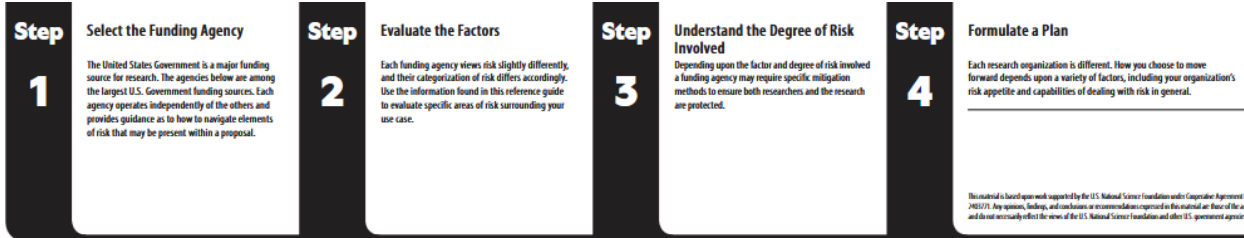
Risk Mitigation

Risk Matrix Reference Guide

How to use this tool
This guide is designed to provide a quick visual of federal agency risk factors used to assess fundamental research proposals and mitigation decisions and how the factors align and differ. The cases will vary, but may include pre-award and proposal review, hiring reviews, researcher education, detailing degrees of identified risk as part of a research security assessment process, internal risk matrix creation, and more.

Perspectives on Risk
Each agency views risk differently. Color coding has been provided, where possible, to delineate between possible degrees of severity.

- ❗ Prohibited Activity
- ⚠ Mitigation Required
- ⚠ Mitigation Expected/Recommended
- ⚠ Mitigation Suggested
- ↔ Co-authorship
- ↔ BLUE Blue type indicates commonalities between agencies



Department of Defense (DoD)

DoD Matrix: [June 29, 2023](#), amended [May 9, 2023](#) and [March 9, 2026 \(current version\)](#)

Considers Risk of:

- Funding the Project
- Possible loss of "IP", including pre-published or patented information

Within the past 5 years



Factor 1	Factor 2	Factor 3	Factor 4	Critical Technologies	Process
Foreign Talent Recruitment Programs	Foreign Funding Sources	Patents	U.S. Restricted Lists		

<p>❗ Prohibited: Indicators of the covered individual actively participating in a malign foreign talent recruitment program (MFTRP).</p> <p>⚠ Mitigation required if, within the past 5 years, there are indicators of participation in an MFTRP by the covered individual or their co-authors on science and engineering (S&E) journal publications</p>	<p>⚠ Mitigation required if, within the past 5 years, there are indicators of participation in an MFTRP by the covered individual or their co-authors on science and engineering (S&E) journal publications</p>	<p>⚠ Mitigation required if, within the past 5 years, patent applications or patents that resulted from research funded by the U.S. Government (USG) were filed in an FCOC or on behalf of an FCOC-connected entity, prior to filing in the U.S., or in non FCOC and not disclosed, or involving patent or co-patent applications with an individual affiliated with any entity on Prohibited Entity Lists at the time of review.</p>	<p>❗ Prohibited if active collaboration for the specific purpose of fundamental research, meaning research that is identified in the fundamental research proposal that is to be conducted between a covered individual and any academic institution or entity, or employee of such entity, on the current Prohibited Entity Lists or funding of or to:</p> <p>⚠ Mitigation required if, within the past 5 years, indicators of affiliation by the covered individual or their co-authors on publications in S&E journals with an entity on any Prohibited Entity List at the time of review including: U.S. Bureau of Industry and Security (BIS) Entity List; Annex A of Executive Order (EO) 14812 or superseding EO; Section 1260H of the National Defense Authorization Act (NDAA) for FY2021; Lists Published in Response to Section 1286 of the NDAA for FY2019 as amended; and 9 additional lists added in the March 9, 2026 update.</p> <p>↔ Co-authorship is considered.</p>	<p>Not Explicitly Indicated.</p>	<p>Risk review of fundamental research proposals recommended for funding. Additional details can be found in the June 29, 2023 document.</p>
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Department of Energy (DOE)

Office of Research, Technology and Economic Security (RTES) Framework

Considers Risk of:

- Funding the Project
- Possible loss of "IP", including pre-published or patented information



<p>❗ Prohibited: Indicator(s) of active participation in a malign foreign talent recruitment program (MFTRP).</p>	<p>"Certain foreign funding sources (both monetary and in kind)" Dates and types of activity are weighted in the risk assessment.</p>	<p>"Certain concerning behaviors associated with patenting (e.g., transferring to foreign entities after filing)" Dates and types of activity are weighted in the risk assessment.</p>	<p>"Ties to" foreign entities or foreign collaborators on specified lists, "for example," U.S. Bureau of Industry and Security Entity List; Annex A of Executive Order (EO) 14812 or superseding EO; Section 1260H of the National Defense Authorization Act (NDAA) for FY2021; Lists Published in Response to Section 1286 of the NDAA for FY2019 as amended. Dates and types of activity are weighted in the risk assessment. DOE may request confirmation that the relationship has ceased. For past affiliations, associations or collaborations with entities on specified lists, DOE will consider the date the entity was added to the lists as part of the risk assessment.</p> <p>↔ Co-authorship is considered.</p>	<p>DOE is unique in that critical and emerging technology areas are the focus of many DOE programs. If the risk indicators are present on a proposed or existing project, consideration is given to whether the project falls within a critical and emerging technology area, whether the project will have physical or cyber access to critical infrastructure, and any project work with proximity to a military installation.</p>	<p>Phase 1: A review is conducted on Notices of Funding Opportunities, etc. to ensure language allows applicants to understand the RTES-related requirements and assess the technology risk level of the solicitation. Phase 2: Before selection, financial assistance projects undergo an RTES due diligence review, with consideration of the technology risk assessment during Phase 1 review. Phase 3: During the life of a project, additional RTES review may be triggered in situations where there are changes to the project, personnel, or ownership/control that could affect RTES.</p>
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National Science Foundation (NSF)

NSF Trust Process

Considers Risk of:

- Funding the Project
- Possible loss of "IP", including pre-published or patented information



<p>❗ Prohibited: Active participation in a malign foreign talent recruitment program (MFTRP).</p>	<p>Receiving research support from U.S. proscribed parties: 1. BIS Entity List, 2. the Annex of Executive Order (EO) 14812 or superseding EO, 3. section 1260H of the FY19 NDAA or 4. section 1286 of the FY19 NDAA and nondisclosures of sources of research support.</p> <p style="text-align: center;">N/A</p>	<p style="text-align: center;">N/A</p>	<p>Active appointments and positions with U.S. proscribed parties: 1. BIS Entity List, 2. the Annex of Executive Order (EO) 14812 or superseding EO, 3. section 1260H of the FY19 NDAA or 4. section 1286 of the FY19 NDAA and nondisclosures of appointments, activities, and sources of research support. Co-authorship is not considered.</p>	<p>Key/critical technologies identified in the CBPPS and Science Act, beginning with Quantum Information. Potential foreseeable national security applications of the research.</p>	<p>Risk review of fundamental research proposals recommended for funding.</p>
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National Institutes of Health (NIH)

NIH Decision Matrix

Risk Concerns Specific to:

- Lack of Disclosure



<p>❗ Prohibited: Indicator(s) of active participation in a malign foreign talent recruitment program (MFTRP).</p> <p>⚠ Mitigation measures recommended if indicators of past MFTRP participation within the last 5 years.</p>	<p>⚠ Mitigation required if indicators of undisclosed or incompletely disclosed active (ongoing) funding from an FCOC or connected entity.</p> <p>⚠ Mitigation recommended if a non-FCOC or within the last five years</p> <p>⚠ Mitigation suggested if within the last 5 years and not a FCOC.</p>	<p style="text-align: center;">N/A</p>	<p>⚠ Mitigation measures required if indicators of an undisclosed or incompletely disclosed active (ongoing) affiliation with an institution or entity located in or connected with a FCOC.</p> <p>⚠ Mitigation measures recommended if within the last five years or a non-FCOC.</p> <p>⚠ Mitigation suggested if within the last 5 years and not a FCOC.</p>	<p style="text-align: center;">N/A</p>	<p>Review of proposals and ongoing awards.</p>
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*DoD defines affiliation as "Academic (not including undergraduate or graduate student), professional, or institutional appointments or positions with a foreign government or a foreign government-connected entity, whether fulltime, part-time, or voluntary (including adjunct, visiting, post-doctoral appointment, or honorary)."

Risk Matrix (RM):
A tool provided by federal agency to assess risk to research security from inappropriate foreign influence.

The RM is not applied until after scientific review of a project.

This [PAGE](#) on NSF SECURE is a resource for current RM status.



NSF SECURE Center

Last Updated 4-15-26



Risk Mitigation

Step

1

Select the Funding Agency

The United States Government is a major funding source for research. The agencies below are among the largest U.S. Government funding sources. Each agency operates independently of the others and provides guidance as to how to navigate elements of risk that may be present within a proposal.

Step

2

Evaluate the Factors

Each funding agency views risk slightly differently, and their categorization of risk differs accordingly. Use the information found in this reference guide to evaluate specific areas of risk surrounding your use case.

Step

3

Understand the Degree of Risk Involved

Depending upon the factor and degree of risk involved a funding agency may require specific mitigation methods to ensure both researchers and the research are protected.

Step

4

Formulate a Plan

Each research organization is different. How you choose to move forward depends upon a variety of factors, including your organization's risk appetite and capabilities of dealing with risk in general.

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Factor 1

Foreign Talent Recruitment Programs

Factor 2

Foreign Funding Sources

Factor 3

Patents

Factor 4

U.S. Restricted Lists

Critical Technologies

Process

Steps: Funding Agency, Factor Evaluation, Determine Risk, Develop a Plan

Factors: (1) Foreign Talent Recruitment Program, (2) Foreign Funding Sources (& Collaborations), (3) Patents, (4) US Restricted Parties Lists

Process at Caltech: See Next Slide

Caltech Risk Mitigation Process

Request from
Agency

ORS Collects Data:

Publications (Co-authors, Affiliations-
Past and Present, Funding
Acknowledged)

Funding (Caltech, External Funding,
Lab Member/Visitor Funding,
C&P/Other Support, In-Kind)

Outside Affiliations

Financial Interests

Patents

Other Collaborations

Training

ORS Meets with
Covered
Individual

ORS Develops a
Plan to Submit
to Agency.
ORS Annual
Review.

ORS: Office of Research Security (researchsecurity@caltech.edu)

Covered Individual: Usually Senior/Key Personnel

[Publication and Collaboration Resources](#)

[Federal Agency Disclosures: Biosketch, Current/Pending/Other Support](#)

Risk Mitigation References

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View DoD policies, guidelines & resources
<https://tinyurl.com/ysbzweyt>

Within the past 5 years

Fox in the Henhouse



SEPTEMBER 6, 2023
The U.S. Department Of Defense Research And Engineering's Failures To Protect Taxpayer-Funded Defense Research

[Fox in the Henhouse Report](#)

Department of Energy (DOE)

Office of Research, Technology and Economic Security (RTES) Framework

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View DOE policies, guidelines & resources
<https://tinyurl.com/3svz73wf>

Containment Breach:

The U.S. Department of Energy's Failures in Research Security and Protecting Taxpayer-Funded Research from Foreign Exploitation



[Containment Breach: DOE Failures in Research Security](#)

Risk Mitigation

National Institutes of Health (NIH)

[NIH Decision Matrix](#)

Risk Concerns Specific to:

- Lack of Disclosure



View NIH policies,
guidelines & resources
<https://tinyurl.com/yadt23kv>

U.S. researchers face new restrictions on publishing with foreign collaborators

NIH, NASA grantees are confused and concerned amid agencies' piecemeal communication

20 MAY 2024 • 4:56 PM ET • BY JEFFREY BOALABO



[US Researchers Face New Restrictions on Publishing with Foreign Collaborators](#)

Research Security for America's Future in Space

NASA's Enforcement of the Wolf Amendment

THE SELECT COMMITTEE ON THE STRATEGIC COMPETITION BETWEEN THE UNITED STATES AND THE CHINESE COMMUNIST PARTY



[Research Security for America's Future in Space](#)

[Appendix A](#)

National Science Foundation (NSF)

[NSF Trust Process](#)

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View NSF policies,
guidelines & resources
<https://tinyurl.com/4vv6u48h>

Additional Risk Considerations

ADMINISTRATIVE

COLLABORATIONS

CRITICAL & EMERGING TECHNOLOGIES

CYBERSECURITY

DATA PROTECTION

EXPORT CONTROL

EXTERNAL PROFESSIONAL ACTIVITIES

FUNDING

INSIDER THREAT RISK

INTELLECTUAL PROPERTY

INTERNAL ACTIVITIES

TRAVEL

VISITING SCHOLARS