



NATIONAL SCIENCE FOUNDATION
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NSF 20-123

Frequently Asked Questions (FAQs) about the National Artificial Intelligence (AI) Research Institutes Program ([NSF 20-604](#))

REVISED 11/18/2020

Under Program-Wide Questions, Questions 41-43 were added on November 18, 2020.

[Question 36](#) and [Question 37](#) have important revisions. In particular, they reflect a change in restrictions on individual eligibility stemming from relationships with partner companies. With these changes, the scope of the eligibility restriction now pertains to the themes in which the relevant partner company is contributing. This is a change from the information provided in the live webinar. The [webinar slides and script](#) posted to the event page have been modified to reflect this change.

PROGRAM-WIDE QUESTIONS

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Research Institutes program?

27. Are AI Research Institutes awards going to be renewable for an additional five years?
28. What are the plans for this program for future Institute themes?
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30. I have a question about the requirements for sections of the proposal listed in the NSF PAPPG (e.g., Budget and Budget Justification, Current and Pending Support, Facilities, Equipment and Other Resources) that is not addressed in the solicitation.
31. Is there a limit on the number of PIs, co-PIs, or Senior Personnel on my proposal?
32. Can individuals from organizations other than the lead (submitting) organization be listed as co-PI?
33. What is NSF's guidance regarding collaborations with a partner who would not be a subaward, but instead an unfunded collaborator, and in which case such a collaborator might agree to provide their own funding or other sources of support to the institute?
34. Are letters of interest/support from individuals or organizations permitted?
35. What role will partner companies listed in this solicitation have in the review and recommendation of institute awards under this solicitation?
36. If an individual is currently employed by, consulting for, or on an active agreement to provide services for a partner company, is that person eligible to be a participant on a proposal to this solicitation in their capacity at another organization?
37. If an individual is the recipient (or has been the recipient) of research funding from one of the industry partners on this solicitation, is that person eligible to participate in a proposal to this solicitation?
38. Is there potential for other industry partners to join this solicitation or future solicitations?
39. What will the role of the partner companies be in the oversight of Institutes funded under the applicable themes?
40. What is the level of support being provided by industry partners?
41. Is a person precluded from serving as a Senior Personnel if their spouse or other family or household member is employed by, consulting for or has an active agreement to provide services for a partner company?
42. Would a person be precluded from Senior Personnel status if they were hired by a law firm for the purposes of serving as an expert witness on a legal matter (e.g. dealing with Intellectual Property) for a partner company?

43. The solicitation states that, "Awardees shall grant to the sponsoring parties (the Federal Government and any industry partners involved in funding that awardee) a non-exclusive, worldwide, royalty-free, sub-licensable license to all intellectual property rights in any inventions or works of authorship resulting from research conducted under the joint award." I am submitting a proposal to a theme that includes industry funding partner(s). The proposed activities will be building on previous inventions. Will the sponsoring parties be entitled to rights to pre-existing intellectual property (IP)?

THEME SPECIFIC QUESTIONS

THEME 1: HUMAN-AI INTERACTION AND COLLABORATION

T1.1. The theme description emphasizes ethics in several places. Are Institutes expected to engage in research activities in ethical AI, or only build existing principles into their technology development?

T1.2. The theme description for Human-AI Interaction and Collaboration emphasizes "developing general methods... involving multiple domains." Can a proposal to this theme focus primarily on a single domain or a small set of domains as its research focus?

T1.3. My Institute proposal will advance research relevant to both Human-AI Interaction and Collaboration and AI-Augmented Learning. How do I know which theme to submit my proposal to?

THEME 2: AI INSTITUTE FOR ADVANCES IN OPTIMIZATION

No theme-specific questions in this release.

THEME 3: AI AND ADVANCED CYBERINFRASTRUCTURE

No theme-specific questions in this release.

THEME 4: ADVANCES IN AI AND COMPUTER AND NETWORK SYSTEMS

No theme-specific questions in this release.

THEME 5: AI INSTITUTE IN DYNAMIC SYSTEMS

T5.1. In Theme 5: AI Institute in Dynamic Systems, what is an appropriate balance between foundational advances in data science, machine learning, and AI and innovative domain research to enable transformative new capabilities for dynamic engineering systems?

T5.2. Theme 5 states that "the Institute will serve as a research and education resource for external groups seeking guidance on the use of AI methods to address difficult problems in

data-driven dynamic real-time decision making." What might be considered an acceptable scope for this research and education resource function?

T5.3. What is the desired breadth of engineering applications that should be supported by an Institute in Theme 5?

THEME 6: AI-AUGMENTED LEARNING

T6.1. In theme 6, if the primary focus of my proposal is not in adult learning, should the proposal nonetheless contain significant activities in adult learning?

T6.2. In revision notes for AI-Augmented Learning (Theme 6), it is stated that, "In addition, an institute is solicited with a primary focus on advancing research in AI techniques for Adult Learning." Does this mean that there is the potential to award more than one institute in this theme?

T6.3. I am interested in proposing an Institute that primarily focuses on AI workforce development for adults. Is that responsive to the Theme 6 focus on adult learning?

THEME 7: AI TO ADVANCE BIOLOGY

No theme-specific questions in this release.

THEME 8: AI-DRIVEN INNOVATION IN AGRICULTURE AND THE FOOD SYSTEM

T8.1. How do I designate USDA-NIFA as the intended funding agency?

T8.2. Can the USDA Agricultural Research Service (ARS) (or other USDA entity) be a subawardee on an AI Institute grant where the lead institution is a university?

T8.3. In the section Cost Sharing Requirements, for awards made by USDA-NIFA, for what types and levels of equipment requests does this requirement apply?

PROGRAM-WIDE QUESTIONS

1. When is the Webinar? How can I participate?

The Webinar date will be established very soon after the release of the solicitation. Please check the program web page for the date and registration/participation instructions.

Webinar materials (slides, recordings, transcripts) will be made available through the

program web page soon after the conclusion of the event.

2. Can I submit an Institute proposal that responds to multiple themes? Is it a good idea?

The solicitation allows for this approach. It is advisable that relevance to any more than one theme be identified only in cases where significant activity is planned in the six desiderata for Institutes for those additional themes.

Proposal submission guidelines for Institute proposals specify that Keywords must be used in the Project Summary to identify the theme(s) addressed by the proposal. Where an Institute proposal is identified as relevant to multiple themes, it is recommended that the predominant theme of the proposal, if there is one, be listed first. The text of the Project Summary and Project Description should clearly establish the relative emphasis placed on each theme named in the proposed Institute.

3. Is it required that an Institute be multi-organizational? How important is this? How many organizations should comprise an AI Research Institute?

This program requires that "Institutes will be comprised of multiple organizations working together to create significant new research capabilities," as described more fully in that desideratum. It is the goal of the program to grow AI capacity throughout the country and engage organizations that can help to engage diverse populations in that growth.

4. Would an AI Research Institute proposal from a single organization (with no or few subawards) be competitive?

Refer to the answer in [question 3](#) above. It is possible (and permissible) for an organization to propose such an arrangement without the need for subawards to partner organizations. Such a proposal should make a strong case that the goals embodied in this desideratum are best achieved in the manner proposed. To assess the potential competitiveness of a proposal, note that the solicitation-specific review criteria refer to all six of the desiderata for Institutes provided in the Program Description.

5. Can a proposed AI research Institute focus on only a subset of the desiderata spelled out in the solicitation?

AI Research Institutes must address all six of the desiderata outlined in the Program Description of the solicitation. Proposed Institutes are expected to configure their functions relative to these desiderata in a way that is unique and appropriate to that Institutes vision. Proposers are reminded that the evaluation of all proposals will take into consideration the full range of solicitation-specific review criteria in the solicitation.

6. What is the appropriate balance between foundational AI research and use-inspired research?

The program considers it a misapplication of the concept of "use-inspired research" to consider the first two desiderata to be in opposition to one another. The goal in this program is that each Institute engage in use-inspired research in such a way that the Institute will make the greatest possible gains in advancing AI. The Institute team should consider (and propose) what they consider the appropriate balance between the application of foundational AI and the advancement of foundational AI in that use-inspired context. It is not the intent of the program that Institutes should focus mainly on the application of AI. At the same time, it is the goal of this program that AI advances will be sought while also making significant advances in the domain, sector, or disciplinary science(s) relevant to that sector, and for greatest societal benefit. Institute plans that merely take inspiration from these sectors but do not significantly advance those sectors are also not the intent of this program.

7. Is it possible to provide any funding to industrial collaborators?

Yes, it is allowable to include a for-profit organization as a subawardee to an Institute proposal. Please consult the NSF Proposal and Award Policies and Procedures Guide (PAPPG) for guidance on subawards (https://www.nsf.gov/pubs/policydocs/pappg20_1/pappg_2.jsp#IIC2gvie).

8. Must an AI Research Institute necessarily be a physical Institute or can it: be a network; have a hub-and spokes structure; be wholly virtual?

The program solicitation does not constrain the nature of a proposed Institute.

9. Can Federally-Funded Research and Development Centers (FFRDCs) participate in proposals to this solicitation?

FFRDCs are not eligible as proposing (lead) organizations.

In general, NSF does not normally support research or education activities by scientists, engineers or educators employed by Federal agencies or FFRDCs. However, FFRDCs may, under certain circumstances, be included as subawardees to proposals to this program. The PAPPG provides guidance on the circumstances under which this is appropriate (https://www.nsf.gov/pubs/policydocs/pappg20_1/pappg_1.jsp#IE7).

10. How does NSF view international collaboration?

NSF promotes international collaboration when it provides U.S. students and researchers the opportunity to benefit from foreign expertise and/or from resources, equipment, data and geographically-based phenomena that are located abroad. PIs are

encouraged to consider how international engagement can enhance effectiveness in any or all of the six desiderata for Institutes, to include the potential to develop a globally-engaged U.S. workforce. NSF encourages a close working arrangement with local scientists and engineers in all international components of research projects. Projects in a foreign country should be designed to be of mutual benefit and must encourage wide distribution of the resulting materials, data, analyses, and publications within the host country as well as in the U.S.

11. Can a foreign institution, as a partner or subcontractor, be financed with funds from an AI Research Institute award?

NSF does not expect to fund foreign institutions as partners or subcontractors. Extraordinary circumstances may be considered on a case-by-case basis, and when the proposed activities cannot be funded from sources in the foreign country. Such circumstances might include activities that require unique foreign expertise, access to unique foreign facilities, unique foreign data resources not generally available to U.S. investigators (or which would require significant effort or time to duplicate), or other foreign resources that are essential contributing factors to the success of the proposed project.

Full information regarding NSF support to foreign organizations can be found in the PAPPG (https://www.nsf.gov/pubs/policydocs/pappg20_1/pappg_1.jsp#IE6).

12. Can an existing "institute" or "center" participate in a proposal to this program?

There is no restriction regarding how an existing institute or center may participate in a proposal to this program. Any AI Research Institute funded in this program is expected to build significant new capacity in the six desiderata outlined in this program. This includes proposals that build upon or collaborate with existing organizations, including existing Institutes or centers. Proposers are reminded that as a network of multiple organizations that together serve as nexus points for collaborative efforts, proposed Institutes must be meaningfully integrated in such a way that it creates a capability that is more than just the sum of the parts.

13. Can National AI Research Institutes award funds be used to develop new infrastructure? If so, are there limitations on the type of infrastructure or the budget for this?

The program solicitation does not constrain the budget items that can be requested.

However, Institutes are expected to build on other NSF investments and are expected to coordinate and integrate with ongoing and new initiatives, including center-scale research, infrastructure, and workforce development activities. The Institute teams are

expected to coordinate with their constituent organizations and partners to develop a concrete and workable plan for leveraging existing infrastructure resources.

If major infrastructure investment is needed to address the proposed research challenge, the appropriate venue is not this program, but rather other NSF sources of funding specifically for experimental research infrastructure, such as the [Major Research Instrumentation](#) program and the [Mid-Scale Research Infrastructure](#) programs.

14. Where can I submit proposals for planning activities? Will the program announce a funding opportunity for planning activities in the future?

This solicitation does not accept proposals for planning activities. At this time, we are not announcing plans regarding future opportunities to submit planning proposals.

15. The solicitation restricts the number of submissions by "senior personnel." Can you clarify what constitutes "senior personnel"?

See the PAPPG [Exhibit II-3](#) for definitions of categories of personnel. "Senior personnel" includes the PI and co-PIs, hence the solicitations clarifying language:

"An individual may be designated as senior personnel (which includes but is not limited to PI or co-PI) on at most ONE project team submitting to this solicitation. In the event that an individual exceeds these limits, proposals will be accepted based on earliest date and time of proposal submission, i.e., the first proposal will be accepted, and the remainder will be returned without review."

Note that this is viewed as the equivalent restriction to that in [NSF 20-503](#), in which a person was permitted to participate as senior personnel in at most one proposal to that solicitations Institute Track.

16. If an individual is listed as senior personnel in a proposal to this solicitation, may that individual provide a letter of collaboration for another proposal?

Yes, this is permissible. Note that these letters must conform to the requirements for letters of collaboration (see [question 17](#) in this FAQ).

17. I have a collaborator and wish to obtain a letter of collaboration from them. Is this allowed, and what are the requirements?

As noted in the solicitation, you are advised to obtain letters of collaboration from your unfunded collaborators. Letters of collaboration are not necessary for subawardee organizations, whose commitment is explicit in the proposal.

It is important that these letters of collaboration conform to the guidance in the PAPPG (see [Chapter II.C.2.j](#)), providing only a specified statement about the intent to collaborate as described in the proposal. Note that any statement of support, either in a letter of collaboration or in separately-submitted documents, will not be allowed. Also note that while Advisory Boards will be required for an Institute upon time of award, please do not specify potential members (or include associated letters of collaboration) in the proposal.

18. We have industry partners that may serve as subawardees. May they apply indirect costs to their budgets?

Please see the PAPPG for guidance on indirect costs for subawardees (https://www.nsf.gov/pubs/policydocs/pappg20_1/pappg_2.jsp#IIC2gvie).

19. What is the limit on budgetary allocation to a subawardee or consultant?

No limit is imposed by the program or PAPPG. This is to be determined by the proposing organization; and the merit of the arrangement will be evaluated by reviewers and funding agencies.

20. Does the NSF two-month salary limit guideline apply to (non-tenure track) research faculty whose salary is funded through directly billing contracts and grants? Does it apply to the Managing Director?

NSF salary policy applies to senior personnel and limits salary compensation to no more than two months of their regular salary in any one year. If anticipated, any compensation for such personnel in excess of two months must be disclosed in the proposal budget, justified in the budget justification, and must be specifically approved by NSF. This program requires that an Institute be staffed with a Managing Director or Project Manager (potentially distinct from the lead PI) and a suitable Management Team to oversee the operations of the Institute. It is anticipated that such personnel might include those who are not on a regular organizational salary. Regardless of the category of senior personnel and the proposed role, proposers are encouraged to staff the Institute for success and provide adequate justification.

Details on the practice of limiting senior personnel salaries and wages are contained in the PAPPG (https://www.nsf.gov/pubs/policydocs/pappg20_1/pappg_2.jsp#IIC2gia).

The NSF two-month salary limit guideline does not apply to proposals submitted for consideration by USDA-NIFA.

21. To which division should I submit my proposal?

All proposals will be submitted to the CISE Division of Information and Intelligent

Systems (IIS). At submission time, you will find that this is the only available Unit of Consideration for submissions.

22. Can you provide more information on the review process that will be used to evaluate proposals? How will proposals that touch on multiple themes be reviewed?

All information about proposal processing and review is provided in Section VI of the solicitation.

23. Can you provide more information on the number of awards anticipated in each institute theme? Is it possible that a theme might receive more than one Institute award?

NSF estimates approximately 8 awards on the expectation that each theme will result in a new AI Research Institute. In addition to this, NSF has the intent to potentially fund more than one institute in Theme 6 (see question T6.2. in this FAQ). The actual number of awards, including by theme, is subject to the availability of funds and quality of proposals received.

24. How do the participating agencies' interests align with the Institute topics?

Theme 8, "AI-Driven Innovation in Agriculture and the Food System," is solicited on behalf of the US Department of Agriculture-National Institute of Food and Agriculture (USDA-NIFA). Institutes in this theme will be selected jointly by NSF and USDA-NIFA and funded entirely by USDA-NIFA.

All other partner agencies will make joint funding decisions in potentially any theme listed in this solicitation.

25. How do I signal the relevance of my proposal to the missions of NSF's partner agencies?

Proposals submitted to Theme 8, "AI-Driven Innovation in Agriculture and the Food System," clearly indicate that you are designating USDA-NIFA as the intended funding agency.

You may choose to indicate any special emphasis in sectors relevant to partner agencies by including Keywords in your Project Summary to both identify those sectors and to call special attention to a corresponding agency, i.e., "DHS" or "FHWA".

26. If I participate in a project awarded by a different NSF program, or have a proposal pending to such a program, am I at a disadvantage in applying to the National AI Research Institutes program?

Proposals to other NSF programs do not preclude senior personnel from submitting proposals to this program. Nor does involvement in other NSF-funded centers or projects preclude submission to the program. Note, however, that this program aims to support activities of a different scale and scope from those of other programs. Successful National AI Research Institute proposals will make clear the distinction between the proposed activity and other projects in the Current & Pending Support section for the senior project personnel.

27. Are AI Research Institutes awards going to be renewable for an additional five years?

While the solicitation does not explicitly provide for the renewal of Institute awards beyond the first five years, it is possible that NSF will offer such opportunity competitively in the future. The current solicitation is the first step in what is expected to be a longer-range, multi-agency investment in AI research and education. Future Institute funding opportunities will be evaluated according to the evolving needs of the research community and national priorities in artificial intelligence.

28. What are the plans for this program for future Institute themes?

Future solicitations may continue the use of identified themes corresponding to high-priority areas, invite proposals for institutes not limited to such research themes, or both. The identification of an Institute theme in any given solicitation does not preclude the possibility that Institute proposals in that same theme or related ones would be welcome in future solicitations.

NSF and partners strive to be responsive to the research priorities emerging from the community, and will also evaluate future investment priorities on the basis of the quality of proposals, progress in funded projects, and emerging national research priorities.

29. What relationship is expected between planning grants awarded in the program previously and future Institute solicitations?

NSF does not comment on future funding opportunities. If applicable, future "themes" may be announced in areas corresponding to the research areas supported as part of the program's previously-funded planning activities, but will not necessarily be limited to those areas.

30. I have a question about the requirements for sections of the proposal listed in the NSF PAPPG (e.g., Budget and Budget Justification, Current and Pending Support, Facilities, Equipment and Other Resources) that is not addressed in the solicitation.

The solicitation addresses only deviations from the PAPPG, including program-specific

considerations for certain sections. Where not otherwise addressed, submissions must conform fully to the Proposal Preparation Instructions outlined in the NSF PAPPG, including all required *Sections of the Proposal* (https://www.nsf.gov/pubs/policydocs/pappg20_1/pappg_2.jsp).

31. Is there a limit on the number of PIs, co-PIs, or Senior Personnel on my proposal?

The proposing organization can list one PI and up to four co-PIs, who will appear on the Cover Sheet of the proposal. There is no limit on the number of additional senior personnel who can be listed on the proposal. However, it is advisable that proposing organizations list personnel in any of these roles **only where those personnel are described as playing a substantive role in the proposed project. Such a substantive role is usually accompanied by a request in the budget for salary support of the individual corresponding to that individual's commitment to the project.** Submitting organizations are advised against listing unfunded senior personnel who are not actively contributing to the project.

The designation of roles on your subawards is a decision to be taken between the submitting organization and those other organizations. However, we recommend you follow the same principles above when choosing to list people in the submission.

32. Can individuals from organizations other than the lead (submitting) organization be listed as co-PI?

The PAPPG provides guidance. See the section, Submission of a collaborative proposal from one organization (https://www.nsf.gov/pubs/policydocs/pappg20_1/pappg_2.jsp#IID3):

"The single proposal method allows investigators from two or more organizations who have developed an integrated research project to submit a single, focused proposal. A single investigator bears primary responsibility for the administration of the grant and discussions with NSF, and, at the discretion of the organizations involved, investigators from any of the participating organizations may be designated as co-PIs. Note, however, that if awarded, a single award would be made to the submitting organization, with any collaborators listed as subawards. (See Chapter II.C.2.g(vi)(e) for additional instructions on preparation of this type of proposal.)"

33. What is NSF's guidance regarding collaborations with a partner who would not be a subaward, but instead an unfunded collaborator, and in which case such a collaborator might agree to provide their own funding or other sources of support to the institute?

The NSF guidelines for unfunded collaborations apply. Please follow the policy/guidance in the PAPPG:

https://www.nsf.gov/pubs/policydocs/pappg20_1/pappg_2.jsp#IIC2div.

Take care also to not structure this as voluntary committed cost sharing, which is prohibited: https://www.nsf.gov/pubs/policydocs/pappg20_1/pappg_2.jsp#IIC2gxii.

34. Are letters of interest/support from individuals or organizations permitted?

This program does NOT allow the submission of letters of support. Letters of collaboration are permitted. Please consult the PAPPG for this distinction and for guidance on submission of letters of collaboration:

https://www.nsf.gov/pubs/policydocs/pappg20_1/pappg_2.jsp#IIC2j.

35. What role will partner companies listed in this solicitation have in the review and recommendation of institute awards under this solicitation?

As stated in the solicitation, partner companies will not participate in or observe the merit review of proposals. This means that they may not review proposals or observe panels. This applies to proposals across the entire solicitation, not just within a theme.

After completion of the merit review process, NSF may share with partner company representatives the subset of proposals in the relevant theme which are under consideration for funding by NSF, along with corresponding unattributed reviews, panel summaries, and Reverse Site Visit reports. Partners may provide feedback on these selections after the merit review process is complete. NSF will take into consideration the input of all funding partners prior to making final funding decisions but will retain final authority for making all award decisions.

36. REVISED - If an individual is currently employed by, consulting for, or on an active agreement to provide services for a partner company, is that person eligible to be a participant on a proposal to this solicitation in their capacity at another organization?

REVISED 9/24/2020 - Individual eligibility restrictions apply only to the themes in which the relevant partner companies are contributing. This is a change from the information provided in the live webinar. The [webinar slides and script](#) posted to the event page have been modified.

If that individual is currently employed by, consulting for, or on an active agreement to provide services for a partner company, *they may not participate (as senior personnel or collaborator, funded or otherwise) on any proposal to the theme in which that partner company is contributing*. That relationship does not disqualify the individual from participating in proposals to other themes in this program.

Past arrangements are not generally disqualifying. Arrangements active between proposal submission and notice of decision are disqualifying.

Any questions about individual eligibility scenarios that are not covered here should be addressed to the program and theme contacts listed in the solicitation.

37. REVISED - If an individual is the recipient (or has been the recipient) of research funding from one of the industry partners on this solicitation, is that person eligible to participate in a proposal to this solicitation?

REVISED 9/24/2020 - Please see related changes in [Question 36](#).

Individuals with industry partner research awards structured as unrestricted gifts, grants, prizes, fellowships, or in-kind offerings may participate. See [Question 36](#) for relationships that do restrict eligibility.

38. Is there potential for other industry partners to join this solicitation or future solicitations?

It is possible to add new partner companies to the current solicitation. NSF welcomes interest in developing new partnerships for future funding opportunities. Please contact AllInstitutesProgram@nsf.gov if you are interested in possibly partnering on this program in the future. Companies that are not partners on this solicitation are eligible and encouraged to collaborate with teams submitting proposals to this solicitation.

39. What will the role of the partner companies be in the oversight of Institutes funded under the applicable themes?

NSF will administer awards under the program in accordance with standard NSF policies and procedures. All awards will be subject to standard NSF terms and conditions. Industry partners will not oversee the activities or use of funds by grantees under this program, but may engage with grantees post-award, as outlined below.

Specifically, as noted in the solicitation, subsequent to Institute awards, industry partners may make available, at a minimum to all Institutes funded within the associated themes, direct contributions of resources including but not limited to software (prototypes or products), data sets, and/or other computing infrastructure. No awardee will be required to use any company's offered contributions.

In addition, an industry partner may also arrange to fund its own personnel as researchers-in-residence (RinR) to directly participate, part-time or full-time, with funded AI Institutes within the theme(s) in which they are participating. These arrangements will be optional and upon the mutual consent of the companies and respective Institutes. No Institute will be required to accept a RinR.

40. **What is the level of support being provided by industry partners?**

Each industry partner is contributing about \$1 million per year over five years to support one or more institutes funded in the associated theme. Each industry partner may also contribute additional resources as described in Section II.C of the Program Description in the solicitation.

41. **Is a person precluded from serving as a Senior Personnel if their spouse or other family or household member is employed by, consulting for or has an active agreement to provide services for a partner company?**

No, the person's eligibility is NOT affected by such activities of spouses or other family or household members.

42. **Would a person be precluded from Senior Personnel status if they were hired by a law firm for the purposes of serving as an expert witness on a legal matter (e.g. dealing with Intellectual Property) for a partner company?**

A person hired by a law firm to serve as an expert witness on a legal matter (IP) for a partner company may or may not be eligible to submit.

If the service is completed, the individual is eligible.

If the contract for the individual's services is between the individual and the law firm (i.e. not a direct agreement with the partner company), the individual is eligible.

An active contract directly with the partner company is subject to the restrictions in Q36.

43. **The solicitation states that, "Awardees shall grant to the sponsoring parties (the Federal Government and any industry partners involved in funding that awardee) a non-exclusive, worldwide, royalty-free, sub-licensable license to all intellectual property rights in any inventions or works of authorship resulting from research conducted under the joint award." I am submitting a proposal to a theme that includes industry funding partner(s). The proposed activities will be building on previous inventions. Will the sponsoring parties be entitled to rights to pre-existing intellectual property (IP)?**

Only the foreground innovations of the Institute (innovations resulting from research conducted under the award) are subject to this provision.

If your proposal has any special considerations with regard to IP, NSF reminds proposers that all proposals to the Foundation are expected to include a Data Management Plan (DMP), and the DMPs should address "policies for access and sharing including provisions for appropriate protection of privacy, confidentiality,

security, intellectual property, or other rights or requirements" (see https://www.nsf.gov/pubs/policydocs/pappg20_1/pappg_2.jsp#dmp for complete DMP guidance).

THEME SPECIFIC QUESTIONS

THEME 1: HUMAN-AI INTERACTION AND COLLABORATION

T1.1. The theme description emphasizes ethics in several places. Are Institutes expected to engage in research activities in ethical AI, or only build existing principles into their technology development?

The theme description stresses social benefits and acceptability of AI systems, emphasizing among other things bias, safety, accountability, explainability, and fairness. These are nascent areas of AI research. As such, an Institute should incorporate foundational research in those socio-technical topics that dovetail with their technology foci. As the theme description points out in closing, we encourage your Institute to be multidisciplinary, "integrating, as appropriate ... sociology, ethics, technology studies, ..."

T1.2. The theme description for Human-AI Interaction and Collaboration emphasizes "developing general methods... involving multiple domains." Can a proposal to this theme focus primarily on a single domain or a small set of domains as its research focus?

The breadth of domain(s) that you target in your use-inspired research is up to you. Targeting a domain or a small set of domains for use-inspired research can be appropriate. However, it is important that any proposal to this theme demonstrate the broad applicability of the intended foundational research advances.

T1.3. My Institute proposal will advance research relevant to both Human-AI Interaction and Collaboration and AI-Augmented Learning. How do I know which theme to submit my proposal to?

The primary differentiator is whether the Institutes emphasis in human-AI interaction/collaboration is situated exclusively in the domain of learning or if the use-inspired AI advances you propose are to be pursued in multiple domains. If the proposal primarily focuses on the domain of learning and advances the learning sciences, we suggest submitting it to AI-Augmented Learning ([Theme 6](#)). If the proposal's use-inspired research focuses significantly in domains other than learning, we suggest submitting it to Human-AI Interaction and Collaboration ([Theme 1](#)). There is also an option to submit to both Themes (see [question 2](#) in this FAQ). If you decide to indicate both, use the above guidelines to decide which theme to list first.

THEME 2: AI INSTITUTE FOR ADVANCES IN OPTIMIZATION

No theme-specific questions in this release.

THEME 3: AI AND ADVANCED CYBERINFRASTRUCTURE

No theme-specific questions in this release.

THEME 4: ADVANCES IN AI AND COMPUTER AND NETWORK SYSTEMS

No theme-specific questions in this release.

THEME 5: AI INSTITUTE IN DYNAMIC SYSTEMS

T5.1. In Theme 5: AI Institute in Dynamic Systems, what is an appropriate balance between foundational advances in data science, machine learning, and AI and innovative domain research to enable transformative new capabilities for dynamic engineering systems?

An Institute proposal under Theme 5, as stated in the solicitation, should demonstrate clear mechanisms to facilitate collaborations to bring the unique capabilities of AI to engineering and scientific application areas critical to the national health, prosperity, and infrastructure. The proposal should promote a beneficial integration of foundational AI and domain research in an appropriate use-inspired context, in which a close coordination between the real-time sensing, learning, and decision-making research will have the most impact. For further questions regarding a proper balance, please contact the program officers for Theme 5.

T5.2. Theme 5 states that "the Institute will serve as a research and education resource for external groups seeking guidance on the use of AI methods to address difficult problems in data-driven dynamic real-time decision making." What might be considered an acceptable scope for this research and education resource function?

It is expected that the AI Institute in Dynamic Systems will enrich research and education in a broad engineering community through its activities as a nexus for collaborative efforts as well as in its role in actively building the next generation of talent. Such external engagement should add significantly to the application of data-driven real-time decision making and learning to dynamic systems of engineering importance, cross disciplinary boundaries, and train the next generation of a diverse workforce. As the solicitation supports multidisciplinary collaborations, an Institute proposal that addresses common challenges in multiple engineering disciplines is highly encouraged.

T5.3. What is the desired breadth of engineering applications that should be supported by an Institute in Theme 5?

We encourage proposals to this theme to address a broad range of meaningful engineering application areas that the proposed Institute is prepared to support. Other factors being equal, proposals that support a wider scope of impactful engineering applications will be preferred. For more information, prospective PIs should contact the Theme 5 Program Officers listed in the solicitation.

THEME 6: AI-AUGMENTED LEARNING

T6.1. In theme 6, if the primary focus of my proposal is not in adult learning, should the proposal nonetheless contain significant activities in adult learning?

No, it is not necessary to do this. A proposal oriented on some other aspect of advancing and augmenting learning will not be more competitive by simply adding an adult learning component. Instead of diluting our focus, we encourage you to convey clear rationale and unifying vision in whatever institute concept you propose.

T6.2. In revision notes for AI-Augmented Learning (Theme 6), it is stated that, "In addition, an institute is solicited with a primary focus on advancing research in AI techniques for Adult Learning." Does this mean that there is the potential to award more than one institute in this theme?

Yes, NSF may fund more than one Institute in this theme. Institutes in this theme will be awarded based on the Merit Review Criteria and the Review and Selection considerations noted in the solicitation, including availability of funds. We do not have any further information on the number and types of Institutes that are expected.

T6.3. I am interested in proposing an Institute that primarily focuses on AI workforce development for adults. Is that responsive to the Theme 6 focus on adult learning?

No, the primary focus of the institute must be on researching AI techniques to advance/augment adult learning. While proposals may include a workforce development component, the primary focus must be on conducting AI research in the context of adult learning.

THEME 7: AI TO ADVANCE BIOLOGY

No theme-specific questions in this release.

THEME 8: AI-DRIVEN INNOVATION IN AGRICULTURE AND THE FOOD SYSTEM

T8.1. How do I designate USDA-NIFA as the intended funding agency?

Please specify USDA-NIFA as the intended funding agency in the Project Summary. It is expected that every proposal responding to Theme 8: AI-Driven Innovation in Agriculture and

the Food System is designating USDA-NIFA as the intended funding agency. It is not appropriate to indicate USDA-NIFA for other themes.

T8.2. Can the USDA Agricultural Research Service (ARS) (or other USDA entity) be a subawardee on an AI Institute grant where the lead institution is a university?

If the proposal designates USDA-NIFA as the requested funding agency (by submitting to Theme 8 and specifying USDA-NIFA as the intended funding agency in the Project Summary), ARS is eligible to be a subawardee. Please refer to Section IV. Eligibility of the solicitation for more information.

T8.3. In the section Cost Sharing Requirements, for awards made by USDA-NIFA, for what types and levels of equipment requests does this requirement apply?

This cost-sharing requirement for equipment applies to all budgeted equipment expenditures in any proposal to USDA-NIFA, subject to the conditions for waiver specified. Proposers may justify a request for such a waiver initially in the Budget Justification section of the proposal.