

DARPA-PA-26-05 MATHBAC
Frequently Asked Questions (FAQs)
as of 4/28/2026

33Q: Could you please let us know whether cost sharing is required, since this is a research OT?

33A: Resource/cost sharing is not required. Pursuant to 10 U.S.C. § 4021, an OT for Research usually entails a resource sharing requirement that up to 50% of the costs come from non-Government funds to the maximum extent practicable. However, each proposal under the MATHBAC program is considered a pre-competitive, early-stage research and development effort where commercialization is not anticipated. The proposer is not precluded from proposing cost share if they see fit.

32Q: Is mathematics a “science” for purposes of MATHBAC? That is, could a domain of mathematics be the “science subdomain” for Phase I?

32A: See 31A, 24A, 13A, 8A and 1A.

31Q: Regarding the MATHBAC program, should the focus for the scientific domain be on physical sciences, or areas like cybersecurity would also be accepted as a scientific domain?

31A: See 24A, 13A, 8A and 1A.

30Q: Will this be a Research OT or Prototype OT?

30A: Per the PA, Types of instruments that may be awarded: Other Transaction Agreements for Research

29Q: Federally Funded Research and Development Centers (FFRDCs), University Affiliated Research Centers (UARCs), and Government Entities to include National Laboratories are not eligible to propose to this solicitation. Could I potentially still contribute to a proposal effort for this call as a subcontractor to a prime proposer who is eligible to submit a proposal?

29A: See 9A.

28Q: Can we have a copy of the slides from Proposers Day?

28A: No.

27Q: Besides, regarding the notion of learning “principles from data,” the examples shared seem to focus on distilling equations from numerical data. Would the program also consider other forms of principles, such as symbolic, procedural, or rule-based representations beyond purely numerical formulations?

27A: Yes, it is expected the proposers will be creative and not be constrained by the examples described throughout the solicitation.

26Q: Can my PI be key or PI on more than one proposal in response to this call?

26A: See 7A.

25Q: Is human subject research within scope of the program?

25A: No.

24Q: Could you share whether certain scientific domains are prioritized? In particular, would materials science be considered within scope? Additionally, is the program open to domains where data may be limited or sparse, such as emerging or experimentally constrained areas?

24A: No. See 13A for both follow-on questions.

23Q: Since another team within our organization is also preparing a proposal, are we permitted to structure the Abstract as our organization serving as both the prime and a subcontractor?

23A: Yes. See 7A.

22Q: For the ROM costing for Phase II, how should we approach pricing for a subcontractor if the specific subcontractor has not yet been identified?

22A: Identify the expected capabilities of the subcontractor and assumptions used for the estimate.

21Q: Proposer Profiles will be distributed on what date?

21A: Profiles that were received prior to the Proposers Day have already been shared. Profiles that were received subsequently will be shared as soon as practical.

20Q: Is it expected or discouraged that Evolution Teams are already preliminarily forming at the proposal stage for Phase 1?

20A: No, it is not expected and it is not discouraged.

19Q: Are Phase 1 proposals strengthened in their approach to Phase 2 by explicitly aligning with other performers' approaches to a TA the performer is not themselves proposing to?

19A: Proposals are evaluated on individual merit and relevance as it relates to the stated research goals/objectives rather than against each other.

18Q: In page 9, it states “In the first evaluation , agents will be required to discover at least one (but ideally, more than one) previously unknown principle, law, or correlation from novel data streams...”. Is this “*unknown*” referring to completely new laws of science to-date or relative to the knowledge in the training data? If it is the former, who will be the one to validate that the discovery is correct?

18A: IV&V & DARPA will validate results. For the first evaluation see 17A. For the second evaluation “ agents will be required to discover at least one (but ideally, more than one) previously unknown principle, law, or correlation from novel data streams (a DARPA-hard goal, for instance, would start with the data-driven Mendeleev-level rediscovery of the periodic table for atoms and proceed to a “multidimensional analog” of a periodic table for molecules).”

17Q: In page 9, it states that “In the first evaluation, proposers will rediscover at least one known generalizable principle, law, or correlation with agents trained on domain literature *chronologically prior* to the original discovery”. Does “chronologically prior to the original discovery” apply only to the scientific articles or does it also apply to the observation data?

17A: It is expected that the discovery will happen using observational data. See Attachment X: “How are you ensuring these corpora do not explicitly contain nor purposefully seed your targeted principle(s), law(s), or correlation(s)?”

16Q: In page 8 of the PA, it mentions that in Phase 1, the performers will focus on “a fixed set of agents”. Are these agents expected to be provided by the gov team or by the performers?

16A: The fixed set of agents does not mean that the performer can only use the same fixed set of agents throughout Phase 1; as noted in the solicitation fixed agents means: “agents that do not change/adapt during (or after) a campaign.”

15Q: Is stigmery something that may be relevant to this call?

15A: You probably mean stigmery. It is incumbent on the proposer to provide evidence that the proposed approach will achieve MATHBACs goals. Additionally, see 1A, 5A, and 6A.

14Q: Are foreign entities eligible for this?

14A: See 2Q below.

13Q: The BAA talks about discovery in scientific domains, but it does not specify whether that includes mathematics. The latter has clear advantages from an evaluation perspective, as it would not require physical collection of data or creation of synthetic environments, but it would raise many of the same issues.

13A: The proposer must provide evidence that the proposed science domain will enable them to (i) sufficiently address the requirements outlined in the solicitation; and (ii) meet the goals and milestones of the program, as written in the solicitation. Also, see 1A.

12Q: IV&V Baselines: The IV&V team will establish a “living metric” based on the best SOA scientific-discovery agentic platform. For photonic design tasks, will IV&V provide a reference Mixture-of-Experts (or equivalent) baseline, or are performers expected to supply and benchmark against their own SOA baseline?

12A: Both, see page 16 “Phase 1 baselines” of the announcement.

*All results will be evaluated by IV&V and DARPA. (On the left) In months 0-4, TAI performers will use their **own data**, **agentic platform**, and families of tasks as their baseline; in months 5-7 TAI performers will have to achieve the IV&V rubric targets using their **own data**, **agentic platform**, and families of tasks; in months 8 – the end of Phase I, performers will compare to the living metric, that is IV&V data, **IV&V agentic platform**, IV&V families of tasks, and the IV&V rubric targets for the bespoke challenge problem.*

11Q: Phase II Team Structure: Regarding Phase II Evolution Teams, is it permissible for a single performer to act as prime and lead the team while subcontracting complementary TA2 expertise, or must the prime performer be jointly selected by all Evolution Team members post-selection?

11A: Phase II proposals will require the Evolution team to have one performer acting as the prime performer and the rest as subperformers. It is incumbent upon the members of the Evolution Teams to choose and negotiate their own prime-sub relationships. DARPA may invite one or more Evolution Teams to continue to Phase II of the program.

10Q: Latent-Space Requirements: For TA1 requirements involving latent-space access (items b2 and b3), are publicly available "small-science" foundation models (with accessible weights and

latent spaces, e.g., open-source transformers) acceptable, or must performers rely exclusively on proprietary/commercial models?

10A: Teams are expected to have access to transformer latent spaces and demonstrate capabilities and or related experience with small science models. This would include both open-source transformers and/or proprietary/commercial models. It would be expected that proposals claiming access to the latent space of proprietary/commercial models would provide evidence of such claims (e.g. letter of support, consulting agreement, etc.).

9Q: Can UARCs/FFRDCs/National Labs be listed as subcontractors in a proposal. Would that arrangement be allowed?

9A: Yes; however, the team must provide justification as to why the entity is uniquely qualified to perform the proposed effort.

-----↑↑↑New Q/A↑↑↑-----

8Q: My team specializes in a critical Department of War (DoW) application area, such as cybersecurity or logistics. Can we propose a project that uses AI to solve a problem in our field?

8A: See Q1; Additionally, MATHBAC aims to fund the creation of new mathematics that advances the science of AI itself. Selected science domains should drive the development of new, foundational mathematical theories for AI. However, a proposal that simply applies existing AI tools and techniques to a specific domain like cybersecurity, without a core focus on generating and proving new mathematical insights, would not be aligned with this solicitation.

7Q: Is it permissible for an organization/PI to participate as a non-lead, contributing team member on multiple proposals submitted by different lead institutions, provided that the organization's role is limited in scope and clearly defined within each proposal?

7Q: Yes, potential awardees may be involved in multiple proposals. However, there is a potential conflict of interest if supporting multiple awards on the same program. You must provide a mitigation plan to demonstrate how you are going to deconflict the issue(s), protect stakeholders' proprietary information, and provide/ensure sufficient support for the effort(s). Additionally, you will need to document how the work being assigned in one effort differs from the other. The Government will not pay for the same work performed on multiple awards.

6Q: What specific expertise or background is required for a team proposing to the MATHBAC program?

6A: See page 22 Section II: Evaluation Criteria, Proposer's Capabilities or Related Experience: The proposer team must demonstrate capabilities and/or related experience with (1) agentic AI; (2) small science models; and (3) the proposed mathematics/information/systems/data science theory and algorithms to be deployed.

5Q: My proposal focuses on achieving significant performance improvements for an AI system. How important is it to also develop a new mathematical theory to explain why it works?

5A: Developing a rigorous mathematical framework is essential to the MATHBAC program. While improved performance is a welcome outcome, the core goal is to

advance the fundamental "science of AI." Proposals that only demonstrate better performance without creating and validating a new mathematical theory to explain the underlying principles are not aligned with the program's objectives. The central aim is to understand why an approach works, not just that it does.

4Q: Given the abstract deadline of April 30, is there any guidance on the expected scope and format of the abstract submission?

4A: Additional instructions for abstract submission are contained within Attachments A and B found on the MATHBAC solicitation opportunity posted on SAM.gov.

3Q: Is registration for the April 21 Proposers Day webcast still possible, or is there an alternative way to access the briefing materials?

3A: Registration closed on April 13, 2026. There will not be an alternative way to access briefing materials.

2Q: Can a Canadian organization submit to MATHBAC under the non-U.S. entity provisions? Are there specific compliance requirements we should be aware of beyond those in the solicitation?

2A: See page 25 SECTION IV: SPECIAL CONSIDERATIONS: "Non-U.S. organizations and/or individuals may participate to the extent that such participants comply with any necessary nondisclosure agreements, security regulations, export control laws, and other governing statutes applicable under the circumstances."

1Q: Does the program scope include applications where the data streams originate from physical infrastructure systems (SCADA, ICS, sensor networks) rather than purely digital/computational environments? Specifically, I'm interested in whether geometric approaches to multi-agent communication - where agents communicate differential manifold state changes across federated infrastructure domains - fall within the program's aperture.

1A: MATHBAC is interested in developing/deriving the mathematics for (1) understanding/designing agentic communication protocols and for (2) improving communication content. Proposed science domains, applications, and data streams should support the goals of the program.