FY24 Laboratory University Collaboration Initiative (LUCI)
Basic Research Office, USD (R&E)

I. Overview

The Laboratory University Collaboration Initiative (LUCI), sponsored by the Basic Research Office, Office of Under Secretary of Defense for Research and Engineering (USD R&E) (http://basicresearch.defense.gov/), is a program designed to support the DoD Laboratory researchers for their collaborations fostered between them and DoD funded university researchers on basic research projects in areas of critical interest to DoD.

White papers for the FY2024 Class of LUCI Fellows are being solicited from researchers in the DoD laboratories to conduct basic scientific research in collaboration with University researchers who participate in the Department-wide fundamental research programs, specifically: past and current Vannevar Bush Faculty Fellows (VBFF), and current and previous PIs and co-PIs of the Multidisciplinary University Research Initiatives (MURI) Program. For the latter, PIs and co-PIs are defined as investigators in charge of a significant portion of the research work, and listed in the original MURI proposal. Other University researchers, funded by other DoD programs, are not eligible. While collaborators from previous and inactive VBFF and MURI awards are allowed, it is recommended that attention be focused on more recent ones, unless well justified in the white paper. It is anticipated that for a successful white paper, the Laboratory researchers will spend a significant amount of time to perform the proposed research in collaboration with the University. Joint white papers written by two DoD Laboratories from the same or different Services are allowed and encouraged, but will not receive additional funding and will be evaluated with the same criteria. Similarly, a white paper may include more than one University PI that satisfies the criteria above (VBFF and/or MURI). In both cases, the number of laboratory PIs collaborators must be explained and justified in the white paper.

The LUCI Program provides an excellent opportunity for DoD Laboratory scientists not only to delve into new and interesting areas of basic science, but also to broaden their scientific collaborations to new academic researchers that could radically change the direction of their research. It is encouraged that applicants take advantage of the opportunity to seek out new basic research collaborations. In particular, early-career DoD Laboratory scientists are encouraged reach for collaborations that extend beyond the advisors of their academic environment during graduate student and/or post-doctoral work, and build a new network of academic collaborators.

Each awarded project will be eligible for up to $200,000/year for three years. Awarded funds may be used for a portion of the PI's salary, new post-doctoral researchers or other contractors, travel to collaborators' institutions, and supplies. Funds may also be used for part-time support of

post-doctoral researchers and students at the collaborating University, but it is expected that most of the funds will be used within the DoD laboratory, and that the Government PI will commit sufficient time to the project. Government PIs are also encouraged to leverage the SMART Scholarship SEED Grant opportunity[1] for Phase 2 SMART scholars, if circumstances allow, although no preference will be given to proposals that can successfully do so.

II. Topics of Interest

The research topics of interest for the white-papers are described in broad terms in the Federal Opportunity Announcement (FOA) for the FY24 VBFF program, which can be found here. They include:

1. Applied Mathematics and Computational Science
2. Networks and Artificial Intelligence
3. Neuroscience and Fundamentals of Cognition and Intelligence
4. Fundamentals of Bioengineering
5. Quantum Information Science
6. Electronics, Photonics and Quantum Materials
7. Materials Science
8. Soft Materials and Multiscale Structures
9. Other Fields of Research, deemed of interest to the DoD.

These topics are broadly defined and are not to be construed as limitations to the range of ideas that can be proposed. The PI may also indicate in the white paper more than one topic, if necessary (a primary and a secondary). This will facilitate the submission and review of white papers which are multi-disciplinary.

III. Submission Process and Instructions

The application is made on-line, at: https://dod-basicresearch.nvision.noblis.org/. The *RunGrants* web-site provides a step-by-step process for submitting the application, including the identification of co-PIs and collaborators, uploading of the white paper, CV, and letters of support from the Laboratory management and the University collaborators. The white paper package to be uploaded **must** have the following documents:

1. A one-page cover sheet that identifies: 1) the submission title, organization(s), proposer's technical and administrative points of contact—including names, phone numbers, and e-mail addresses; 2) the University collaborators and their institutions, contact information, and the date and title of their most recent VBFF or MURI project.
2. A technical narrative section (5 page limit, single-sided, 11 point font minimum). The technical narrative must describe the following: a) the basic scientific or technical research to

[1] For more information, please contact smart@smartscholarship.org, or osd.mc-alex.ousd-atl.mbx.smart@mail.mil

be performed; b) how this research will leverage the expertise of external collaborators to be beneficial to DoD missions; c) the technical approach. References are not required but recommended; they can be included within the 5 page limit, and inserted as footnotes for maximizing space devoted to the narrative. Pictures and graphics, if included, must also be part of the narrative and its 5 page limit.

3. A budget section, limited to 1 page, which should provide an approximate an annual budget and a high level breakdown for personnel, travel, materials and supplies etc.
4. PI's and co-PI's Curriculum Vitae (CV) (4 page limit, single-sided).
5. Letter of support from the PI's technical supervisor, as well as for any co-PI, explaining the potential impacts of the project to the organization, and endorsing the research and any proposed visit to university collaborators.
6. Letter(s) of support from the University collaborator(s). These should explain what the three-year collaboration entails, including a brief description of commitment to the collaboration.

If the package is missing <u>any</u> of the items above, the white paper will be considered ineligible and will not be reviewed.

Additional material will not be considered in the submission, except for University collaborator CV, which is optional.

The white paper and support documents must be combined into **one** (1) PDF file, and submitted via the *RunGrants* web-site, at: https://dod-basicresearch.nvision.noblis.org/. We encourage the applicants to read the additional material provided on the web-site (https://dod-basicresearch.nvision.noblis.org/program/luci), including the User Guide, and reach out to the provided contact information for help. We also point out that a prepared on-line submission is not final, and can always be edited until the deadline. Therefore, it is also encouraged to submit relatively early and check the submission package for additional verification of its accuracy and completeness. Since the package also includes letters of support from the collaborators, it is also highly recommended to carefully manage this process and make sure they can be incorporated before the submission deadline.

IV. Proposal Guidelines and Selection Criteria

A Proposer Guide has been made available on the *RunGrants* website, at: https://s3.us-gov-west-1.amazonaws.com/noblis.nvision.bro.6.public/luci/LUCI%20Proposal%20Guidelines.pdf to explain the objectives of the program, the review process, and provide guidance on how to write a quality submission. Additionally, prospective applicants can explore the Basic Research Office LUCI Page (https://basicresearch.defense.gov/Pilots/Laboratory-University-Collaboration-Initiative/) and review the project summaries of the 2023 LUCI fellows to gain a broad understanding of recently selected projects.

The white paper submission will be essentially evaluated according to the following criteria:

1. Scientific and technical merits of the proposed research
   - Does the white paper explain the state-of-the-art of the research?
   - Does the white paper provide convincing arguments that the proposed research is a significant advance over the state of the art?
   - Is this fundamental research?
2. Is the technical plan credible? The relevance and impact to the DoD
   - Does the research indicate a potentially transformative impact on the DoD missions?
   - How will the expected outcome impact the DoD laboratory's R&D plans, activities, or personnel?
   - Is the Government PI well committed to the success of the research project?
3. The importance of the collaboration
   - How meaningful is the external collaboration to the success of the research?
   - What recent breakthroughs by the collaborator and/or PI make this project particularly relevant and timely?
   - How will the interaction and exchange of ideas, skills and knowledge be accomplished?
4. The reasonableness of proposed budgets
   - Is the proposed budget plan consistent with the research plan?
   - Is most of the funding supporting the Laboratory?

After the white paper evaluation by panels of government subject-matter experts, selected applicants will be asked to prepare for a 30-minute interview, to be conducted via teleconference, for a second phase of selection. This will consist of a 20-minute presentation to an OSD evaluation committee, followed by 10 minutes for Q&A. Presentation material must be provided to the evaluation committee in advance of the interview. This phase provides an opportunity for the applicants to clarify any issue or question raised by the review panels during Phase I. The comments and evaluations by the panels will be made available to the PI as a summary feedback, in order to better prepare for the interview phase. The evaluation committee will then make recommendations to the Director for Basic Research at OSD, for a final decision

V. Eligibility

- Eligible Individuals: PI and co-PIs must be DoD government laboratory researchers. Other DoD-funded researchers, even if funded by other DoD programs, are not eligible
- Academic collaborators: Must be current or previous Vannevar Bush Faculty Fellows (VBFF), or current or previous PIs and CoPIs from the Multidisciplinary University Research Initiative (MURI) Program.

- Number of applications: The PI may submit more than one application in response to this FOA and can be a co-PI on another submission. However, a single PI will not be allowed to receive two awards.

VI. Important Dates

Event	Date	Time
RunGrants site open for white papers and supporting documents submission and **Webinar**	26 January 2024	
Final date/time for submission of white papers and supporting documents	19 April 2024	11:59 PM Eastern Daylight Time
Notification of white paper selections for interviews	10 June 2024*	
Interview period	19 - 23 August 2024*	
Notification of selections for award	30 August 2024*	
Start date of project	01 October 2024*	

***These dates are estimates as of the date of this announcement. Please be mindful of the limited scheduling opportunities for the interview phase and plan accordingly.**

Procedural questions regarding the submission process should be sent to the provided contact information on the *RunGrants* website. All technical and administrative correspondence, and questions regarding the program should be addressed to Dr. Jean-Luc Cambier, Basic Research Office, OUSD (R&E). E-mail: jeanluc.cambier.civ@mail.mil