

Document Type: Request for Proposal – Special Notice

Contracting Office Address: Department of the Army, Army Contracting Command, ACC - APG (W911NF) Research Triangle Park Division, 800 Park Office Drive, Research Triangle Park, NC 27709

Reference: Funding Opportunity Announcement (FOA) W911NF24S0009, Research and Education Program for Historically Black Colleges and Universities/Minority-Serving Institutions issued August 2024, which can be found at <https://www.grants.gov>.

Title: Army-HBCU/MI Faculty Immersion Program

Synopsis: In a concerted effort to attract novel perspectives, the Army seeks unclassified proposals from covered educational institutions (i.e., HBCU/MIs) to participate in a Faculty Immersion Program. Executed under authority 10 U.S.C. Section 4144, the intent is to direct funding to institutions that have not otherwise received a significant amount of funding from DoD RDT&E programs supporting the national security functions of the Department. Unless otherwise stated here, all requirements for proposal submission, to include eligibility are defined in FOA W911NF24S0009. A copy of the Department of Education letter dated February 2020 or later, certifying the institution's eligibility for Title III or Title V assistance must be included with a proposal submitted under this special notice. The purpose of this program is to foster collaboration, enhance research capabilities, and encourage participation in the programs and activities of the Department of Defense by covered educational institutions. The Army is seeking applicants with junior faculty members who are currently performing research in the field of environmental science (ES).

**The junior faculty members selected for the Faculty Immersion Program must be U.S citizens and be able to meet Government research facility access requirements in order to attend visits and meetings. Proof of citizenship, which will require two (2) forms of identification, must be provided for junior faculty members. One form of identification must include a picture, such as a current driver's license or passport. The second form of identification does not require a picture, such as a Social Security Number (SSN) card or a birth certificate). Additionally, all junior faculty members must be willing to submit to a National Crime Information Center (NCIC) check. Proof of citizenship is NOT required as part of the application. However, citizenship will be verified by the government prior to award.**

The full program description including research topic areas follows.

PROGRAM TITLE: Army HBCU/MI Faculty Immersion Program

PROGRAM DESCRIPTION: The Army seeks unclassified proposals from covered educational institutions for participation in a Faculty Immersion Program. In accordance with objectives set forth in 10 U.S.C. Section 4144 and eligibility defined in FOA W911NF24S0009, the intent is to direct resources to institutions that have not otherwise received regular attention for DoD RDT&E programs supporting the national security functions of the Department. A copy of the Department of Education letter dated February 2020 or later, certifying the institution's eligibility for Title III or Title V assistance must be included with a proposal submitted under this special notice. The purpose of the program is to foster collaboration, enhance research capabilities, and encourage participation in the programs and activities of the Department of

Defense by covered educational institutions. The Army is seeking applicants with junior faculty members who are currently performing research in the field of environmental science (ES). An applicant's proposal must identify a junior faculty member to participate in the program and their proposed research in the field of ES. The concept is a two-year program executed in three phases. Phase one places an HBCU/MI junior faculty in an Army laboratory for a minimum of 10 consecutive weeks for training and collaboration with Army in-house researchers. Phase two places the HBCU/MI junior faculty member at an R-1 Institute of Higher Education (IHE) for a semester of training and experience working with Army and the R-1 IHE researchers. Phase two also includes the further development of an Army-relevant research proposal for continuing research into phase three of the program. Phase three entails eighteen months conducting the proposed research at the junior faculty member's home institution (i.e., the HBCU/MI) with continued collaboration with Army and R-1 IHE teammates. This program will require the applicant to identify an R-1 IHE as a subawardee. This R-1 IHE should be involved with both mentoring the junior faculty member and working with the HBCU/MI to further the proposed research in the field of ES. Under this award, collaboration can then be supported with the HBCU/MI, the R-1 IHE and the Army in furtherance of 10 U.S.C. Section 4144. The Army will provide an initial listing of current Army-sponsored R-1 IHEs for consideration as subawardees, see Attachment A. However, an applicant is free to work with any R-1 IHE that supports their proposed research.

An R-1 institution is a doctoral university with very high research activity (e.g., Carnegie Classification of Institutions of Higher Education <https://carnegieclassifications.iu.edu/index.php>)

For the purposes of this Program, Junior Faculty is defined by an academic rank of Assistant or Associate Professor, and the candidate having held a faculty appointment at their home institution, for no more than seven years.

The Government will evaluate proposals through a review process in accordance with evaluation criteria listed in the FOA. An applicant with the proposal that offers the best value to the Government may be awarded a Cooperative Agreement with a performance period not to exceed two years. Up to two awards will be made and the anticipated funding for each award will not exceed \$250,000.00 per year, with the period of performance of two years. An amount of the first-year award is anticipated to cover 'time-away' costs so the junior faculty member can be 100% engaged in the program for phase one and phase two of the program. "Time-away" costs include release time (costs to the institution to accommodate the temporary absence of the participant), travel, and per diem. The subaward to the collaborating R-1 IHE for research expenses is allowable for up to 30 percent of the annual budget. A discussion of collaboration between the HBCU/MI, the R-1 IHE and the Army must be included in the proposal.

**The junior faculty members selected for the Faculty Immersion Program must be U.S citizen and be able to meet Government research facility access requirements in order to attend visits and meetings. Proof of citizenship, which will require two (2) forms of identification, must be provided for junior faculty members. One form of identification must include a picture, such as a current driver's license or passport. The second form of identification does not require a picture, such as a Social Security Number (SSN) card or a birth certificate). Additionally, all junior faculty members must be willing to submit to a National Crime Information Center (NCIC) check. Proof of citizenship is NOT required as part of the application. However, citizenship will be verified by the government prior to award.**

#### OBJECTIVES:

1. Enhance the research capabilities at HBCU/MIs.
2. Increase the diversity of the research and idea pool to address one or more priorities listed in the FOA.
3. Encourage research and educational collaborations between HBCU/MIs and other institutions of higher education and strengthen Army research networks.
4. Encourage participation in the programs and activities of the Department of Defense by HBCU/MIs.
5. Expose HBCUs/MIs to R-1 IHE research and procurement 'best-practices' and provide an opportunity to engage in research opportunities at an R-1 IHE.
6. Increase the number of graduates from such institutions engaged in disciplines important to the national security functions of the Department of Defense.

#### REQUIREMENTS FOR PARTICIPATION BY THE HBCU/MI

1. If the Department of Education letter is not submitted with the application, the applicant will be deemed ineligible and the application will not be considered by Army.
2. Full-time commitment by the junior faculty member to the program (no instruction or research commitments during phase one and phase two).
3. Ability of junior faculty member to participate in research at an R-1 IHE and an Army laboratory.
4. Commitment to completing research at home institution.
5. Willingness to allow Army and R-1 IHE observers to continue support and assistance during 'at-home' phase.
6. Proposals are not to exceed 25 pages (to include technical interest/capability, institutional letters of support and cost proposal).

#### FUNDING:

The following expenses are allowable within the \$250,000.00 per year award.

1. 'Time-away Costs' for phase one and phase two to cover the junior faculty member's travel and per diem and for the HBCU/MI to cover the junior faculty member's absence.
2. Funding to continue research at the home institution (phase three).
3. Subaward to the R-1 IHE not to exceed 30% of the award.

#### ARMY-HBCU/MI FACULTY IMMERSION PROGRAM – SPECIAL NOTICE PROPOSAL

##### REQUIREMENTS:

Proposals must be compliant with instructions provided in this special notice and with the associated FOA. The principal purpose of a cooperative agreement is to support and stimulate research. It is not for the acquisition of property or the provision of services for the direct benefit or use of the Government. Proposals must indicate how the HBCU/MI will interact and collaborate with the Army and with the R-1 IHE.

#### **RESEARCH TOPIC AREA(S) in AI and Autonomy:**

The junior faculty member must have expertise relevant to environmental science, in general, and have specific expertise and experience in one of the following topic areas listed below.

Hierarchies of Games: Mathematics of Game-Theory to Algorithms and Implementations

Methods, algorithms, and empirical approaches in the field of autonomy with emphasis on AI in the following areas:

- (1) Robotic autonomy in adversarial environments with incomplete information.
- (2) Sensor fusion, mapping, semantic scene understanding to drastically decrease computational overhead.
- (3) Autonomous implement control enabling terrain shaping in diverse challenging environments.
- (4) Autonomous and doctrinally relevant behaviors that enable successful implementation of human-machine integration in tactical missions.

#### **RESEARCH TOPIC AREA(S) in Synthetic Biology:**

The junior faculty member must have expertise relevant to synthetic biology, in general, and have specific expertise and experience in one of the following topic areas listed below.

Development of biosensors for detection of chemicals:

Biologically based-sensors are needed to determine if harmful industrial/agricultural chemicals are present in areas of Army operation. Areas of emphasis could include : (1) Development of novel biosensors to detect toxic industrial chemicals (e.g. PFAS and related chemicals, heavy metals, pesticides), (2) Novel approaches for remote biosensor application and detection of toxic compounds, (3) Novel approaches for detecting chemicals buried or underground, (4) Novel strategies for remote detection of biosensor activities.

Development of novel materials for rapid construction and repair of infrastructure.

Areas of emphasis could include: (1) Development of synthetic approaches to faster and stronger Microbial Induced Calcium Carbonate Precipitation (BioCement), (2) Development of synthetic biology approaches for in situ crack sealing, (3) Development of novel adhesives for use in aggregate materials (e.g. sand, rocks) that is tolerant of marine and freshwater environments.

Characterization & Sensing of Bio-synthetic Entities in the Environment:

Methods, algorithms and empirical approaches that couple diverse sensing modalities with new theories of biological processes and predictive models to understand the difference between natural and biosynthetic materials.

Heterogeneous Characterization & Sensing of Environmental State & Constituents:

Methods, algorithms and empirical approaches that couple diverse sensing modalities with new theories of near-surface environmental processes and predictive models to understand the physical environment and enable Warfighters and intelligent systems to tactically exploit environmental impacts.

Characterization & Treatment of Novel Environmental Contaminants:

Methods, algorithms and empirical approaches that couple diverse sensing modalities with new theories of treating contaminated soils, sediments, surface water and ground waters. Areas of emphasis could include: (1) physical and chemical technologies to minimize or reduce the quantity and toxicity of hazardous waste, (2) biological processes and methods to detoxify/destroy hazardous waste constituents, (3) techniques for in situ treatment of groundwater aquifers, (4) laboratory design criteria

for and field implementation of piloting equipment for promising technologies, (5) computer-based techniques to assess operational performance of various treatment processes/systems and (6) improved analytical chemistry techniques and methodology to assess treatment technologies.

#### Natural Infrastructure (NI) Construction/Deployment & Related Technologies:

Methods, algorithms and empirical approaches that couple research pertaining to placement of scientific instruments and/or pursuit of novel experiments that advance field-based sampling and laboratory practices for the purpose of measuring and archiving the performance of natural infrastructure (NI); conduct research and/or test innovative instrumentation that records/monitors natural and engineering processes resulting from the placement of NI and/or hybrid infrastructure; conduct research and test new technologies that result in accelerated construction/placement of natural and nature based features and/or improved placement strategies for dredged sediment used to construct engineering with nature (EWN) projects.

#### INSTITUTIONAL COMMITMENT

Proposals must include a discussion of the commitment, support, and involvement of the junior faculty member's home institution.

#### EVALUATION CRITERIA

Proposals will be evaluated based on the criteria outlined in the referenced FOA.

Proposals must be submitted in accordance with instructions provided in referenced FOA and must be received no later than 4:00 PM (ET), 31 January 2025. An award announcement is expected by June 2025. The recipient of an award will be contacted by a Contracting Officer/Grant Specialist of the Army Contracting Command.

Questions regarding the intent or scope of this special notice must be submitted to <https://www.hbcumiresearch.army.mil>. The deadline to submit questions is 4:00 PM (ET), 3 January 2025.

#### **ADDITIONAL INFORMATION ONLY APPLICABLE TO THIS SPECIAL NOTICE**

##### A) Privacy Statement

With the application submitted under this special notice, the Applicant must provide the following "Privacy Act Statement" consent form for each Covered Individual in the proposal. This form must also be signed by the Applicant as that Individual's Sponsor.

## Privacy Act Statement

Army Futures Command or Department of the Army

### Application for Federal Assistance

Authority: Government Paperwork Elimination Act (Pub. L. 105-277, 44 U.S.C. 3504); Executive Order 12372, Intergovernmental review of Federal Programs (47 FR 30959); 42 U.S. Code § 6605 – Disclosure of funding sources in applications for Federal research and development awards; Public Law 117-167, CHIPS and Science Act; Public Law 116-92, National Defense Authorization Act for Fiscal Year 2020; 5 U.S.C. 9101, Access to Criminal History for National Security and Other Purposes 5 CFR §1320.8, Agency collection of information Responsibility; 18 U.S.C. § 1001, False Statements, Concealment; E.O. 13478, Amendments to Executive Order 9397 Related to Federal Use of social Security Numbers; NSPM-33, National Security Presidential Memorandum 33 on National Security for United States Research and Development; DoD-D 5240.01, DoD Intelligence Activities; DoD-I 5200.02, Department of Defense Personnel Security Program; Army Regulation 381-10, U.S. Army Intelligence Activities

Purpose: The information collected may be used in processing, investigating, and maintaining records relevant to Federal Assistance awarded by the Department of the Army. Records in these systems will be used to ensure Army sponsored and/or awarded federal grants, assistance, contracts, and/or benefits are awarded to responsible parties, entities, and individuals.

Routine Uses: To contractors, grantees, experts, consultants, students, and others performing or working on a contract, service, grant, cooperative agreement, or other assignment for the Federal Government when necessary to accomplish an agency function.

To the appropriate Federal, State, local, territorial, tribal, foreign, or international law enforcement authority or other appropriate entity where a record, either alone or in conjunction with other information, indicates a violation or potential violation of law, whether criminal, civil, or regulatory in nature.

DoD Blanket Routine Use (<http://dpcl.d.defense.gov/privacy>)

Effect of not providing information: Providing information to the Department of the Army is voluntary. However, 42 U.S. Code § 6605, which imposes certain disclosure requirements in connection with Federal research and development awards, provides various enforcement mechanisms for non-compliance. One such mechanism, which the Department of the Army intends to pursue here, is rejection of such applications.

Proposal Title (or grants.gov number): \_\_\_\_\_

Acknowledgment of consent:

Covered individual (Signature): \_\_\_\_\_ Date: \_\_\_\_\_

Covered individual (Name print): \_\_\_\_\_

Institution's Authorized Representative (Signature): \_\_\_\_\_ Date: \_\_\_\_\_

Institution's Authorized Representative (Name print): \_\_\_\_\_

Institution Name: \_\_\_\_\_

## B) Additional Review and Selection Information

a. Upon receipt of a proposal, ARL staff will perform an initial review of its scientific merit and potential contribution to the Army mission, and also determine if funds are expected to be available for the effort. Proposals not considered having sufficient scientific merit or relevance to the Army's needs, or those in areas for which funds are not expected to be available, may not receive further review.

b. All proposals are treated as procurement sensitive and are disclosed only for the purpose of evaluation. Proposals having sufficient scientific merit or relevance will be subject to a peer review by highly qualified subject matter experts, both Government employees and non-Government employees. While the applicant may restrict the evaluation to Government employees, to do so may prevent review of the proposal by other qualified experts in the field of research covered by the proposal. The applicant must indicate on the appropriate proposal form (Form 52 or 52A) any limitation to be placed on disclosure of information contained in the proposal.

c. Each proposal will be evaluated based on the evaluation criteria in accordance with W911NF24S0009. Each evaluated proposal will receive a recommendation of "select" or "do not select" as supported by the evaluation.

d. Upon completion of an evaluation against the criteria in BAA, W911NF24S0009 a proposal selected for possible award will be analyzed for the realism and reasonableness of costs and funds availability. Proposal costs must be determined reasonable and realistic before the Government can make an award.

e. Army Research Risk Assessment. Each proposal with a recommendation to "select" in accordance with 2.c above, whose costs have been determined to be reasonable and realistic in accordance with 2.d above, for which funds are available, and where a grant or cooperative agreement will be the award instrument type, will be subject to an Army Research Risk Assessment prior to award.

i. The Army Research Risk Assessment Program. The Army Research Risk Assessment Program (ARRP) is an adaptive risk management security program applied to Army funded research designed to help protect Army Science and Technology (S&T) by identifying possible vectors of undue foreign influence. In order to identify and mitigate undue foreign influence as required by federal law and policy, the Army will perform a research risk assessment of each proposal selected based on the criteria above for consideration of a fundamental research grant or cooperative agreement award. ARRP risk assessments for these subject proposals will be developed for all proposed Senior/Key personnel, (also referred to as "Covered Individuals"). These risk assessments will be based on information disclosed in the Standard Form (SF) 424, "Senior/Key Person Profile (Expanded)," any of its accompanying or referenced documents, publicly available information, and information contained in internal Army databases. Nationality or citizenship is not a factor in the risk assessment. 35 ARRP has a risk matrix which identifies risk factors and resulting risk ratings. The matrix generally looks at four factors, or risk areas: participation in foreign talent programs; denied entity list affiliation or association (see <https://www.bis.doc.gov/index.php/the-denied-persons-list> and <https://www.bis.doc.gov/index.php/policy-guidance/lists-of-parties-of-concern/entitylist>); funding sources to include conflict of interest or conflict of commitment, or funding from a

strategic competitor; and foreign influence showing a pattern or history of affiliation, association, or collaboration with a foreign institution, person or entity from a U.S. strategic competitor.

The matrix is set forth below:

Rating	Identified Specific Actions of the Senior/Key Personnel			
	Foreign Talent Program	Denied Entities	Funding	Foreign Institutions
<b><u>HIGH</u></b>	Indicators of active (ongoing) participation or sponsorship in a strategic competitor Foreign Talent Program	Indicators of an active (ongoing) affiliation or past affiliation or present association with an entity on the U.S. Gov't denied entity or person list or EO 13959 or subsequent similar issuances	Indicators of active (ongoing) conflict of interest, conflict of commitment, or pattern of direct funding from a strategic competitor or country with history of targeting U.S. research or technology	Indicators of active (ongoing) direct affiliation, association or collaboration with a foreign institution, person, or entity from a strategic competitor
<b><u>MODERATE</u></b>	Indicators of past participation in a Foreign Talent Program with a U.S. strategic competitor, or country with a history of targeting U.S. research or technology	Indicators of past association with an entity identified in the U.S. Gov't denied entity or person list or EO 13959 or subsequent similar issuances	Indicators of any history or nonconsecutive pattern of, conflict of interest, conflict of commitment, or funding from a strategic competitor or country with history of targeting U.S. research or technology	Indicators of a history or pattern of association or collaboration with foreign institution, person, or entity from a strategic competitor or country with history of targeting U.S. research or technology
<b><u>LOW</u></b>	No participation in a Foreign Talent Program	No indicators of past or current association or affiliation with an entity on the U.S. Gov't denied entity or person list or EO 13959 or subsequent similar issuances	No indicators of past funding from a strategic competitor or country with history of targeting U.S. research or technology	No indicators of an association or collaboration with a foreign institution, person, or entity from a strategic competitor or country with history of targeting U.S. research or technology



Affiliation is academic, professional, or institutional appointments or positions with a foreign government-connected entity, whether full-time, part-time, or voluntary (including adjunct, visiting, honorary, or lectures/visits) where direct monetary or non-monetary reward is involved.

- Association is academic, professional, or institutional appointments or positions with a foreign government-connected entity, whether full-time, part-time, or voluntary (including adjunct, visiting, honorary, or lectures/visits) where no direct monetary or non-monetary reward is involved.

- Collaboration is academic, professional, or institutional agreement to jointly work together with a foreign government- connected entity, whether full-time, part-time, or voluntarily, in an official or unofficial capacity. Co-authorship in research endeavors is an example of collaboration.

- Strategic competitors are those adversaries identified in the current year Annual Threat Assessment report from Director of National Intelligence. The 2021 assessment was published on April 9, 2021 and can be found at <https://www.dno.gov/>.

- Conflict of Interest and Conflict of Commitment are defined in NSPM-33 and in the CONOP as well as the ARRP Policy memorandum. - Senior/Key Personnel are those who (a) contribute in a substantive, meaningful way to the scientific development or execution of a research and development project proposed to be carried out with a research and development award from a Federal research agency; and (b) are designated as a covered individual by the Federal research agency concerned.

ARRP risk ratings range from LOW to HIGH depending on the amount, type, and timing of foreign associations or affiliations that could constitute a foreign-influenced “Conflict of Interest” or “Conflict of Commitment,” as defined by National Security Presidential Memorandum 33 (NSPM-33). Once the research risk assessments are performed, the Army risk acceptance authority has several courses of action available for consideration. These courses of action are as follows: Course of Action 1 - The Army risk acceptance authority may accept the risk rating that results from the risk assessment process and proceed with the award. This typically happens with proposals with risk ratings of “LOW” but could also happen with the other risk ratings.

In Course of Action 1, the applicant will not be required to do anything related to the risk assessment process or the assigned risk rating.

Course of Action 2 - The Army risk acceptance authority may accept the risk rating with some research protection requirements added to the grant or cooperative agreement award. This typically happens with proposals with risk ratings of “MODERATE” but could also happen with the other risk ratings. Also, typically, these added research protection requirements could include, but be limited to the following in the grant or cooperative agreement award:

The University's Security Office shall provide the Principal Investigator and key personnel related to this award training on foreign talent recruitment programs and threat awareness and reporting requirements.

The University shall disclose to the Army Research Laboratory Security Office and Grants Officer all international travel, i.e., all international travel completed as part of any university business, by the Principal Investigator and key personnel related to this award instrument prior to travel.

The University shall report to the Army Research Laboratory Security Office and Grants Officer all inquiries by foreign operatives or suspected foreign operatives into research associated with the award.

The University is encouraged to utilize students without potential conflicts of interest or conflicts of commitment as identified in U.S. National Security Presidential Memorandum (NSPM-33).

Under Course of Action 2, the applicant will be asked to sign the grant or cooperative agreement prior to award, confirming agreement to these added requirements. Should the applicant not agree to these added research protection requirements, the Army risk assessment authority may decide not to award.

Course of Action 3 - The Army risk acceptance authority is not willing to accept the risk assigned as a result of the assessment process. In this case, the applicant will be provided an opportunity to provide a risk mitigation plan. This typically happens with proposals with risk ratings of "HIGH" but could also happen with the other risk ratings. In Course of Action 3, the applicant will be informed of the risk rating assigned during the risk assessment process as well as the block(s) on the matrix where the review resulted in some type of finding that contributed to the assigned risk rating. Should the applicant choose to not submit a risk mitigation plan, the Army risk assessment authority may decide not to award. Should the applicant choose to submit a risk mitigation plan, the Army will review such plan. As a result of this review, the Army risk acceptance authority may then be willing to accept the risk assigned with the mitigation plan and proceed with the award or the Army risk acceptance authority may not be willing to accept the risk and may decide not to award. Further, should the risk mitigation plan include proposal revisions that affect those aspects of the proposal included in the review or selection process under 2.c, the original proposal evaluation will be reviewed and revised as appropriate based on the proposal revisions.