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) W911NF-19-S-0013 Amendment 01, Research and Education Program for Historically Black Colleges and Universities/Minority-Serving Institutions issued January 2021, 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. To be executed under authority 10 U.S.C. Section 2362, 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 W911NF-19-S-0013. 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 artificial intelligence and machine learning (AI/ML). (AI/ML is listed in the FOA as one of thirteen DoD priorities.)

**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 be 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 2362 and eligibility defined in FOA W911NF-19-S-0013, 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 artificial intelligence and machine learning (AI/ML). (AI/ML is listed in the FOA as one of thirteen DoD priorities.)

An applicant's proposal must identify a junior faculty member to participate in the program and their proposed research in the field of AI/ML. 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 AI/ML. 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 2362. 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 thousand 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 be 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 $250K 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):

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

**Complex Behaviors for Ground Autonomy:** Theories, methods, algorithms and experimental approaches to enable ground autonomous systems to coordinate, collaborate and execute goal-driven and tactically appropriate behaviors and activities that comprise multiple actions in complex ground environments.

**C4 for Multi-Domain Operations:** Theories, methods, algorithms and experimental approaches to enable distributed teams of humans and intelligent agents (software and robotics) to integrate a broad range of dynamic, complex, and disparate information arriving from the multi-domain battlespace; comprehend situational implications; generate and recommend effective decisions; and monitor/assess decisional effects.

**Artificial Reasoning for Intent and Discourse:** Theories, methods, algorithms and experimental approaches to enable computer systems, autonomous physical systems, and humans to reason about available data and interactions between those entities to understand the intent and meaning of the communicated information; and to conduct discourse over time where communications depend on history of previous interactions and situational conditions.

**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.

**Comprehensive Spatiotemporal Scene Understanding:** Theories, methods, algorithms, sensors and experimental approaches to enable intelligent systems to understand the content, meaning and implications of complex situations and events unfolding in physical environments over space and time; and to identify and label mission-relevant elements of the observed scene and actions performed within the scene.

**Data Science Enablers:** Theories, methods, processes, algorithms, frameworks and experimental approaches to identify, characterize, extract and integrate entities, patterns, relations, insights and ultimately knowledge from collections of diverse types of structured and unstructured data.

**Efficient Information Models and Representations:** Theories, methods, processes, algorithms, and experimental approaches to create information and machine learning models that can learn complex tasks without being explicitly programming; low size weight and power (SWAP) algorithms and methods suitable for tactical edge operations and distributed command and control operations.

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.

NOTE REGARDING COVID-19

The Army continues to monitor the impact of COVID-19 on operations and procurements. The Army HBCU/MI Faculty Immersion Program is planned under the presumption that any COVID-19 restrictions will not impact the program. Proposals should be written accordingly.

Proposals must be submitted in accordance with instructions provided in referenced FOA and must be received no later than 4:00 PM (ET), October 1, 2021. An award announcement is expected by December 15, 2021. 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 usarmy.adelphi.devcom-arl.mbx.army-forum@mail.mil. The deadline to submit questions is 4:00 PM (ET), September 15, 2021.

Attachment A.

Potential Army-Sponsored R-1 IHE Teammates for HBCU/MI Consideration

Arizona State University
Carnegie Mellon University
Columbia University
Cornell University
Mississippi State University
Northeastern University
Pennsylvania State University
Rutgers University
University of California - Berkeley
University of California - Davis
University of California - Los Angeles
University of California - San Diego
University of California - Santa Barbara
University of Georgia
University of Minnesota - Minneapolis
University of Rochester
University of Southern California
University of Texas at Dallas
University of Texas at San Antonio
Virginia Polytechnic Institute & State University