Opportunity Title: Advanced Research in Anticipatory Analytics
Opportunity Reference Code: NGA-17-6-closed

Organization U.S. Department of Defense (DOD)

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How to Apply Applications are accepted and reviewed on an ongoing basis through the PC Recruiter Application System. Selections are made as openings occur throughout the year. NGA expects there to be multiple positions. The Visiting Scientist Program for NGA is administered by ORISE. A complete application package consists of: - Application - Current curriculum vitae or resume - Two completed reference forms - Transcripts - Statement of research interests (four page maximum)

Please reference Project #NGA-17-6 when calling, emailing, or writing for information.

Application Deadline 11/30/2018 12:00:00 PM Eastern Time Zone

Description **Advanced Research in Anticipatory Analytics**

PROJECT DETAILS

NGA is conducting advanced research in Anticipatory Analytics. The NGA Research Anticipatory Analytics Pod conducts research which advances the discovery and modeling of associations, trends, patterns and system dynamics that support the conditional exploration of potential events. They create computational methods to transform traditional GEOINT and open source data into spatio-temporal information describing events and activities. They develop quantitative and predictive analytic models to capture hidden relationships among events and activities and to measure change and characterize uncertainty. They enrich the field of GEOINT by combining full spectrum source data with modeling capabilities that attribute real world object behavior to known signatures and doctrines. Join the Anticipatory Analytics Pod to develop the ability to capture knowledge as models that are dynamically refined by recent spatial, temporal and domain observations to represent the most current understanding of world events, systems and discrete entities. NGA is looking for scientists to aid our research efforts in this unique problem set that has special application to the Intelligence Community and the Department of Defense.

NGA Visiting Scientists apply the scientific method across one or more disciplines to advance Geospatial Science and enhance Agency Tradecraft through systematic experimentation and exploitation. They serve as principle investigators for scientific research projects and facilitate collaboration among diverse domains to further scientific inquiry and application. These Scientists plan and conduct research, provide technical guidance and oversight, report results, and advise management on new and evolving technology.

INDIRECT BENEFITS OF POSITION

Selected participants will have the opportunity to perform research on topics of interest to the U.S. Government and to interact with leading scientists performing research and/or advising NGA. NGA's extensive

partnering relationships with other government agencies will expose participants to a broad government research community. Visiting Scientists will have the opportunity to meet government decision-makers and learn directly from them about the role of scientific research in government activities. Furthermore, participants have the opportunity to learn how research products transition from the proof-of-concept stage to integrated production systems.

BASIS OF SELECTION

Participants will be selected based on a 4-page maximum statement of research interests, relevant experience, academic performance, overall technical expertise, publications, recommendations, and compatibility of background with basic and applied research programs and projects at NGA and/or NGA-approved location.

STATEMENT OF RESEARCH INTERESTS

The statement of research interests should describe previous research experience and outline the relevance to this project. The research interest statement is a significant component of the selection criteria and should be no longer than four-pages. NGA and the selected candidate will work cooperatively to define mutual research assignments and goals in support of the NGA mission and the candidate’s educational pursuits.

APPOINTMENT TERM AND WORK ENVIRONMENT

The initial appointment period will generally not be less than 3 months and may be up to 1 year. The appointment may be renewed for up to 4 additional years, total appointment not to exceed five years, based upon recommendation of NGA and subject to availability of funds.

Dependent upon the specific research project, the appointment may be:

1) A full time residency appointment with NGA. Participation will require SCI clearances and drug testing, and work will not begin until all security processes and drug testing are completed successfully. Refer to section on Security Requirements. Applicants should be aware that due to security requirements, applications should be submitted no later than 9 months prior to desired start date. During the entire period of the award, participants must devote their activities to the approved research program.

2) Most appointments must be in-residence at an NGA facility or other approved facility; however, if a Visiting Scientist appointment is for an unclassified research project NGA has a limited number of opportunities for appointments that do not require in-residence at an NGA facility, for which applications will be considered on a case-by-case basis.

NGA approval is required before participants may accept additional monetary aid or other remuneration from another fellowship appointment or similar grant during the period of appointment.

For all Visiting Scientists, whether in-residence at NGA or at an NGA-

approved facility, approval for any publication of articles or presentations during the appointment is subject to the NGA process for public release of information. The requirement for publications and presentations to undergo a NGA public release process extends beyond the term of the appointment when a research product, article, or presentation contains information directly arising from participation in the appointment. For inventions conceived of or reduced to practice during the appointment, the participant shall assign to NGA a perpetual world-wide royalty-free non-exclusive irrevocable license to practice the invention on behalf of the Government. An intern or participant may hold a copyright in information created by the intern or participant during the appointment.

COMPENSATION

The selected candidate will receive a monthly stipend. The stipend rate is determined based upon level of education, training, and experience. Inbound travel and moving expenses may be considered and reimbursed according to established policies. Limited travel and other costs will also be reimbursed for training related to the project as approved by the Oak Ridge Institute for Science and Education (ORISE) and NGA. The participant does not become an NGA employee, and there are no fringe benefits paid.

The participant must show proof of health and medical insurance. Health plans are available through ORISE for Postgraduate Internship or Fellowship participants. The monthly stipend is intended to cover costs for health and medical insurance. NGA does not provide additional compensation for these expenses.

Qualifications **ELIGIBILITY**

Student applicants must be completing a Ph.D. or post-doctoral appointment with backgrounds in Mathematics, Statistics, Computer Science, Geospatial Information Science, Geography, Physics, Geometry, Visual Cognition, Nuclear Physics, Astrophysics, Remote Sensing, or a related field. - Current college or university faculty members on sabbatical are also eligible. - Other applicants will be considered on a case-by-case basis. - Applicants must demonstrate experience applying the scientific method and modern research techniques in a field directly applicable or highly related to the Research Pod.

- Applicants must demonstrate experience in algorithm development and programming to test and validate the proposed methods.

- Applicants should have experience working within a research environment and show an ability to conceptualize a broad research agenda, to plan and execute specific research projects, and to meet task deadlines and goals. Applicants should have excellent verbal and written communication skills. - U.S. citizenship is required for the applicant. Please see further eligibility under Security Requirements. - If the research project is classified, a background check will be conducted for a Sensitive Compartmented Information (SCI) security clearance and completion of a Questionnaire for

National Security Positions will be required. Visiting scientists are also subject to Counterintelligence Polygraph examinations and drug testing in order to maintain access to Top Secret information. Please refer to section on Security Requirements.

SECURITY REQUIREMENTS

The program is open to qualified U.S. citizens ONLY without regard to race, sex, religion, color, age, physical or mental disability, national origin, or status as a Vietnam era or disabled veteran.

For appointments to classified research projects:

The “Questionnaire for National Security Positions,” Standard Form 86 (SF-86) and “Fingerprint Chart,” Standard Form 87 (SF-87) must be completed by the selectee to initiate a background investigation. Instructions for completing these forms will be provided following appointment acceptance. All documentation must be completed within two weeks of appointment acceptance and required clarification must be completed within two weeks of request.

Top Secret security clearance with access to Sensitive Compartmented Information (SCI) required (will take several months to complete). As a mandatory prerequisite for the appointment to an NGA facility, the applicant must be a U.S. Citizen. Clearance determinations are based upon careful consideration of the following:

o Allegiance to the United States

o Foreign Influence

o Foreign Preference

o Sexual Behavior

o Personal Conduct

o Financial Considerations

o Alcohol Consumption

o Drug Involvement

o Emotional, Mental, and Personality Disorders

o Criminal Conduct

o Security Violations

o Outside Activities

o Misuse of Information Technology Systems

Applicants must undergo a comprehensive background investigation and be adjudicated in accordance with the guidelines set by “Director of Central Intelligence Directive 6/4” and DoD 5200.2-R, “Department of Defense Personnel Security Program Regulation.” Available, reliable information

about the person, past and present, favorable and unfavorable will be considered in reaching a determination. Each case will be judged on its own merits, and any doubt concerning personnel being considered for access to classified information will be resolved in favor of national security.

A counterintelligence polygraph will be required.

NGA is a drug-free workplace. Initial and random drug tests will be conducted.

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Earth and Geosciences** (21 👁)
  - **Environmental and Marine Sciences** (2 👁)