



Know the Earth... Show the Way

Academic Research Opportunities at the National Geospatial-Intelligence Agency (NGA):

NGA Academic Research Program

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Abstract

The vision of the National Geospatial-Intelligence Agency (NGA) is to “Know the Earth... Show the Way.” To achieve this vision, the NGA provides geospatial intelligence in all its forms and from whatever source—imagery, imagery intelligence, and geospatial data and information—to ensure the knowledge foundation for planning, decision, and action. Academia plays a key role in the NGA research and development program through the NGA Academic Research Program. This multi-disciplinary program of basic research in geospatial intelligence topics provides grants and fellowships to the leading investigators, research universities, and colleges of the nation. This paper provides information about the NGA Academic Research Program, the projects it supports and how researchers and institutions can apply for grants under the program. Other opportunities for academia to engage with NGA through training programs and recruitment are also described.

Introduction

The National Geospatial-Intelligence Agency (NGA) conducts a multi-disciplinary program of basic research in geospatial intelligence topics through grants and fellowships to the leading investigators, research universities and colleges of the nation. This research provides the fundamental science support for NGA’s applied and advanced research programs to address shortfalls in imagery and geospatial science and technology supporting the National System for Geospatial Intelligence (NSGI). The components of the NGA Academic Research Program (NARP) as shown in Figure 1 are:

- NGA University Research Initiatives (NURI)
- Historical Black College and University – Minority Institution Research Initiatives (HBCU-MI)
- Service Academy Research Grants
- Director of Central Intelligence (DCI) Post-Doctoral Research Fellowships



Figure 1: The NGA Academic Research Program

NGA University Research Initiatives

Begun in 1997, the NGA University Research Initiatives (NURI) program is an annual solicitation for basic research proposals in geospatial intelligence disciplines from US academic institutions. The solicitation topics are selected to provide the scientific basis for advanced and applied research in NGA core disciplines. Each year, six to eight proposals are competitively selected for three-year research grants. Fifty-six grants have been awarded through 2005. Each grant provides about \$150,000 per year and may be shared amongst multiple investigators and institutions. Institutions are encouraged to involve graduate students in the grants. The stimulation of graduate programs in geospatial intelligence-related disciplines is an additional benefit to the basic geospatial intelligence research conducted under the NURI program. Each grant also provides for two optional one-year extensions for research transition.

Historical Black College and University – Minority Institution Research Initiatives

In 1998, the Historical Black College and University – Minority Institution Research Initiatives (HBCU-MI) was created to provide basic research grants of more limited scope to US MI and HBCU institutions. These two-year research grants are awarded competitively to the best investigators at Historically Black Colleges and Universities, and Minority Institutions across the US academic community. The annual solicitation topics are selected to provide the scientific basis for advanced and applied research in NGA core disciplines. Typically, three grants are awarded annually with a total of twenty HBCU-MI grants awarded through 2005. HBCU-MI grants are funded at about \$60,000 per year with an option year for research transition.

Service Academy Research Grants

For over twenty years, NGA and its predecessor agencies, the National Imagery and Mapping Agency and the Defense Mapping Agency, have awarded annual research grants to conduct basic research in the Geospatial Sciences and enhance Geospatial Science education at

the US Service Academies (Army, Navy, Air Force and Coast Guard). This program directly impacts the geospatial intelligence knowledge and awareness of 13,000 future officers in the Department of Defense and the Department of Homeland Security. The program started with the US Military Academy (West Point) in the early 1980's and added the US Air Force Academy in the early 1990's, the US Naval Academy in 2002 and the US Coast Guard Academy in 2004.

DCI Post-Doctoral Research Fellowships

In 2000, the Chief Scientist of the Central Intelligence Agency established the Director of Central Intelligence (DCI) Post-Doctoral Research Fellowship Program. This annual solicitation for proposals seeks to establish long-term relations and mentoring of post-doctoral researchers at leading US academic institutions and federal or national laboratories. NGA serves the Intelligence Community (IC) as the executive agent for the DCI Post-Doctoral Program. Each IC agency contributes topics to the solicitation that reflect either agency-specific interests or broader interests across the IC. The Fellowships are two- and three-year awards at about \$120,000 per year with an optional third year. From ten to twenty fellowships are awarded annually. The post-doctoral fellow must be a US citizen.

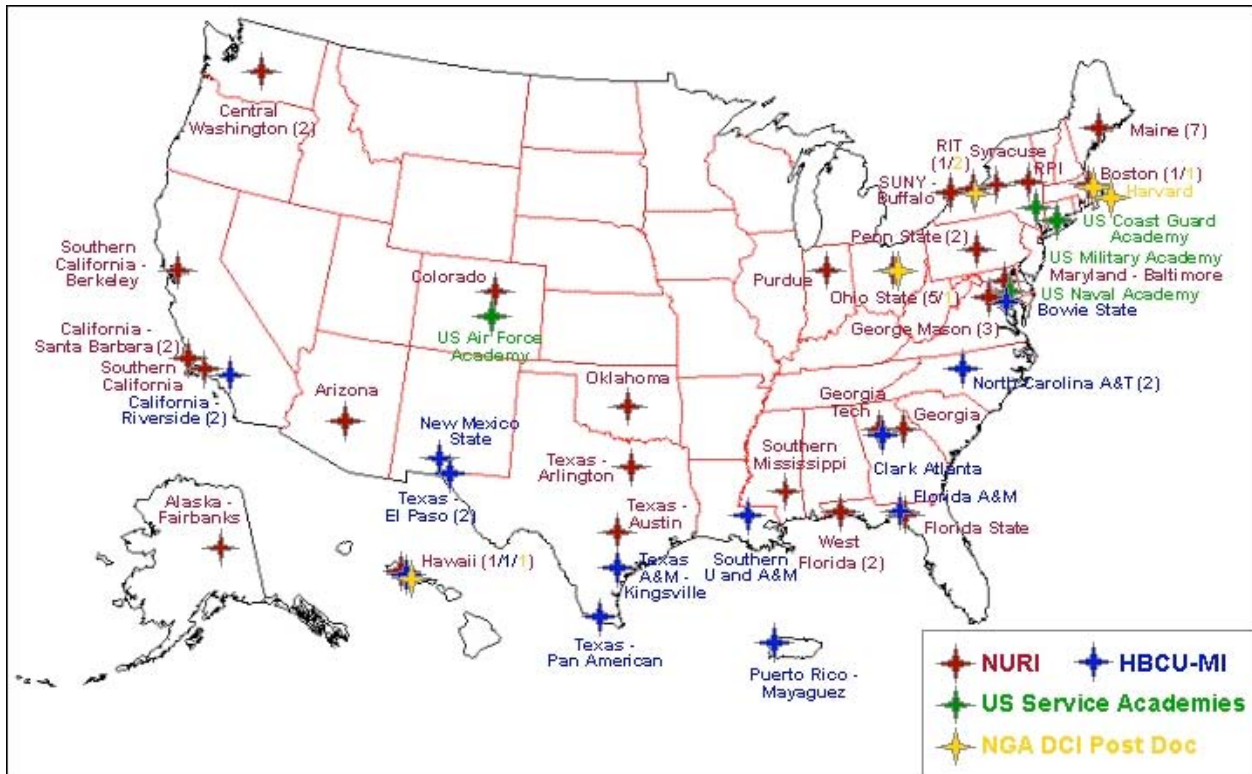


Figure 2: NGA Academic Research Program Participants

Academic Research Transition

NGA is interested in transitioning research conducted under the various NARP sub-programs into operational capabilities in support of the National System for Geospatial Intelligence (NSGI). To accomplish this, the NARP seeks to provide maximum exposure for sponsored research to the academic, government and business communities to encourage partnerships that will transition the research from the laboratory to the geospatial intelligence community’s applied research and technology programs. The mechanisms used by the NARP include:

- Annual NGA Academic Research Program Symposium to showcase research to NGA, DoD and IC agencies and NGA commercial partners;
- NGA-sponsored sessions at major professional organization conferences (AAG, ASPRS, IEEE, SPIE); and,
- Fostering partnerships between Academic Research projects and the Small Business Innovative Research (SBIR) Program in which NGA participates.

NARP Interactions

The NGA Academic Research Program has a synergistic relationship with both academia and the geospatial intelligence-related professional societies as depicted in Figure 3. These interactions include, but are not limited to, NGA-sponsored sessions at professional society conferences, publication of NGA-sponsored research in professional journals, recruitment of students majoring in geospatial intelligence-related disciplines and the NGA Vector Study Program. The Vector Study Program places NGA employees in long-term, full-time graduate programs leading to Masters and Doctoral degrees in geospatial intelligence-related disciplines. The NGA also works with the National Science Foundation and the National Academy of Science/National Research Council to coordinate, conduct and evaluate academic research.

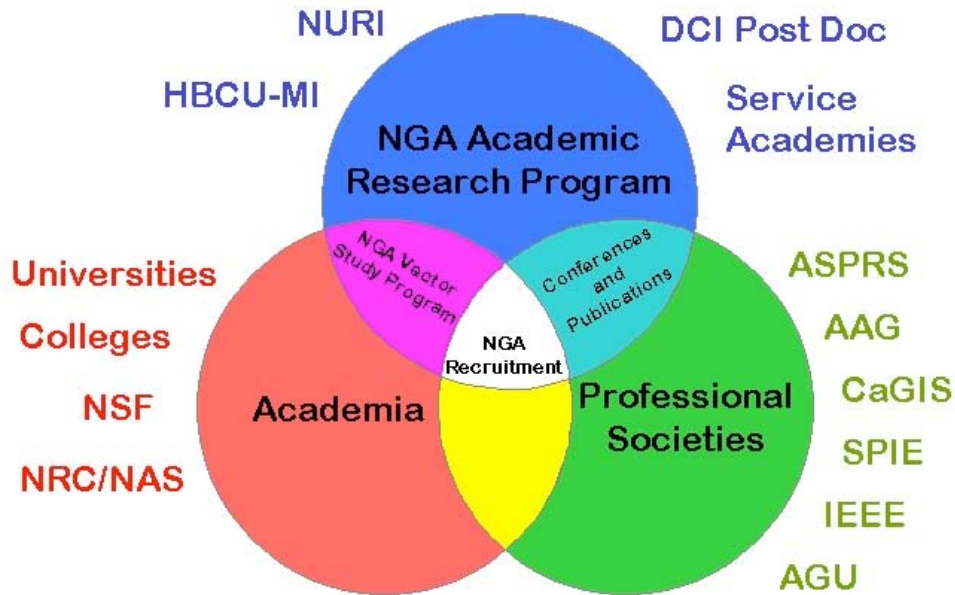


Figure 3: NGA Academic Research Program Interactions

OK, How Do I Apply?

The three competitive programs described above (NURI, HBCU-MI and DCI Post-Doc) are administered by the NGA Contracting Office with the annual solicitations posted on the Federal Grant Opportunities web site at www.FedGrants.gov and on the NGA web site at www.nga.mil under Business Opportunities (www.nga.mil/bizops). The solicitations typically occur in the late first or early second quarter of the fiscal year (December-February). In addition, the DCI Post-Doctoral Fellowship Program has its own web site at www.dcipostdoc.org. The point of contact for all NGA Academic Research Program activities is Dr. Scott A. Loomer, (703) 735-3062 or Scott.A.Loomer@nga.mil.