

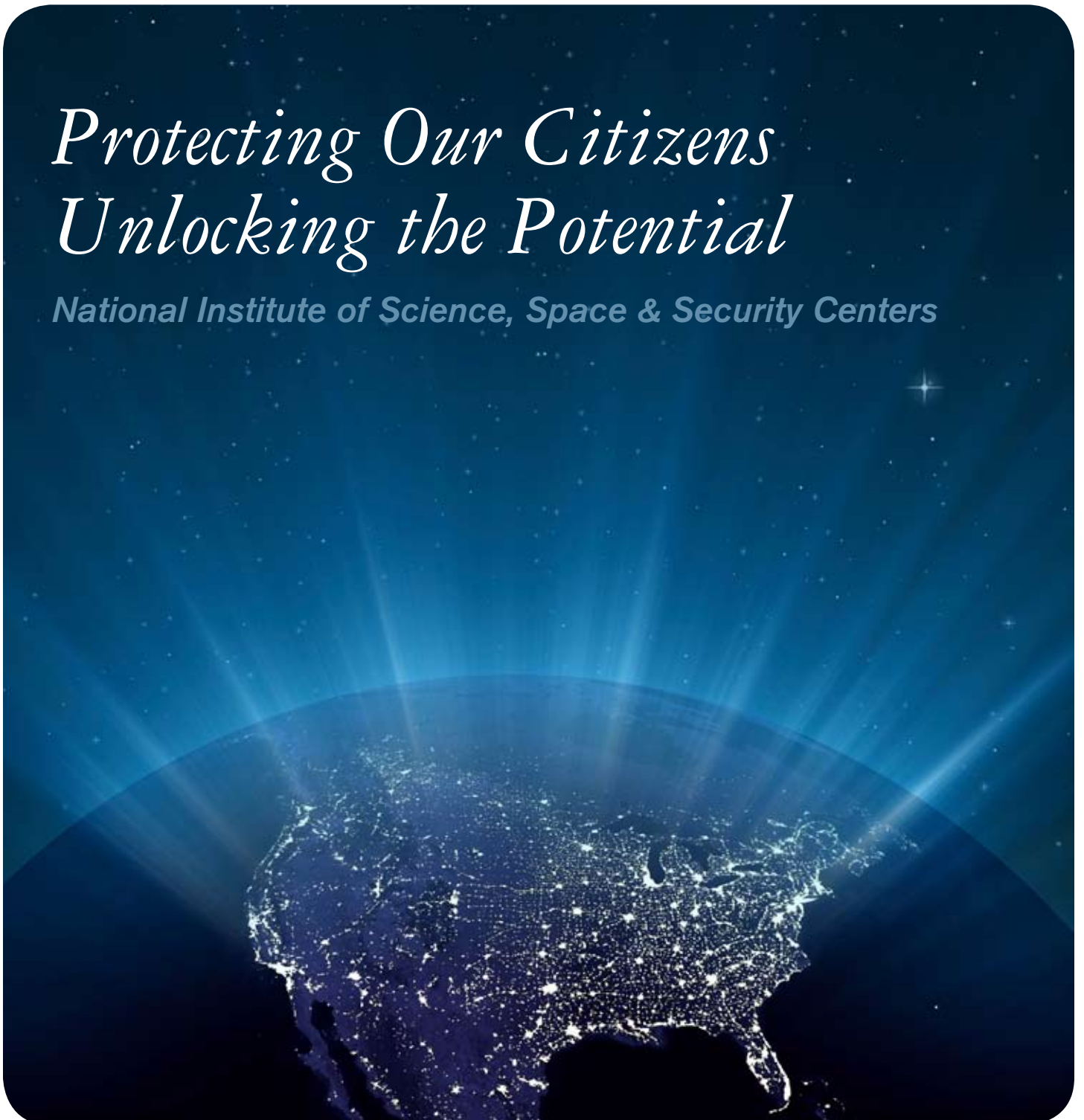
Creating Futures

University of Colorado *at Colorado Springs*



*Protecting Our Citizens
Unlocking the Potential*

National Institute of Science, Space & Security Centers





Research that Expands Horizons

Our opportunities today are greater than ever, but so are our vulnerabilities. Space travel has become more routine, and our explorations generate domestic innovations from GPS navigation to satellite radio. Yet tsunamis, cyber attacks, and car bombs require solutions that make us secure. To find these solutions, our universities must educate a sophisticated, high-tech workforce. But other nations are passing us by when it comes to science and math education.

At the National Institute of Science, Space & Security Centers, researchers study the questions that confront us in these fields—from “How do we balance the need for personal privacy with the need to fortify ourselves against attack?” to “How can we help a Hurricane Katrina victim put her life and her business back together, and be resilient enough to weather future storms?”

With your support, we'll work rapidly in quickly evolving fields toward answers to these and countless more questions, answers on which our future depends.



The NISSSC is housed in UCCS's new Science and Engineering building.

UCCS: A Perfect Home

Researchers in a vast array of far-flung military, industry, and academic institutions do valuable work on all of these issues. But we need a central clearinghouse so researchers can work together across diverse disciplines, connect with others doing parallel work, and publicly promote and debate new ideas at a national level.

NISSSC is just that clearinghouse, based in the new Science and Engineering Building at the University of Colorado at Colorado Springs.

UCCS is an ideal place to pursue these solutions. Situated at a military hub that includes NORAD, U.S. Northern Command, and Air Force Space Command at Peterson Air Force Base; Fort Carson; Schriever AFB; Cheyenne Mountain Air Station; and the U.S. Air Force Academy, as well as scores of defense firms, many of America's top thinkers on security subjects are drawn to the Pikes Peak Region. Colorado Springs boasts a strong high-tech sector (UCCS was founded largely to fuel Hewlett-Packard's local workforce in the 1960s) and robust UCCS programs in engineering, business, public affairs, and psychology. And Colorado's space economy ranks second in the nation, with one in five astronauts possessing significant Colorado ties.

A Vital Need

The U.S. government has recognized the value of NISSSC, supporting its development with federal grants that have provided the bulk of its funding. But those grants expire soon, and the Institute needs new funding streams—particularly, donor support—to remain strong.

Please consider supporting NISSSC. It's an investment in a secure, successful future for our citizens, our planet, and beyond.

Four Centers Under One Roof

NISSSC is a base for four centers with their own missions, research, and outreach projects, but with a shared orientation toward science, space and security solutions.

These centers are:

Center for Homeland Security: CHS generates basic and applied research that protects our citizens and sheds light on threats that confront us. Beyond research, CHS offers courses on subjects such as the terrorist threat, infrastructure protection, and interagency roles/relationships, which can lead to accredited certificates in Homeland Defense, Homeland Security, Security Intelligence, or Disaster Public Health. It makes UCCS one of few nonmilitary universities to educate students about nuances of tactical threat response, cybersecurity, and defense policymaking. This work resonates as far away as the George C. Marshall Center for European Studies in Germany, the city of Zagreb, Croatia, and the Albanian Defense College, partners that share CHS's mission of a safer world.



Trauma, Health, & Hazards Center: From wildfires, hurricanes, and disease epidemics, THHC aims to reduce the psychological impact of extreme human events. It organizes an annual conference bridging medical and behavioral health expertise related to hazard-response issues. Research on subjects such as disaster warning/response, emergency responder strategies, and the impact of post-traumatic stress on job performance have vital overlaps with, and implications for, homeland security. Several THHC research projects have gained funding through the National Science Foundation and the National Institute for Mental Health focusing on warnings for short-fuse weather events and recovery from emotional trauma. THHC Director Dr. Charles Benight reviews for several primary journals in the field, and has been associate editor for the *Journal of Traumatic Stress*.



Center for Space Studies: CSS is a pipeline from the classroom to space. Directed by 20-year Air Force veteran and Oxford graduate Dr. Scott Trimboli, CSS provides space certificates and advanced degree programs for aspiring space professionals. The Center sponsors and conducts research exploring subjects from the prevention of satellite collisions to accurate identification of orbiting tethered systems. In addition, CSS actively promotes national science and technology workforce capability improvement via space technology.

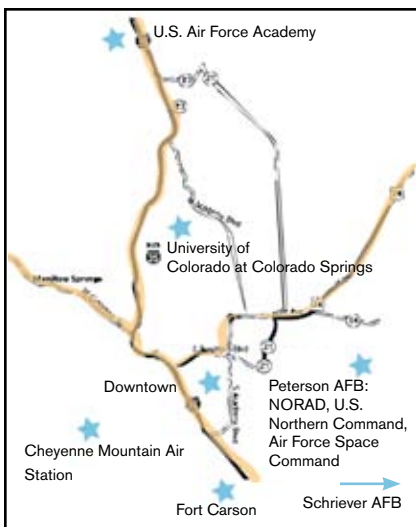
Center for Science, Technology, Engineering, and Mathematics Education: Many students reach college having already decided whether to study an engineering discipline or hard science. Often, they've chosen not to. The U.S. recently fell to 16th among 30 major nations in math/science education. CSTEME aims to bolster the science and engineering workforce, and reverse this decline. Programs such as the Partnership in Innovative Preparation for Educators and Students (PIPES) engage students from elementary school through college, and elicit the partnership of parents, schools, and industry. Dave Khaliqi, recipient of numerous teaching awards, directs CSTEME.

Our nation's computer infrastructure must be protected: it is a national priority. So NISSSC, enhanced by a state-of-the-art, high-performance computer and data storage system, is partnering with the College of Engineering and Applied Science to offer practical solutions that provide cyber defense expertise and technology that keeps America safe.



“UCCS and NISSSC have a powerful reputation for breakthrough solutions to real-world problems. This connection makes the Institute a leader in unlocking the potential for collaboration in leading-edge research, and in providing educational services in the science, space, and security fields.”

Michael Perini
NISSSC Executive Director



NISSSC is situated near numerous key partners in Colorado Springs and is strategically located within the Rocky Mountain Technology Corridor.

To support or learn more about NISSSC:

Contact

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All gifts should be payable to the University of Colorado Foundation for the purpose designated.

www.cufund.org

Funding Our Future

Our citizens rely on our research, teaching, and community connections—and now, we rely on you. We are trying to raise \$200,000 during an initial round of funding, to fund development of a resiliency handbook and post-doctorate research in terrorism and trauma psychology. A second funding round of \$1.5 million will enable NISSSC to become a national preparedness laboratory for resilience, to include research in cyber security, small satellite design, web-based intervention for trauma resilience, and international civil security collaboration.

In addition to unrestricted NISSSC gifts that would support the above, you can support an area of your choosing, such as:

- **Professorships and Endowed Chairs** that use multi-disciplinary approaches to attract innovation and expand integration and potential linkages among Institute Centers and NISSSC partners
- **Scholarships** that enable students access to a UCCS education, regardless of finances or circumstances
- **Work-Study Fellowships** in homeland defense
- **Underwriting** of National Conservation series, Senior Leader Seminars
- **An Endowed Professorship** to build Colorado’s first PhD program in trauma psychology
- **The NISSSC Library**, a resource for research materials in science, space and security, for use by faculty, staff, students, alumni, and the community
- **Operations** that provide a base for study of selected science, space and security topics

Within five years, we hope to be self-sustainable, earning revenue through conferences, industry-institute memberships, senior leader seminars, and grant funds. But for now, donor funding will enable the NISSSC to continue the progress it has made over the last several years.

New capacities. Skilled workers. Better understanding. These NISSSC outgrowths benefit Colorado’s workforce and defense infrastructure, and enhance UCCS’s profile as a central contributor to tomorrow’s great debates.

Join us, and help us unlock the potential for collaboration in science, space, and security.