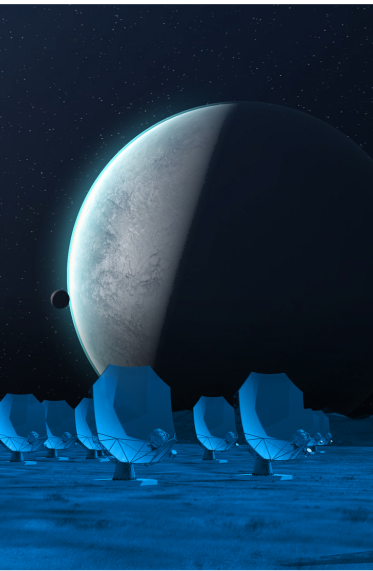


# AUI Capabilities Summary

AUI specializes in the planning, construction, and management of Research and Development (R&D) institutions, including Federally Funded Research and Development Centers (FFRDCs). AUI focuses its efforts on four areas: astronomy and space, energy programs, cybersecurity, and STEM education and e-learning. AUI is a non-profit educational institution founded in 1946.

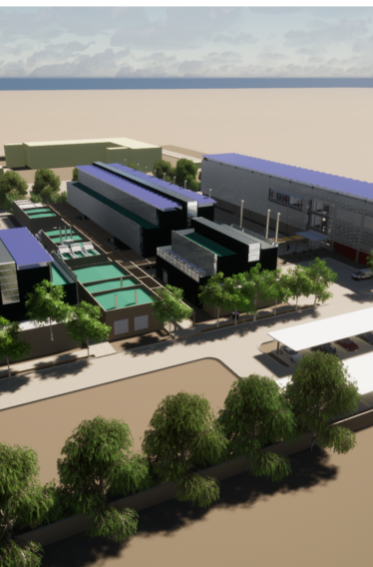
## ASTRONOMY AND SPACE



AUI manages the National Radio Astronomy Observatory (NRAO) and the Green Bank Observatory (GBO) under cooperative agreements with NSF. AUI has a long record of excellence in building and operating world-class facilities and applies its experience and partnerships to push the cutting edge of research. AUI is laying the groundwork to upgrade the Karl G. Jansky Very Large Array (VLA) to become the Next Generation Very Large Array (ngVLA). AUI led efforts to create the Atacama Large Millimeter/submillimeter Array (ALMA) in Chile as part of an international consortium. The \$1.5 billion ALMA project was completed under budget and on time in 2013.

Expertise developed in support of radio astronomy has uses in microwave electronics; wireless communications; and signal & data processing. New GHz-THz receiver products, active radar, image processing of multi-dimensional data sets, and space situational awareness capabilities created through the augmentation of radio telescopes are important developments felt beyond the radio astronomy community. Green Bank Observatory and NASA have demonstrated the power of this capability by finding the missing Chandrayaan-1 spacecraft in 2016. Together they located the tiny, 5-foot lunar probe orbiting the moon 237,000 miles away by pioneering a new application of interplanetary radar.

## ENERGY PROGRAMS



AUI's Energy Program focuses on the science and technology related to upstream materials extraction and processing, as well as workforce development and policy issues to enable the clean energy transition. AUI's history of building FFRDCs began with the successful construction and operation of Brookhaven National Laboratory, one of the U.S. Department of Energy's 17 National Labs. AUI was recently awarded a contract to build, manage, and operate a clean technology institute, known as the Instituto Chileno de Tecnologías Limpias (ICTL), in Chile. AUI remains committed to establishing this industry leading institute, in addition to pursuing an innovation institute in the US that can focus on R&D, technology demonstration, and scale-up for upstream materials extraction and processing. AUI presents unique partnership opportunities as a nonprofit, nonmember, education organization. We convene leaders within the scientific community to prioritize the future of research, drive Nobel Prize-winning research, and value the relationship between research and policy.

# AUI Capabilities Summary

## CYBERSECURITY



AUI partners with government, industry, and academia to deliver enhanced protection to vulnerable communities and critical infrastructure. AUI has created Woodstar Labs to develop and provide a range of leading-edge cybersecurity training and education, consultancy, and research and development services. Woodstar Labs is a key player in the emergency Cybersecurity Maturity Model Certification (CMMC) realm, both in helping organizations prepare for CMMC assessments as well as in training certified CMMC assessors. On the technology front, we utilize a suite of sophisticated tools to obtain, view, utilize and analyze metadata from our client's network infrastructure. These tools enable us to validate security controls, monitor cyber hygiene and detect anomalous and malicious activity. Through leveraging largely open source tools, we are able to combine signature and behavior detection techniques with threat intelligence and reporting and tracking tools to provide an affordable yet powerful monitoring system. Combining our experience in technology and education while incorporating enterprise risk management best practices, we also provide security services to help guide organizations to a more secure future.

Our subject matter experts have worked in cybersecurity roles as civilians in the Federal government (including in senior positions at the U.S. Department of Energy and National Nuclear Security Administration), as members of the U.S. military and Intelligence Community, and in private sector consulting. Our team members have served as cybersecurity advisors for Fortune 500 companies, senior Federal government personnel, and as leaders pushing the boundaries of cyber threat intelligence and analytics.

## STEM EDUCATION & E-LEARNING



AUI is a global leader in developing and delivering high-quality workforce development, education and training tools and initiatives. AUI's educational initiatives span a broad spectrum of ages, professions and disciplines, and pedagogical approaches. At the core of all these initiatives is a deep fidelity to the goal of building the workforce of tomorrow through effective, efficient, and innovative projects.

AUI built and operates—in partnership InfraGard National, an FBI-sponsored organization—the National Infrastructure and Resilience U (NISRU), an online training platform for the critical infrastructure community. NISRU provides competency-based, peer-reviewed online educational courses in all 16 critical infrastructure sectors to 74,000 InfraGard members, as well as approved businesses, public sector partners, educational institutions, and individuals. Learn more by visiting NISRU at [www.nisru.org](http://www.nisru.org).

AUI maintains active STEM education and public engagement efforts and programs that seek to inspire people of all ages, and to prepare the next generation STEM workforce. AUI's approach focuses in four areas: 1) astronomy and space sciences, 2) teaching and learning with big data in Earth-space sciences, 3) clean energy and technologies, and making STEM accessible for all.