

who we are



The **COMMONWEALTH CYBER INITIATIVE** (CCI) is **MAKING VIRGINIA A GLOBALLY RECOGNIZED LEADER IN CYBERSECURITY.**

CCI researchers create innovative solutions to secure our critical systems while educating a new generation of cyberwarriors and creating jobs in the commonwealth.

CCI is an unprecedented consortium of **41 INSTITUTIONS OF HIGHER EDUCATION** in Virginia, encompassing more than **320 RESEARCHERS** focused on the intersection of cybersecurity, autonomous systems, and intelligence.

The Arlington-based CCI Hub coordinates programs and strategy while housing cutting-edge facilities that provide a platform for innovative research.

Four regional nodes — in **Northern Virginia, Central Virginia, Coastal Virginia, and Southwest Virginia** — include regional industry, government, universities, and community colleges.

WORKFORCE DEVELOPMENT

CCI provides hundreds of Virginia students with experiential learning opportunities to meet the rising demand for cybersecurity professionals. One of our primary goals is **increasing the diversity** of the cyber workforce.

CCI helps support hundreds of paid internships in the private and public sectors for students from high school through graduate school. Our highly sought internship programs often boast majority participation from traditionally underrepresented groups.

CCI is creating a unique experiential learning portfolio, from capture-the-flag events to hands-on activities to enhance the security of autonomous vehicles and of our elections. These programs are paired with professional development activities and clearance-readiness instruction. CCI programs increase retention and equip students to compete for top cybersecurity jobs.

INNOVATION

We enrich a strong innovation ecosystem in Virginia by preparing students for entrepreneurship and investing in faculty and startups to translate university research into commercial products and services.

We work with Virginia cyber startups by providing paid internships, supporting translational research grants, and pairing them with faculty inventors.

Our students participate in innovation boot camps and entrepreneurial skills workshops, and receive funding and mentorship to bring ideas to market.



RESEARCH

CCI has the breadth of expertise and the scale to lead large research projects. Multi-university teams use CCI's unique research infrastructure to deliver on multi-million-dollar research projects funded by federal agencies and industry.

Our **xG Testbed** is the largest, most advanced of its kind in the country. It offers unparalleled opportunities to CCI researchers and our industry and government partners to test secure 5G and next-generation mobile networks, as well as AI assurance.

Major research themes in CCI include:

Securing the Next Generation of Networks: We help safeguard secure communications networks within critical infrastructure.

CCI is part of the **NextG Alliance**, an industry-led effort that's mapping a North American vision for NextG. Our research informs the standardization process.

Key research areas include:

- Open interfaces and standards
- Virtualization and network disaggregation
- Integration of cyber physical systems
- Quantum communications
- Secure and flexible spectrum

Securing Human-Machine Interactions: Developments in artificial intelligence, cyber physical systems, and communications are creating a world in which humans and autonomous machines increasingly interact.

At CCI, our research focuses on crafting the technology to secure the digital experience, in collaboration with experts from the social, life, and health sciences, as well as law and humanities.

Key research areas include:

- AI assurance
- The metaverse
- Security and privacy for embedded devices
- Ethical cybersecurity

