



Center for Applied Cybersecurity Research

Strategic Plan (2015-2020)

Over the next five years, CACR will pursue three strategic initiatives:

Lead

Increase

Advance

Lead

collaborative activities to enable a more cohesive, more impactful cybersecurity community at Indiana University

CACR has a unique opportunity to lead, coordinate, and facilitate cybersecurity activities for the university. Through the following actions, CACR will strive to benefit from and improve the capabilities of all parts of the university:

- 1.1: In partnership with all interested university entities, create a website to serve as a single online portal to the university's cybersecurity expertise, activities, and educational opportunities
- 1.2: Propose a cybersecurity Grand Challenge in furtherance of the university's Bicentennial strategic plan
- 1.3: Support the fulfillment of Grand Challenge proposals by other university entities
- 1.4: Focus CACR's annual summit on risk management and privacy issues of interest to university, as well as local and national communities
- 1.5: Lead and facilitate the development of a vibrant, system-wide cybersecurity community through faculty relationships, collaborative academic programs, and informative programs for the public

In all of its activities, CACR commits to addressing topics of broad interest that present significant opportunity to conduct collaborative work. Privacy, risk management, governance, big data, information sharing, and leadership meet these criteria. Through ongoing strategic planning activities, CACR will incorporate additional topics that appeal to the university community.

Increase

CACR's impact on the state of Indiana

CACR has a number of existing initiatives that benefit the state of Indiana, such as the annual CACR Summit, speaking at local and state events, and the Security Matters educational initiative. More direct benefit could be achieved through collaboration with other state entities that are working on cybersecurity, bringing CACR expertise on trustworthy infrastructure, privacy, and software assurance – expertise developed at the national level, through federal funding – to benefit the state of Indiana. The following actions will enable CACR to increase its visibility and leadership at the state level:

- 2.1: Implement an active CACR fellows program that promotes collaboration among academic disciplines and government, corporate, non-profit, and other communities
- 2.2: Expand collaborations to increase CACR's value to the state of Indiana by including one or more of the Indiana National Guard, Office of Information Technology, Indiana Information Sharing and Analysis Center, the Naval Surface Warfare Center Crane Division, and other state entities
- 2.3: Continue to strengthen and focus CACR's outreach and education programs to benefit populations in the state of Indiana

Advance

CACR to address healthcare cybersecurity issues

Healthcare is a strategic priority for Indiana University; it is identified as principle of excellence in the Indiana University Bicentennial Strategic Plan and as a Grand Challenge in Indiana University's Strategic Plan for Information Technology. The healthcare field can readily benefit from CACR's strengths, and it presents many of the most pressing cybersecurity issues for the coming generation to study and address.

Information-related issues include the use of cloud services, the digitization of medical records, privacy and security, and big data analytics. Governance, economics, legal, and policy issues are intertwined in federal laws and regulations. And cybercrime is a growing concern as groups target health information, weak corporate security practices, and underdeveloped risk management strategies. In short, there is a real market need for CACR's cybersecurity skills and expertise. With the addition of HIPAA consulting services, CACR will have a direct and measurable impact on healthcare cybersecurity.

The following actions will enable CACR to establish itself as a leader in the field of healthcare security:

- 3.1: Offer consulting services on the Health Insurance Portability and Accountability Act (HIPAA) and integrate related knowledge into other CACR projects
- 3.2: Collaborate with university entities to pursue funding to secure health information and/or infrastructure
- 3.3: Collaborate with university researchers and practitioners to lead at least one interdisciplinary research proposal

Through these initiatives, the Center will continue to cement its status as a world leader in the academic and research sides of cybersecurity.

Leadership

CACR Director **Von Welch** has more than a decade of experience developing, deploying, and providing cybersecurity for private and public sector high-performance computing and distributed computing systems.

Senior Fellow and founding Director **Fred H. Cate** specializes in information security law and policy issues and is routinely called upon to testify before congressional committees; speak before professional, industry, and government groups; and comment on cybersecurity-related stories in the news.

Associate Director **William Barnett** is senior manager for life sciences in the UITS Research Technologies office, and director of the Advanced IT Core in the IU School of Medicine. Dr. Barnett has also recently been named the first Indiana CTSI and Regenstrief Chief Research Informatics Officer.

Associate Director **Mark Bruhn** is Indiana University's associate vice president for assurance and public safety.

Associate Director **Scott Orr** is an instructor in Network Security and System Administration at IUPUI.

Administrative Director **Leslee Cooper** has over two decades of accounting and financial management experience.



Staff

CACR staff help manage daily operations such as administrative, management, external relations support, as well as security and policy analysis.

Randy Heiland,
Senior Systems Analyst/Programmer

Craig Jackson,
Chief Policy Analyst

Ryan Kiser,
IT Specialist

Mark Krenz,
Lead Security Analyst

Sarah Portwood,
Executive Assistant to Fred H. Cate

Anurag Shankar,
Senior Security Analyst

Susan Sons,
Senior Systems Analyst

Zalak Shah,
System Analyst

Amy Starzynski Coddens,
Education, Outreach and Training Manager

Diana Borecky,
Senior Administrative Assistant

Fellows

CACR sponsors nearly a dozen fellows representing a wide range of perspectives, including law, policy, ethics, and informatics.

L. Jean Camp, School of Informatics and Computing
Fred H. Cate, Maurer School of Law
Jake Chen, School of Informatics and Computing (IUPUI)
Arjan Durresi, Department of Computer and Information Science (IUPUI)
David P. Fidler, Maurer School of Law
Apu Kapadia, School of Informatics and Computing
Steven Meyers, School of Informatics and Computing
Scott J. Shackelford, Kelley School of Business
Robert Templeman, Naval Surface Warfare Center, Crane Division
Joseph Tomain, Maurer School of Law
Xiaofeng Wang, School of Informatics and Computing
Xukai Zou, Department of Computer Science (IUPUI)

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INDIANA UNIVERSITY
Pervasive Technology Institute