



U.S. Department of Homeland Security

FOR FY 2021, THE U OF I SYSTEM REQUESTS **\$840.943 MILLION** FOR THE SCIENCE & TECHNOLOGY DIRECTORATE AND **\$40.5 MILLION** FOR THE OFFICE OF UNIVERSITY PROGRAMS

S&T Directorate

FY2021 PBR = \$643.729M
FY2020 = \$737.275M
FY2019 = \$819.785M
FY2018 = \$840.943M

Office of University Programs

FY2021 PBR = \$21.746M
FY2020 = \$40.5M
FY2019 = \$40.5M

Appropriations Bill:

Homeland Security

Agency: U.S. Department of Homeland Security

DHS R&D EXPENDITURES, FY2019

URBANA-CHAMPAIGN: \$3.4 MILLION | UIC: \$141,000

Science and Technology Directorate (S&T)

Urbana-Champaign is home to the **Critical Infrastructure Resilience Institute (CIRI)**, a Center of Excellence funded under DHS S&T's Office of University Programs through a multi-year grant to conduct research, technology transition, and education and workforce development to strengthen



the security and resilience of our nation's critical infrastructures. Such infrastructure includes emergency communications systems, next-generation (5G) telecommunications networks, critical and defense manufacturing, and transportation systems, as well as the supply chains supporting those infrastructures. The Institute's research has already developed several compelling technologies that are being transitioned to critical infrastructure markets. New this year are research projects exploring the risks to the 5G wireless infrastructure associated with supply chain vulnerabilities, as well as research to identify and address potential cybersecurity risks to our nation's current 9-1-1 emergency communications and dispatch systems and next-generation 9-1-1 systems. CIRI has also extended its research collaboration with the United States Transportation Command (USTRANSCOM) focused on enhancing USTRANSCOM mission assurance by strengthening the cyber security and resilience of its vast supply chain and the maritime port operations that are so critical to USTRANSCOM's global mission.

Also with DHS funding, an Urbana professor is researching ways to **detect GPS spoofing**, where an attacker mimics the authentic signal, causing the receiver to compute a different position or timing solution.

Federal Emergency Management Agency (FEMA)

The Illinois State Water Survey (ISWS) at Urbana's Prairie Research Institute continues to receive grant funding from FEMA through the **Risk MAP program** to support the Illinois floodplain mapping program. ISWS is a Cooperating Technical Partner and produces flood risk identification maps that assist Illinois communities and citizens in understanding and taking measures to reduce flood risk. The project coordinates with Illinois Extension on extensive outreach to inform the public about flood hazards and alternatives.

FEMA also provides support to the **Illinois Fire Service Institute (IFSI)**, the statutory State Fire Academy for Illinois, which is at Urbana. In addition to providing training on campus, the Institute offers one-day, hands-on classes for fire departments at Regional Training Centers and local fire stations across the state. IFSI is currently engaged with FEMA on studies of firefighter chemical exposure and cardiovascular risk, with a focus on translating findings into actionable strategies that can be disseminated across the U.S.

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