U.S. DEPARTMENT OF HOMELAND SECURITY

FOR FY2024, THE U OF I SYSTEM REQUESTS **\$912.541 MILLION** FOR THE SCIENCE & TECHNOLOGY DIRECTORATE AND **\$57.88 MILLION** FOR THE CENTERS OF EXCELLENCE IN THE OFFICE OF UNIVERSITY PROGRAMS

S&T DIRECTORATE	
FY2024 PBR	= TBD
FY2023	= \$900.541M
FY2022	= \$886.4M
FY2021	= \$765.6M

FIZUZ4 PBR	- 100
FY2023	= \$45.88M
FY2022	= \$57.88M

Appropriations Bill: Homeland Security

Agency: U.S. Department of Homeland Security

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DHS R&D EXPENDITURES, FY2022

University of Illinois Urbana-Champaign

SCIENCE & TECHNOLOGY DIRECTORATE (S&T)

UIUC is home to the Critical Infrastructure

Resilience Institute (CIRI), a Center of Excellence funded under DHS S&T's Office of University Programs to conduct research, technology transition, and education and workforce development to strengthen the security and resilience of critical infrastructure systems. Such infrastructure includes government information systems, emergency communications systems, next-generation (5G) telecommunications networks, critical and defense manufacturing, oil and gas pipelines, water systems, 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, including tools to assist organizations in adopting and conforming to national cybersecurity standards and best practices as established by the National Institute for Standards and Technology (NIST).

CIRI and its partner institutions have developed innovative cybersecurity curricula and courses for use by 2-year and 4-year academic institutions to address the chronic shortage and lack of diversity in our Nation's cybersecurity workforce.

CIRI is researching the timing signal requirements of 5G telecommunications infrastructure and Land Mobile Radios used by first responders. These infrastructure systems (and others) currently rely on the Global Positioning System (GPS) for precision timing signals – a source that is susceptible to malicious disruption. Disruption of such timing signals could have catastrophic consequences for \$4.8 Million

timing-dependent critical infrastructure (including the electric grid). CIRI will identify and assess the viability of alternative timing signal sources and make recommendations for establishing viable back-up timing sources to enhance the resilience of these and other timingdependent infrastructures.

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

The Illinois State Water Survey (ISWS) at UIUC'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 with FEMA and produces regulatory and non-regulatory flood risk identification maps and related products that assist Illinois communities and citizens in understanding and taking measures to reduce flood risk. The project coordinates with the Illinois Department of Natural Resources to identify and prioritize state needs and with the Illinois Extension on extensive outreach to inform the public about flood hazards and mitigation alternatives.

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

UNIVERSITY OF ILLINOIS SYSTEM

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