



Chief Scientist of
The Air Force



Industry Day – UARC Panel

Georgia Tech Research Institute



USAF HBCU UARC Industry Day - Minimum Viable Infrastructure

August 9, 2022

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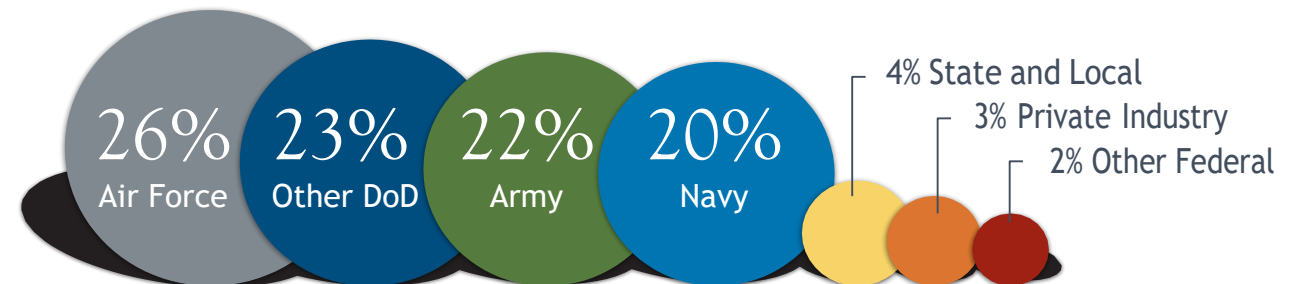
GTRI is Georgia Tech's UARC

As a University Affiliated Research Center (UARC), the Georgia Tech Research Institute (GTRI) is the nonprofit, applied research unit of the Georgia Institute of Technology (Georgia Tech).

- GTRI Designated a DoD Founding UARC in 1995
- US Army's biggest and second largest of 14 UARCs
- Managed by US Army Combat Capabilities & Development Command DEVCOM
- Operates under Federal Acquisition Regulation (FAR) 31.2
 - Non-profit electing to operate under cost principles for commercial organizations where fee is collected

GTRI Sponsors

**We were asked to talk about
“minimum viable infrastructure”
IT, Security, Contracting & Finance**



IT - Regulations for Working with CUI Data

- **Several DFARS requirements for working with CUI data**

- DFARS 252-204.7012 (Safeguarding Covered Defense Information and Cyber Incident Reporting)
 - is included in all DoD contracts regardless of whether it contains CUI or not.
- NIST 800-171 (Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations)
 - 110 Controls
 - Full System Security Plans (SSP) developed describing how each control is met.
- DFARS 252-204.7019
 - Must perform a self assessment and input your self assessed score into SPRS (<https://www.sprs.csd.disa.mil/>)
 - Must include System Security Plan(s) (SSPs)
 - Must include Plan of Actions and Milestones for any deficiencies

- **Cloud Computing**

- FedRAMP Moderate or High

CUI – Controlled Unclassified Information
DFARS – Defense Federal Acquisition Regulation Supplement
SSP – System Security Plans
SPRS – Supplier Performance Risk System
FedRAMP - Federal Risk Authorization Management Program. <https://www.fedramp.gov/program-basics>

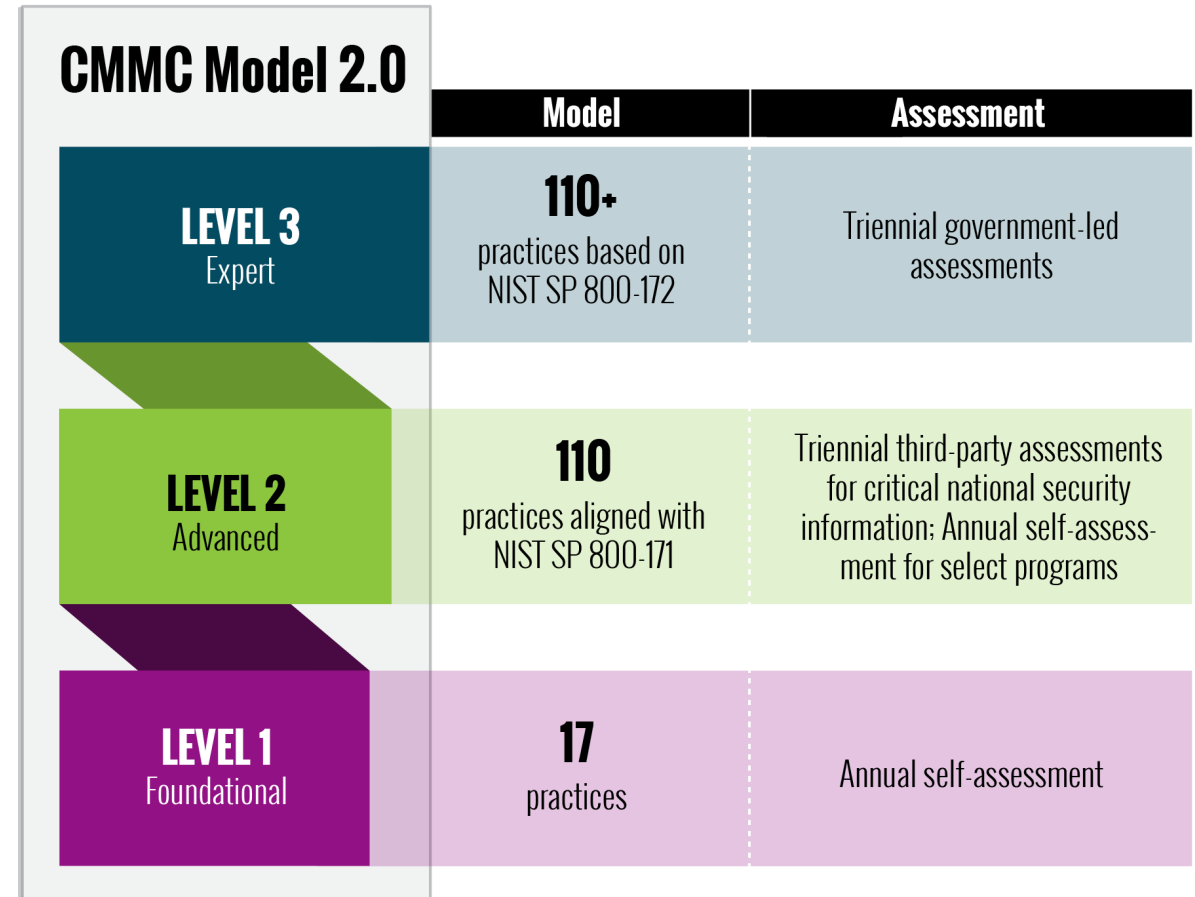
IT - DFARS 252.204-7012/NIST 800-171 Compliance

- Hardest areas are generally related to validated encryption and Multi-Factor Authentication (MFA)
 - Need to think about MFA in the path for all types of roles. As in if someone is performing two types of security roles, they need MFA in the path for both roles
- You have the choice of where to draw your network security boundary
 - Does not need to be your entire network
 - Network itself must be physically protected or protected via encryption
- If it's an island/enclave, you will still have to tie it in with authentication (IAM) and monitoring (usually a SOC) and that needs to be part of your overall SSP

MFA - Multi-factor Authentication
IAM – Identity and Access Management
SOC – Security Operations Center
SSP – System Security Plans

IT - CMMC – Cybersecurity Maturity Model Certification

- CMMC is a DoD designed certification with the goal of improving the security of federal contract information (FCI) and controlled unclassified information (CUI)
- Idea is to move from self (and DCMA DIBCAC) assessment of DFARS 252.204-7012 to a Third Party Assessment Organization (3PAO) certification for Defense Contractors
- DoD working on rulemaking and implementation of requirement in FY23
- Level of certification will be determined per contract based on sensitivity of the data

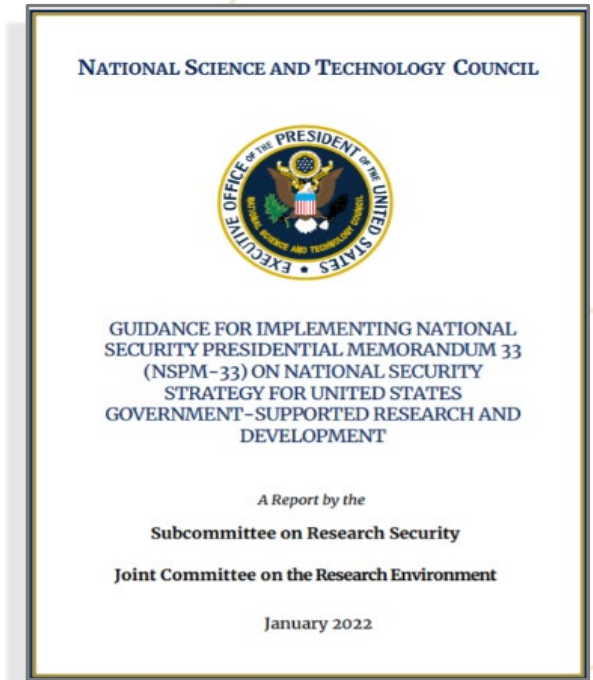


FY23 requirement, work toward level 2

Research Security

- National Security Presidential Memorandum 33 (NSPM-33)
- Must be identified as a Cleared Defense Contractor (CDC)
 - Requires sponsorship from either the Federal Government or a CDC
 - Identify nature of tasks or services to be performed that require access to classified information. Some examples are;
 1. **Contract/DD Form 254**
 2. A request for proposal
 3. Cooperative research and development agreement (CRADA)
- Personnel Security Clearance (PCL)
 - Identify Key Management Personnel (KMP) who will require PCL
 - Senior person(s) in organization, contracts, and security
 - Clearances must be level of Facility Clearance of organization
 - Must be a U.S. Citizen to be eligible for a security clearance

Work toward CDC status. USAF security will be your best help



<https://www.dcsa.mil>

<https://www.dcsa.mil/mc/pv/fso/>

Research Security

- CDC Security Professionals – 3 required positions
 - Cleared to highest level of facility
 - Facility Security Officer (contractually required position)
 - Well-versed in security management.
 - Insider Threat Program Senior Official (contractually required position)
 - Insider Threat Program developed to “deter, detect, and mitigate”.
 - Counterintelligence
 - Information Systems Security Manager (contractually required position)
 - Well-versed in classified cybersecurity management. Must have working knowledge of;
 1. Information Assurance
 2. Compliance
 3. Risk Management Framework

Areas to be Aware/Mitigate

	Federal Contract	Mitigation
Cyber Security and CUI	Ensure protection and security of CUI	Do not receive CUI. Fundamental Research Exclusion (FRE)
Publication Restrictions	Sponsor Approval of Publication	FRE or sponsor agreement in advance
Intellectual Property	Sponsor owns or controls	Negotiate IP and IP access
Warranty/ReWork	Ensures that deliverable is acceptable and within Scope	Eliminate or substantial reduction to Best Effort
Billing Requirements CLIN/ACRN	Cost control by funding certain cost types	Negotiate the elimination of multiple CLIN's
Foreign National Restriction	Protect US security and interests	FRE or sponsor negotiation



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Penn State University



University Affiliated Research Center (UARC)

Contracting Overview

Contracting Process & Organizational Conflict of Interest

James J. Dromazos
Chief Financial Officer and Director of Business Services
Applied Research Laboratory, The Pennsylvania State University

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09 August 2022



DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING
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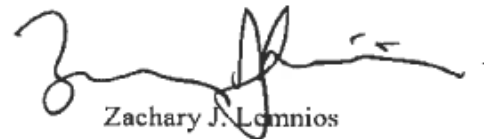
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MEMORANDUM FOR ASSISTANT SECRETARY OF THE NAVY (RESEARCH,
DEVELOPMENT, AND ACQUISITION)
ASSISTANT SECRETARY OF THE ARMY (ACQUISITION,
LOGISTICS AND TECHNOLOGY)
DIRECTOR, NATIONAL SECURITY AGENCY
DIRECTOR, MISSILE DEFENSE AGENCY

SUBJECT: FY 2010 DoD UNIVERSITY AFFILIATED RESEARCH CENTER
(UARC) MANAGEMENT PLAN

I have approved the FY 2010 DoD UARC Management Plan. This plan goes into effect immediately. Please pass my thanks to your staffs and your UARCs for their assistance in updating the original UARC Management Plan.

Mr. Mark Krzysko, Deputy Director, Enterprise Information and OSD Studies and his staff will work with your staffs and the UARCs to make implementation of the management plan as smooth as possible. His point of contact regarding this matter is Mr. Jay Minsky who can be reached at 703-845-2202 or by e-mail at jay.minsky@osd.mil.



Zachary J. Lemnios



- **Scope of Work...UARC Specific Core Competencies**
 - **Core Competencies**
 - **Areas of expertise in key technical areas to support the UARC's mission**
- **Competition in Contracting Act (CICA) Exemption**
 - **Allows USG To Contract Sole-Source to Educational Institution Performing R&D**
 - **United States Code...10 USC 3204(a)(3)(B)**
 - **FAR 6.302-3 -- Industrial Mobilization; Engineering, Developmental, or Research Capability; or Expert Services**
- **Institution Maintains a Long-Term Strategic Relationship with DoD**
 - **Responsiveness to evolving sponsor requirements**
 - **Comprehensive knowledge of sponsor requirement, and problems**
 - **Broad access to information, including proprietary data...Broad corporate knowledge**
 - **Independence and objectivity**
 - **Quick response capability...Current operational experience**
 - **Freedom from real and/or perceived conflicts of interest**
- **Significant Benefits of the UARC Contract**
 - **Standard Task Description Proposal and Contract Modification Formats**



10 U.S. Code § 3204 Use of procedures other than competitive procedures

(a) When Procedures Other Than Competitive Procedures May Be Used. The head of an agency may use procedures other than competitive procedures only when

(3) it is necessary to award the contract to a particular source or sources in order

(B) **to establish or maintain an essential engineering, research, or development capability to be provided by an educational or other nonprofit institution** or a federally funded research and development center,



- **Justification & Approval / Acquisition Plan**
 - White-paper supports total ceiling value
 - Perform contract ceiling discussions with Sponsor
 - Initial AP and J&A document drafted by COR/CO
 - Final Government approvals
- **Pre-RFP Work**
 - Release Draft RFP
 - Establish pricing methodology and proposal exhibits
- **RFP Release and Contract Negotiation**
 - Review contract technical core competency wording
 - Negotiate terms and conditions
 - Initiate DD254 review
 - Submit cost proposal...CO evaluation of cost proposal and negotiation
 - Congressional Notification as needed...Final Government approvals
- **Comprehensive Review – Performed Every Five Years by NAVSEA UARC PMO**
 - Reaffirmation of core competencies
 - ARL provides sponsor contacts to NAVSEA
 - NAVSEA performs survey of the major funding sponsors
 - Grants final approval and recommendation to continue with core competencies

Concurrent Paths Leading to Contract Award



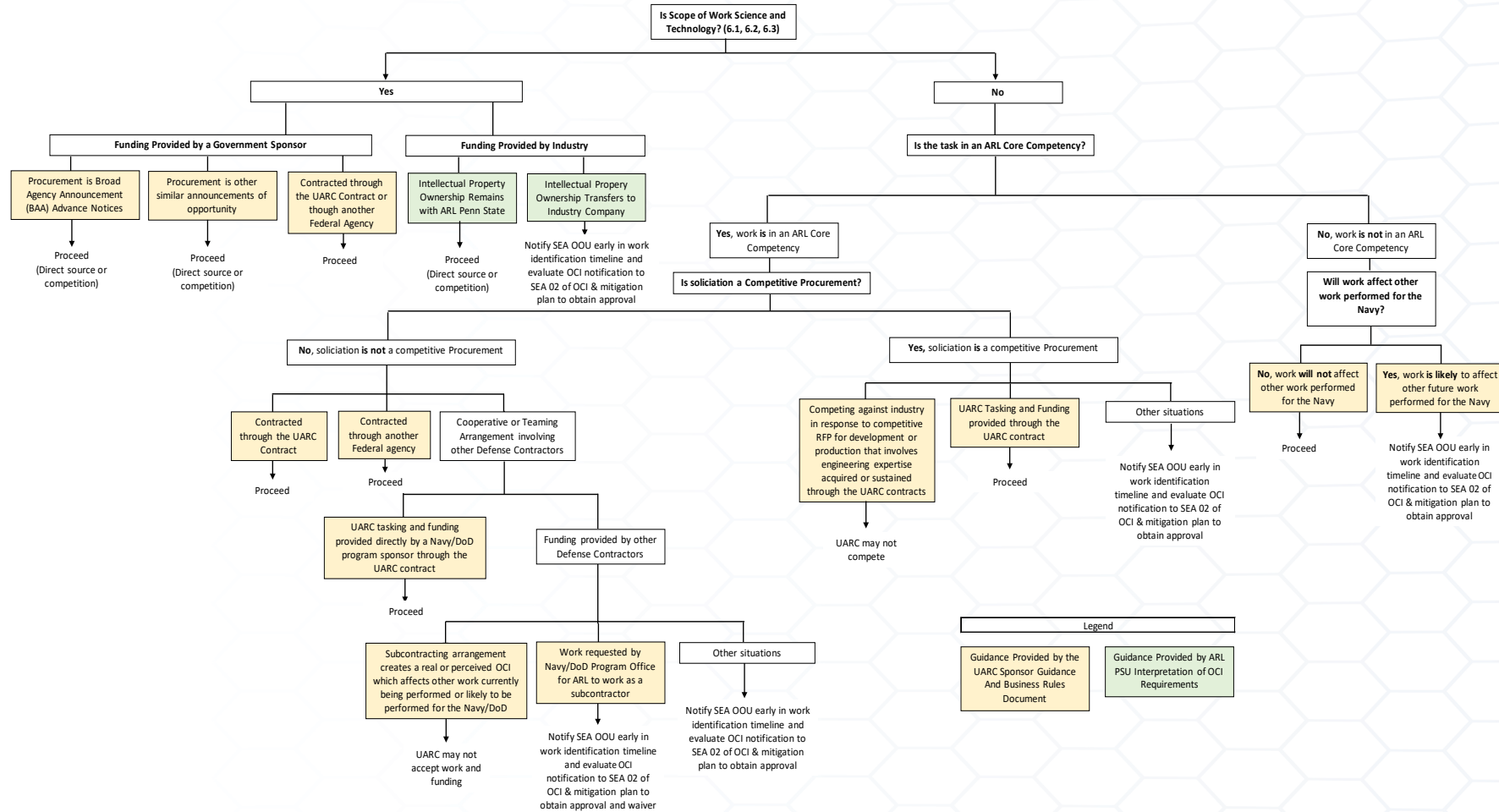
- **Justification and Approval (J&A) Reviews and Approvals**
 - **UARC PM sign off to send through the Executive Director of NAVSEA**
 - **NAVSEA legal (review for legal sufficiency)**
 - **PCO**
 - **Senior Procurement Executive of the Navy**
- **J&A Coincides with the Authorization Plan (AP)**
 - **AP goes through NAVSEA Head of Contract office, and DASN (A&P)**
- **J&A Includes the Following Sections:**
 - **Contracting Activity (NAVSEA)**
 - **Description of Action Being Approved**
 - **Description of Supplies/Services (Including labor hours and cost estimates for each year of proposed contract award and the core competencies)**
 - **Statutory Authority Permitting Other than Full and Open Competition**
 - **Rationale Justifying Use of Cited Statutory Authority**
 - **Description of Efforts Made to Solicit Offers from as Many Offerors as Practicable**
 - **Determination of Fair and Reasonable Costs**
 - **Actions to Remove Barriers to Competition**



- (f) **The Contractor agrees that, if after award, it discovers an actual or potential organizational conflict of interest, it shall make immediate and full disclosure in writing to the Contracting Officer.** The notification shall include a description of the actual or potential organizational conflict of interest, a description of the action which the Contractor has taken or proposes to take to avoid, mitigate, or neutralize the conflict, and any other relevant information that would assist the Contracting Officer in making a determination on this matter. Notwithstanding this notification, the Government may terminate the contract for the convenience of the Government if determined to be in the best interest of the Government.
- (g) Notwithstanding paragraph (f) above, if the Contractor was aware, or should have been aware, of an organizational conflict of interest prior to the award of this contract or becomes, or should become, aware of an organizational conflict of interest after award of this contract and does not make an immediate and full disclosure in writing to the Contracting Officer, the Government may terminate this contract for default.
- (h) If the Contractor takes any action prohibited by this requirement or fails to take action required by this requirement, the Government may terminate this contract for default.
- (i) **The Contracting Officer's decision as to the existence or nonexistence of an actual or potential organizational conflict of interest shall be final.**



UARC Contract OCI Contracting Flowchart



Avoiding OCI...Essential to Maintaining ARL as Trusted-Agent



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University of Maryland



APPLIED RESEARCH LABORATORY FOR
**INTELLIGENCE
AND SECURITY**

What Makes a Successful UARC and Common Challenges

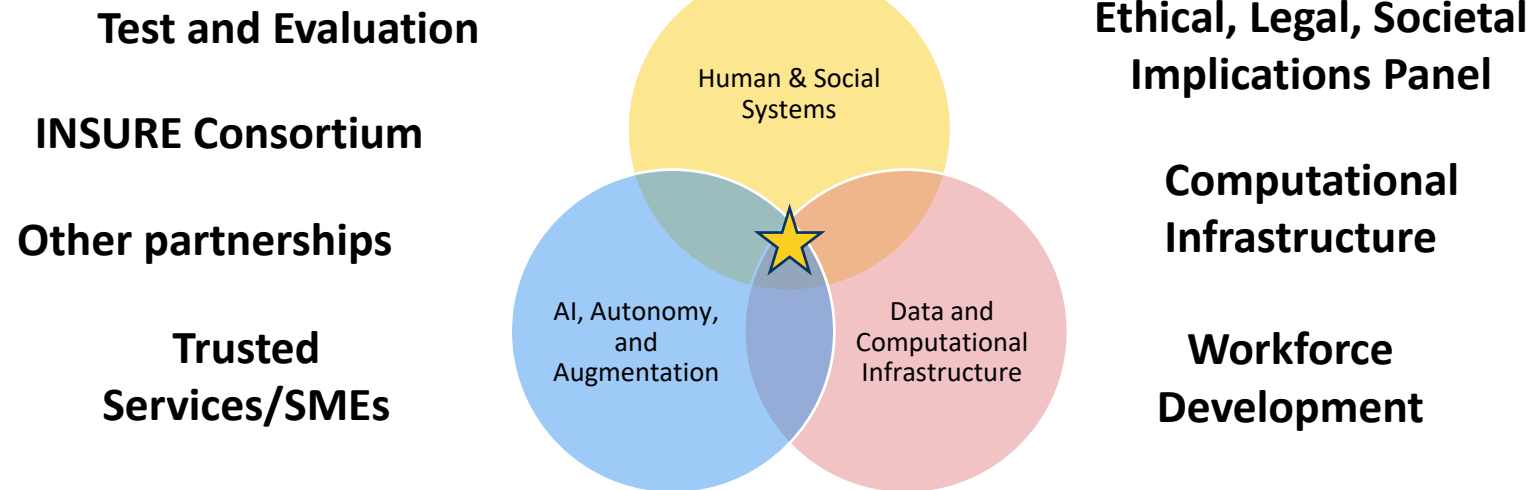
Erin Fitzgerald-Rey, PhD

Director, Intelligence & Security University Research Enterprise

HBCU UARC Industry Day, 09 August 2022

ARLIS: Providing Sociotechnical Solutions for US Advantage in the Human Domain

Integrating social and behavioral sciences, AI/ML, and computing for new applied research and development capabilities for Sociotechnical Systems



Analytics & Tools for Languages and Social Systems

Augmenting Collective Intelligence

Enabling Cognitive Security

Ensuring Trustworthy Supply Chains

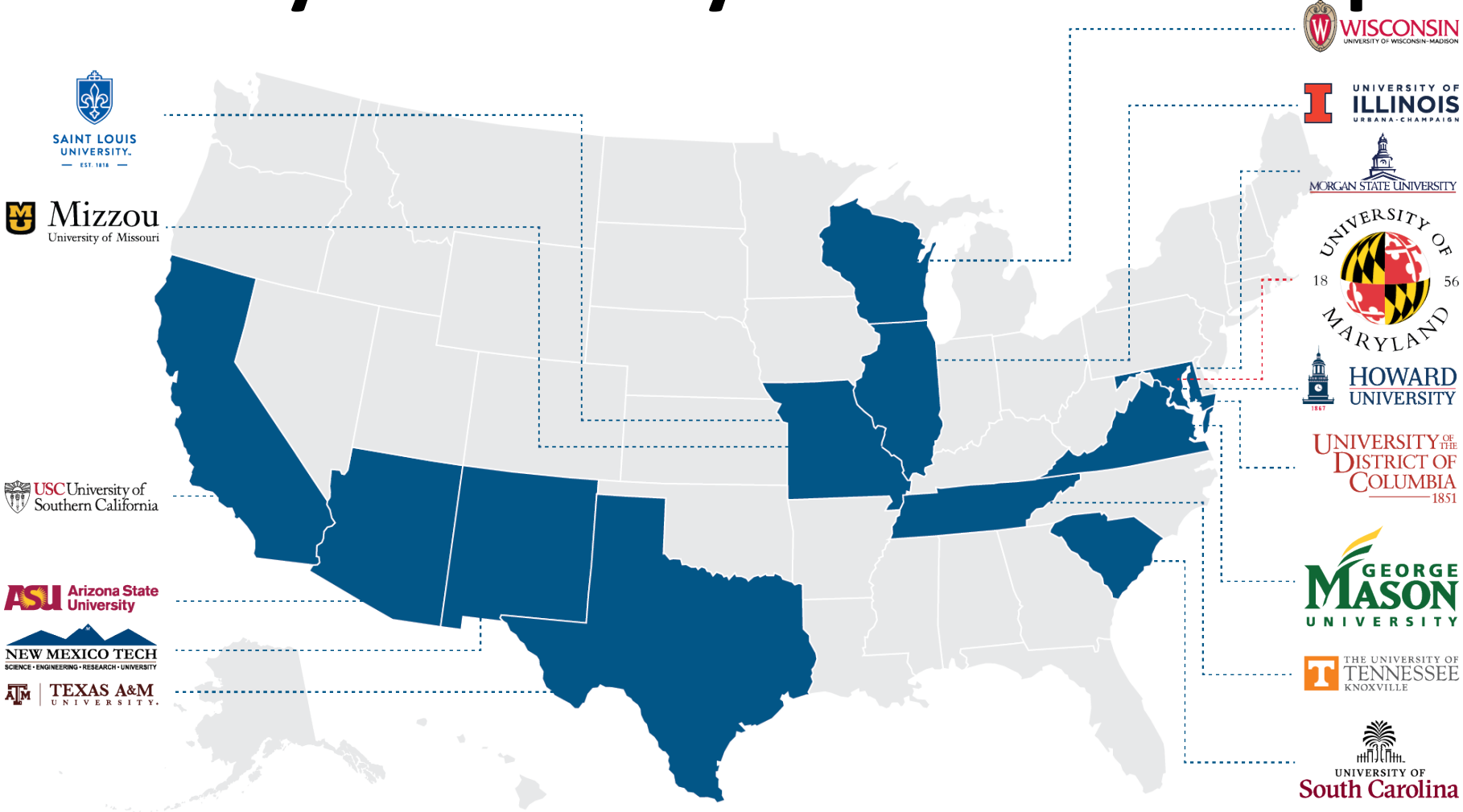
Operationalizing AI, Autonomy, & Augmentation

Modeling & Mitigating Insider Risk

ARLIS by the numbers

- **75+ active projects**
- **80+ FTE scientists and engineers**
psychology, linguistics, rhetoric, computer science, anthropology, social science, information science, human-machine interaction, systems engineering, manufacturing
- **50+ ARLIS affiliates and associates**
- **Five involved colleges at the University of Maryland**
- **100+ RISC summer students**
- **15 INSURE member universities, and growing**
- Supported by ~20+ DoD/IC agencies, State of Maryland, private philanthropy

INSURE: Strengthening the Intelligence and Security University Research Enterprise



Goals

Bring the right team to every in-scope problem brought to ARLIS.

Be the connector (and translator) for I&S communities to engage academic talent.

Build a robust and diverse future workforce.

15 member institutions in 13 states ♦ **4** HBCU/MSIs ♦ **8** w/ secure facilities + cleared researchers
33,610 faculty ♦ **481,603** students ♦ **over \$6.7 B** in federal research expenditures

A UARC's Objectives

- Develop and maintain **essential government-defined research, development or engineering capabilities** and provide those to DoD through a long-term strategic relationship.
- Develop a **strategic relationship with their sponsor** that gives them **knowledge of their sponsor's needs and access to their information**;
- Operate in the **public interest as strategic partners** with their DoD sponsors, rather than in the interest of corporate shareholders, and conduct its business in a manner befitting its special relationship with DoD, combining **technical excellence with objectivity**.
- **Respond quickly** to sponsor needs, serving as subject matter experts that function as **independent, trusted advisors** and honest brokers, **answerable only to their DoD customers**.

What Makes a Successful UARC?

- Ability to **tackle applied research**
- **Respond quickly to sponsor needs**
- **Knowledge of sponsors' needs and access to their information**
- Research administration infrastructure with DoD contracting and subcontracting experience (not just grants)

What Makes a Successful UARC?

- **Ability to tackle applied research**
 - Infrastructure and policy incentives to support restricted research activities
 - Robust research staffing model – consortia can help
 - Trusted broker for USG – operationalization vs novelty
- **Respond quickly to sponsor needs**
- **Knowledge of sponsors' needs and access to their information**
- **Research administration infrastructure with DoD contracting and subcontracting experience (not just grants)**

Ways Applied/UARC Work is Different

- Proposals **generated in coordination with USG** informed by their needs, not ground-up.
 - Most projects are 12-18 months duration.
 - Many projects have **limitations on non-US citizen involvement** and require security review before publication.
 - Projects are **contracts** -- finite duration, quantifiable metrics and goals to measure progress, and **success noted with milestones and deliverables**
- but –
- Scale tends to be bigger.
 - More direct impact on today's challenges.
 - Work with operational organizations otherwise inaccessible.
 - Potential role of trust with the USG sponsor.
 - Build 1:1 relationships with government funders.

What Makes a Successful UARC?

- Ability to **tackle applied research**
- **Respond quickly to sponsor needs**
 - Staffing robust to academic calendar rhythm
 - Dedicated contracting support
- **Knowledge of sponsors' needs and access to their information**
- Research administration infrastructure

What Makes a Successful UARC?

- Ability to **tackle applied research**
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- Research administration infrastructure

What Makes a Successful UARC?

- Ability to **tackle applied research**
- **Respond quickly to sponsor needs**
- **Knowledge of sponsors' needs and access to their information**
 - Facility clearance and/or a reliable translator of classified context
- Research administration infrastructure

What Makes a Successful UARC?

- Ability to **tackle applied research**
- **Respond quickly to sponsor needs**
- **Knowledge of sponsors' needs and access to their information**
- **Research administration infrastructure**
 - DoD contracting experience (not just grants)
 - Subcontracting experience with flow-down requirements
 - Dedicated support for UARC activities
 - Compliance support



Thank you!

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APPLIED RESEARCH LABORATORY FOR
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Industry Day

Government Panel

Dr. Victoria Coleman – Chief Scientist of the Air Force
Dr. Dietra Trent – Executive Director, White House Initiative on HBCUs
Mr. Maynard Holliday – Director, Defense Research & Engineering for
Modernization, (USD(R&E))
Ms. Marianne Malizia – Director, Diversity and Inclusion, DAF
Dr. Jaret Riddick – Principal Director, Autonomy, (USD(R&E))

Government Panel Q&A

- Panelist:
 - Name
 - Position
 - UARC Expectations



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Closing Remarks

Dr. Victoria Coleman – Chief Scientist of the Air Force



Chief Scientist of
The Air Force



Industry Day

University Affiliated Research Center (UARC):
Tactical Autonomy

Thank you for your participation!

Please join us on the first floor at Bronson Bierhall for a no-
host reception