



# INNOVATION PROSPECTUS

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*Where ideas and opportunity converge*



Engage diverse talent. Promote innovation. Engineer futures.

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[www.msrdconsortium.org](http://www.msrdconsortium.org)

Since 2015, the MSI STEM Research & Development Consortium (MSRDC) has served as a strategic asset, solutions provider and research development partner to over 60 minority-serving research institutions, federal partners and private industry collaborators. The Consortium creates a teaming environment for its members and collaborative partners to promote innovation, commercialization and technology leadership through a combination of basic, applied, and/or advanced technology development research to pioneer groundbreaking solutions that drive innovation forward.

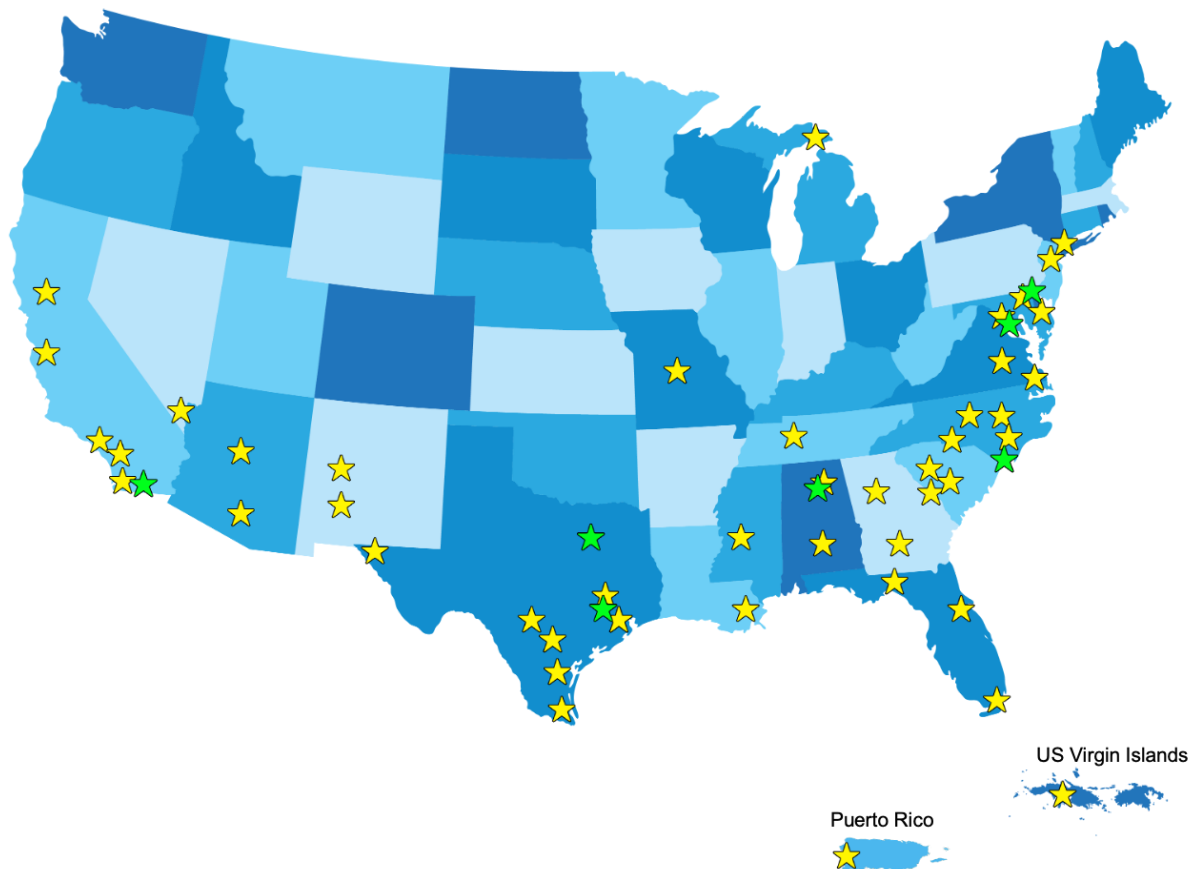
- We are a 501(c)(3) nonprofit organization chartered in the District of Columbia
- We are authorized by Section 252 of the FY10 National Defense Authorization Act (10 USC 2362)
- Our primary focus is on the promotion of research & development activities at Historically Black Colleges and Universities (HBCUs) and Minority-Serving Institutions (MSIs) of Higher Education
- Established under Cooperative Agreement No. W911SR-14-2-0001

**We don't just create avenues for research portfolio growth...**

## **We are changing the narrative surrounding MSI research.**



We are a rapidly **emerging ecosystem** of innovation driven by diverse talent



We are the **first and only consortium of its kind**, positioned to increase the involvement of MSIs in federal research

**59%**

HBCU MEMBERS

**31%**

HSI MEMBERS

**10%**

ALL OTHERS



## Institutional Members

- ALABAMA A&M UNIVERSITY (HBCU)
- ALABAMA STATE UNIVERSITY (HBCU)
- ALBANY STATE UNIVERSITY (HBCU)
- BAY MILLS COMMUNITY COLLEGE (TCU)
- BENEDICT COLLEGE (HBCU)
- BETHUNE-COOKMAN UNIVERSITY (HBCU)
- CALIFORNIA STATE UNIVERSITY – CHICO (HSI)
- CALIFORNIA STATE UNIVERSITY – NORTHRIDGE (HSI) (AANAPISI)
- CALIFORNIA STATE UNIVERSITY – SACRAMENTO (HSI) (AANAPISI)
- CALIFORNIA STATE UNIVERSITY – SAN BERNARDINO (HSI)
- THE CITY COLLEGE OF NEW YORK (HSI) (AANAPISI)
- CLAFLIN UNIVERSITY (HBCU)
- DELAWARE STATE UNIVERSITY (HBCU)
- DILLARD UNIVERSITY (HBCU)
- FAYETTEVILLE STATE UNIVERSITY (HBCU)
- FISK UNIVERSITY (HBCU)
- FLORIDA A&M UNIVERSITY (HBCU)
- FLORIDA MEMORIAL UNIVERSITY (HBCU)
- HAMPTON UNIVERSITY (HBCU)
- HOWARD UNIVERSITY (HBCU)
- JACKSON STATE UNIVERSITY (HBCU)
- JOHNSON C. SMITH UNIVERSITY (HBCU)
- LINCOLN UNIVERSITY OF MISSOURI (HBCU)
- MEHARRY MEDICAL COLLEGE (HBCU)
- MOREHOUSE COLLEGE (HBCU)
- MOREHOUSE SCHOOL OF MEDICINE (HBCU)
- MORGAN STATE UNIVERSITY (HBCU)
- NEW JERSEY CITY UNIVERSITY (HSI)
- NEW MEXICO TECH (HSI)
- NORFOLK STATE UNIVERSITY (HBCU)
- NORTH CAROLINA A&T STATE UNIVERSITY (HBCU)
- NORTH CAROLINA CENTRAL UNIVERSITY (HBCU)
- NORTHERN ARIZONA UNIVERSITY (AIANSI)
- PAINE COLLEGE (HBCU)
- PRAIRIE VIEW A&M UNIVERSITY (HBCU)
- SAN DIEGO STATE UNIVERSITY (HSI)
- SHAW UNIVERSITY (HBCU)
- TENNESSEE STATE UNIVERSITY (HBCU)
- TEXAS A&M UNIVERSITY – CORPUS CHRISTI (HSI)
- TEXAS A&M UNIVERSITY – KINGSVILLE (HSI)
- TEXAS A&M UNIVERSITY – SAN ANTONIO (HSI)
- TEXAS SOUTHERN UNIVERSITY (HBCU)
- TEXAS STATE UNIVERSITY (HSI)
- TOUGALOO COLLEGE (HBCU)
- TUSKEGEE UNIVERSITY (HBCU)
- UNIVERSITY OF ARIZONA (HSI)
- UNIVERSITY OF MARYLAND – BALTIMORE COUNTY (MSI)
- UNIVERSITY OF NEVADA - LAS VEGAS (HSI) (AANAPISI)
- UNIVERSITY OF NEW MEXICO (HSI)
- UNIVERSITY OF NORTH CAROLINA – CHARLOTTE (MSI)
- UNIVERSITY OF NORTH CAROLINA – GREENSBORO (MSI)
- UNIVERSITY OF NORTH CAROLINA – PEMBROKE (AIANSI)
- UNIVERSITY OF PUERTO RICO – MAYAGUEZ (HSI)
- UNIVERSITY OF TEXAS AT BROWNSVILLE (HSI)
- UNIVERSITY OF TEXAS AT EL PASO (HSI)
- UNIVERSITY OF TEXAS RIO GRANDE VALLEY (HSI)
- UNIVERSITY OF TEXAS AT SAN ANTONIO (HSI)
- UNIVERSITY OF THE DISTRICT OF COLUMBIA (HBCU)
- UNIVERSITY OF THE VIRGIN ISLANDS (HBCU)
- VIRGINIA STATE UNIVERSITY (HBCU)
- XAVIER UNIVERSITY OF LOUISIANA (HBCU)

## Collaborative Partners

- CALIFORNIA INSTITUTE OF TECHNOLOGY - JET PROPULSION LABORATORY
- GEORGIA INSTITUTE OF TECHNOLOGY/ GEORGIA TECH RESEARCH INSTITUTE
- RESEARCH TRIANGLE INSTITUTE
- TEXAS A&M UNIVERSITY
- UNIVERSITY OF DELAWARE
- UNIVERSITY OF NORTH CAROLINA – WILMINGTON
- UNIVERSITY OF NORTH TEXAS
- UNIVERSITY OF SOUTHERN CALIFORNIA
- VANDERBILT UNIVERSITY

## Private Industry Partners

- COLSA CORPORATION
- IRIS TECHNOLOGIES
- MANTECH INTERNATIONAL CORPORATION
- mHub
- MIGHTY MUSCLE FACILITIES
- PELICAN DEFENSE TECHNOLOGIES
- PHOENIX OPERATIONS GROUP
- QMS CONSULTING
- RHEAPLY

For an updated list of our member institutions,  
visit us at [msrdconsortium.org/members](https://msrdconsortium.org/members)

AANAPISI - Asian American and Native American Pacific Islander-Serving Institutions  
AIANSI - American Indian Alaska Native Serving Institutions  
HBCU - Historically Black Colleges and Universities  
HSI - Hispanic-Serving Institutions  
MSI - Minority-Serving Institutions (not classified elsewhere)  
TCU - Tribal Colleges and Universities





# MEMBER AWARDS

**ALBANY STATE UNIVERSITY (HBCU)**

- 1 Award - \$353,767

**CALIFORNIA STATE UNIVERSITY – SAN BERNARDINO (HSI)**

- 1 Award - \$534,650

**THE CITY COLLEGE OF NEW YORK (HSI) (AANAPISI)**

- 8 Awards - \$1,608,965

**FISK UNIVERSITY (HBCU)**

- 2 Awards - \$517,142

**FLORIDA A&M UNIVERSITY (HBCU)**

- 2 Awards - \$283,697

**HOWARD UNIVERSITY (HBCU)**

- 1 Award - \$220,222

**NEW MEXICO TECH (HSI)**

- 6 Awards - \$2,357,344

**NORTH CAROLINA A&T STATE UNIVERSITY (HBCU)**

- 5 Awards - \$1,803,093

**NORTH CAROLINA CENTRAL UNIVERSITY (HBCU)**

- 4 Awards - \$852,720

**SAN DIEGO STATE UNIVERSITY (HSI)**

- 2 Awards - \$552,615

**UNIVERSITY OF MARYLAND – BALTIMORE COUNTY (MSI)**

- 1 Award - \$132,473

**UNIVERSITY OF NORTH CAROLINA – CHARLOTTE (MSI)**

- 2 Awards - \$60,000

**UNIVERSITY OF TEXAS AT EL PASO (HSI)**

- 2 Awards - \$514,807

**UNIVERSITY OF TEXAS RIO GRANDE VALLEY (HSI)**

- 1 Award - \$124,978

**UNIVERSITY OF TEXAS AT SAN ANTONIO (HSI)**

- 5 Awards - \$835,547

**\$12M**

RESEARCH DOLLARS

**\$3M**

RESEARCHER SUPPORT

**\$2.2M**

PARTNER SUPPORT

**\$1.5M**

EQUIPMENT FUNDING

**\$183K**

IN TRAVEL SUPPORT



## FLORIDA A&M UNIVERSITY (HBCU)

- 2 Awards - \$283,697
  - **Project:** Modeling, Imaging and Optimal Design in Nano-Optics
  - **Sponsor:** United States Army Combat Capabilities Development Command Armaments Center
  - **Project:** High Speed Wind Tunnel Testing of Advanced Gun fired Concepts
  - **Sponsor:** United States Army Research Laboratory

## NORTH CAROLINA A&T STATE UNIVERSITY (HBCU)

- 5 Awards - \$1,803,093
  - **Project:** High-content Organ-on-a-Chip Assay: Predictive Nerve Toxicity Model for Organophosphates (2 awards)
  - **Sponsor:** Defense Threat Reduction Agency
  - **Partner:** Research Triangle Institute International (\$105,698)
  - **Project:** Human Liver-Neural Real-time In vivo Correlation of Organophosphate Toxicity
  - **Sponsor:** Defense Threat Reduction Agency
  - **Partner:** The University of North Carolina at Chapel Hill (\$98,406)
  - **Project:** Reduced Weight Polymer Based Composite for Sabots on Anti-Tank Rounds
  - **Sponsor:** United States Army Combat Capabilities Development Command Armaments Center
  - **Project:** Feasibility Study of Thermal Barriers/Isolation for Small Caliber Weapons Systems
  - **Sponsor:** United States Army Combat Capabilities Development Command Armaments Center

## NORTH CAROLINA CENTRAL UNIVERSITY (HBCU)

- 5 Awards - \$852,720
  - **Project:** Exploring Chemical and Bio-Sensors Operating at the Quantum Frontiers (3 awards)
  - **Sponsor:** Deputy Assistant Secretary of Defense
  - **Project:** Fast, Large-Scale, Inexpensive Nanoscale Fabrication
  - **Sponsor:** United States Army Combat Capabilities Development Command Armaments Center
  - **Project:** Global Awareness and Forecasting System to Protect US Borders from Pests and Diseases
  - **Sponsor:** Department of Homeland Security, Customs and Border Protections
  - **Partner:** Orion Integrated Biosciences (\$170,660)



## ALBANY STATE UNIVERSITY (HBCU)

- 1 award - \$353,767
  - **Project:** High-Throughput Screening of the Toxicity of Various Organophosphate Compound
  - **Sponsor:** Defense Threat Reduction Agency

## CALIFORNIA STATE UNIVERSITY – SAN BERNARDINO (HSI)

- 1 award - \$534,650
  - **Project:** Predictive Toxicology of Organophosphates Utilizing Drosophila Embryonic Stem Cells and Cell Lines
  - **Sponsor:** Defense Threat Reduction Agency

## THE CITY COLLEGE OF NEW YORK (HSI) (AANAPISI)

- 8 awards - \$1,608,965
  - **Project:** Rapid Processing of Biopolymeric Co-Continuous Filtration Membrane
  - **Sponsor:** Defense Threat Reduction Agency
  - **Project:** Adsorbents for Use in Building-Integrated Plant-Based Dynamic Filtration Media for Removing Chemical Warfare Agents
  - **Sponsor:** Defense Threat Reduction Agency
  - **Project:** Models for use in Predictive Toxicology Evaluating Organophosphate Compound Using the Hard and Soft, Acids and Bases (HSAB) Theory to Predict Organophosphate-Target Interactions
  - **Sponsor:** Defense Threat Reduction Agency
  - **Project:** AI and Game Theory Based Autonomous CND Software Agents for Dynamic Trust Evaluation
  - **Sponsor:** US Army Communications-Electronics Research, Development and Engineering Center
  - **Project:** Noise-Aware, Low-Cost, Low-Power Baseband DSP Hardware using Stochastic Computing
  - **Sponsor:** US Army Communications-Electronics Research, Development and Engineering Center
  - **Project:** Cyber Security Techniques in the SCADA Military Environment
  - **Sponsor:** US Army Communications-Electronics Research, Development and Engineering Center
  - **Project:** Using the Hard and Soft, Acids and Bases (HSAB) Theory to Predict Organophosphate Target Interactions
  - **Sponsor:** Defense Threat Reduction Agency
  - **Partner:** Montefiore Health Center (\$15,000)
  - **Project:** Compact Microparticle Random-Walk Antennas (CuP-RWA) for Wideband Radio-Frequency Communications
  - **Sponsor:** US Army Communications-Electronics Research, Development and Engineering Center

## FISK UNIVERSITY (HBCU)

- 2 awards - \$517,142
  - **Project:** Multifunctional Materials for Air and Liquid Protection
  - **Sponsor:** Defense Threat Reduction Agency
  - **Partners:** Vanderbilt University (\$37,500) and Tennessee State University (\$25,035)
  - **Project:** Modeling Organophosphate Toxicity in C. Elegans Through a Scalable and in Silico Approach
  - **Sponsor:** Defense Threat Reduction Agency

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  - **Sponsor:** US Army Research Laboratory

## HOWARD UNIVERSITY (HBCU)

- 1 award - \$220,222
  - **Project:** Irregular Warfare Decision Assist for Determining Threats
  - **Sponsor:** US Army Communications-Electronics Research, Development and Engineering Center

## NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY (HSI)

- 6 awards - \$2,357,344
  - **Project:** Explosive Research and Testing
  - **Sponsor:** Naval Surface Warfare Center
  
  - **Project:** Measuring Impulse Load from Anti-Ram Perimeter Wall Debris Due to a Vehicle-Borne Improvised Explosive Device
  - **Sponsor:** Department of State, Presidential Security Detail
  - **Partners:** Protection Engineering Consultants, LLC (\$26,900) and Classic Industries, Inc. (\$1,197,109)
  
  - **Project:** Development of Passive Drone Defensive System
  - **Sponsor:** Department of State, Presidential Security Detail
  
  - **Project:** Debris Effects from Anti-Ram Perimeter Wall on Blast, Forced Entry, and Ballistic Resistant Glazings and Doors
  - **Sponsor:** Department of State, Presidential Security Detail
  
  - **Project:** ANFO As Open Detonation Donor Material
  - **Sponsor:** Joint Program Executive Office Armaments & Ammunition, Project Director Demilitarization
  
  - **Project:** Explosive Research and Testing Support: Reactive Material Fragmentation
  - **Sponsor:** Naval Surface Warfare Center

## NORTH CAROLINA A&T STATE UNIVERSITY (HBCU)

- 5 awards - \$1,803,093
  - **Project:** High-Content Organ-on-a-Chip Assay: Predictive Nerve Toxicity Model for Organophosphates (2 awards)
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  - **Sponsor:** Department of Homeland Security, Customs and Border Protections
  - **Partner:** Orion Integrated Biosciences (\$170,660)

## SAN DIEGO STATE UNIVERSITY (HSI)

- 2 awards - \$552,615
  - **Project:** RF/Optical Receiver Sensitivity Degradation from Exposure to High-Power Electromagnetic Pulses or Microwave Signals
  - **Sponsor:** US Army Communications-Electronics Research, Development and Engineering Center
- **Project:** Stable Manufacturing of Advanced Powder Components by Ultra-Rapid Pressure- and Field-Assisted Sintering
- **Sponsor:** US Army Combat Capabilities Development Command Armaments Center

## UNIVERSITY OF MARYLAND – BALTIMORE COUNTY (MSI)

- 1 award - \$132,473
  - **Project:** Lifelong Multitask Nanoparametric Learning
  - **Sponsor:** US Army Edgewood Chemical Biological Center

## UNIVERSITY OF NORTH CAROLINA – CHARLOTTE (MSI)

- 2 awards - \$60,000
  - **Project:** Optical Properties of Retroreflections (OPRA) (2 awards)
  - **Sponsor:** US Army Communications-Electronics Research, Development and Engineering Center

## UNIVERSITY OF TEXAS AT EL PASO (HSI)

- 2 awards - \$514,807
  - **Project:** Advancement of Additive Manufacturing Process Monitoring and Metal Matrix Composite Fabrication
  - **Sponsor:** US Army Combat Capabilities Development Command Armaments Center
- **Project:** Congealed Water Parameter Measurements
- **Sponsor:** US Army Edgewood Chemical Biological Center

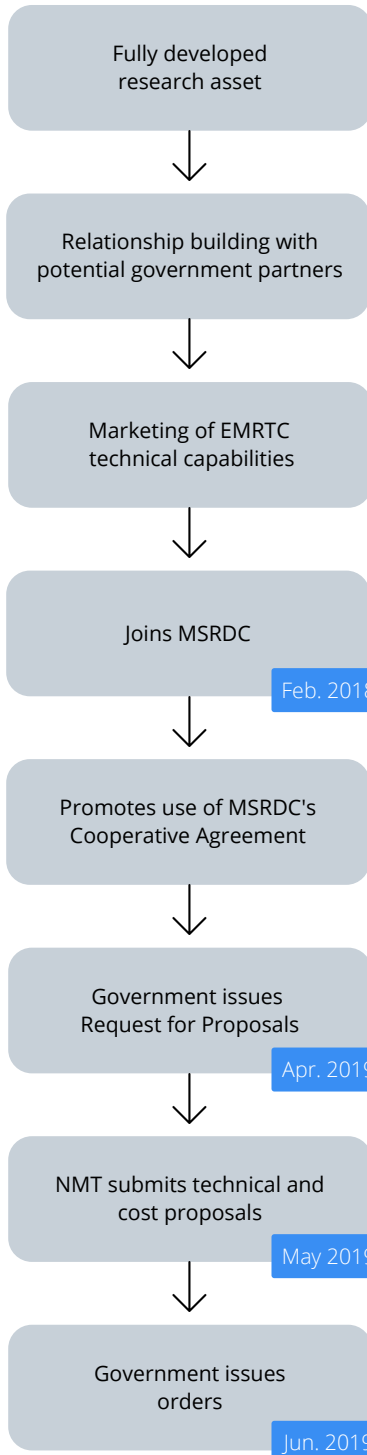
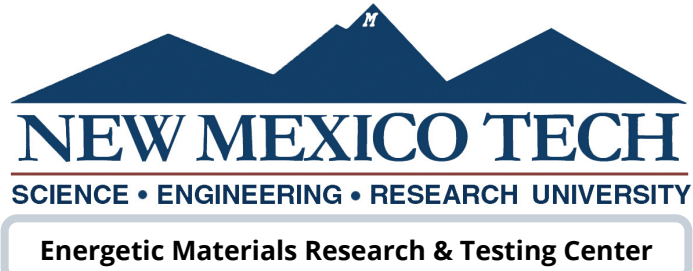
## UNIVERSITY OF TEXAS AT RIO GRANDE VALLEY (HSI)

- 1 award - \$124,978
  - **Project:** Hazardous Radiation and Microbial Protective Integrated Fabrics for Advanced Protection Under Uncontrolled Environment
  - **Sponsor:** Defense Threat Reduction Agency

## UNIVERSITY OF TEXAS AT SAN ANTONIO (HSI)

- 5 awards - \$835,547
  - **Project:** Novel Technology for Detection and Prediction of Spreading of Air-Borne Chemicals (2 awards)
  - **Sponsor:** Deputy Assistant Secretary of Defense
- **Project:** Developing a Pattern Pattern-Based Measurement Model for Improving Software Reliability (2 awards)
- **Sponsor:** United States Army Materiel Systems Analysis Activity
- **Project:** Developing a Novel Data-Driven Technology Towards Improved Leeway Divergence Prediction
- **Sponsor:** Department of Homeland Security, United States Coast Guard
- **Partners:** Hatchbed Solutions (\$27,600), University of Texas at Arlington (\$59,758)





Within 15 months of joining MSRDC, NMT won 5 awards totaling over \$3.8M within a span of just 90 days... **with no competition.**

## Success Metrics

Time to leverage membership	15 months
Number of competitors	0
Number of customers	3
Number of Requests for Proposals	6
Number of Private Industry Subcontractors	3
Number of Awards Won	5
Total Value of Awards Won	\$3.4M
Value of Subcontracts to Private Industry Partners	\$1.7M
Procurement Time (Start to Final Award)	90 days







# FUNDING PARTNERS





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U.S. DEPARTMENT OF  
**ENERGY**



US Army  
Futures Command



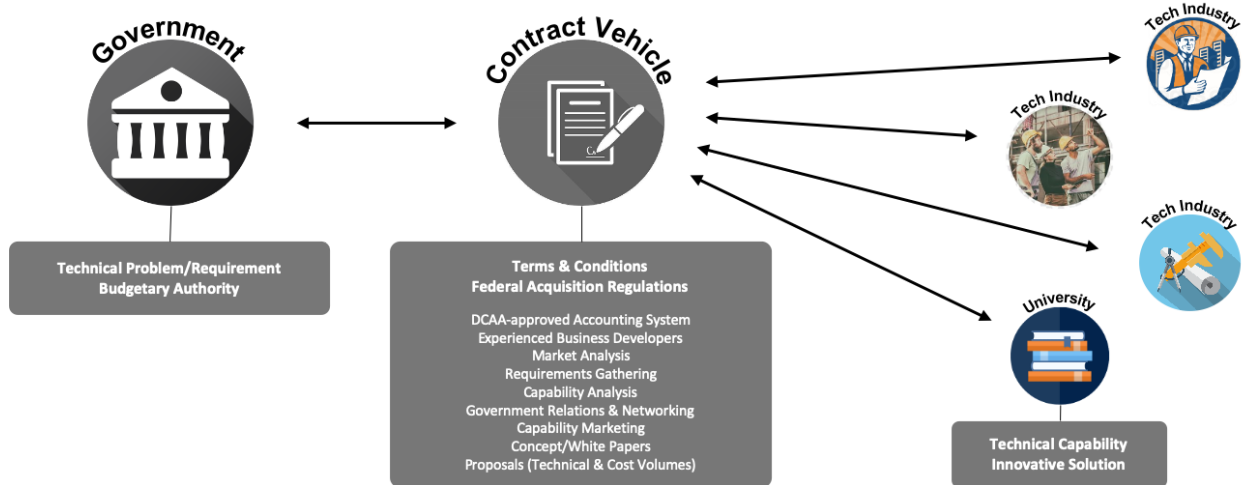
National Institutes  
of Health





# THE ENVIRONMENT

## HIGHLY COMPETITIVE ENVIRONMENT




## HIGHLY COLLABORATIVE ENVIRONMENT

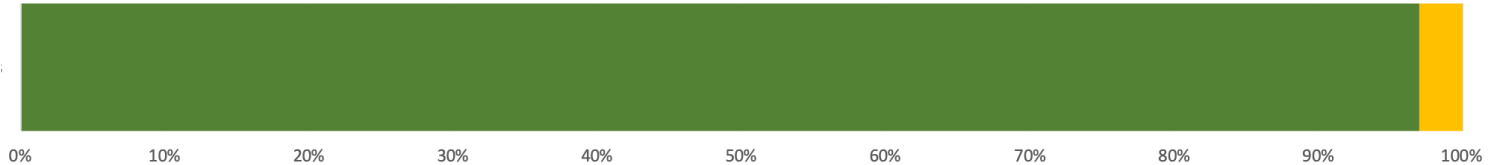










- 1 Build relationship with the Program Manager
- 2 Identify the problem
- 3 Build a team with an innovative solution
- 4 Program Manager writes a Scope of Work (SOW)
- 5 Government issues Request for Proposal
- 6 University/business team responds with proposal
- 7 Government issues a Delivery Order
- 8 Research team begins the work

We are powered with our own procurement vehicle that immediately  
**levels the playing field** for our members

MSI funding is only 3% of all federal research funding 



MSRDC's Cooperative Agreement allows researchers to "hunt" for their own federal funding. They know that **MSRDC has their back** and will work tirelessly to help their research ideas become reality.

-  Members can bypass the competitive process for direct awards
-  Members have direct award negotiation privileges
-  Awards are very quick with an average 90 day turn-around
-  There are no communications blackout periods
-  Program Managers are allowed direct oversight
-  Broad scope research options (6.1, 6.2 and 6.3)





## RESEARCH PROSPECTUS

*Talent meets innovation*



Engage diverse talent. Promote innovation. Engineer futures.

[www.msrdconsortium.org](http://www.msrdconsortium.org)

Customized research prospectuses prepared for individual partners and tailored to their research priorities.

Each prospectus unique and includes researchers with high compatibility with the selected partner.



U.S. DEPARTMENT OF  
**ENERGY**

Energy Efficiency &  
Renewable Energy

*The U.S. Department of Energy (DOE) Building Technologies Office (BTO) leads a vast network of research and industry partners to continually develop innovative, cost-effective energy saving solutions—better products, better new homes, better ways to improve older homes, and better buildings in which we work, shop, and lead our everyday lives.*

## RESIDENTIAL AND COMMERCIAL BUILDINGS

### Selected Researchers

*Our accomplished member institutions bring a wealth of knowledge and expertise that elevate research from acceptable to exceptional. To support your work, we have selected some of our accomplished business partners, member institutions and researchers:*

#### City College of New York

Dr. Jorge E. Gonzalez  
Department of Mechanical Engineering  
**Expertise:** Compact solar-powered air conditioning systems, simulation of an air-cooled solar-assisted absorption air conditioning system and automation and control of solar air conditioning systems

#### Florida A&M University

Dr. Mahsan Mohsenin  
Department of Mechanical Engineering  
**Expertise:** Building information modeling, healthy building environment, urban sustainability, daylighting modeling and simulation

#### University of New Mexico

Dr. Andrea Mammoli  
Department of Mechanical Engineering  
**Expertise:** Distribution microgrids, buildings, resilience

#### University of North Carolina at Charlotte

Dr. Weimin Wang  
Department of Engineering  
**Expertise:** Building system modeling, analysis, and control; sustainable building design and operation; building grid integration



Engage diverse talent. Promote innovation. Engineer futures.

MSRDC + DOE | 6



## Making Better Silk: New and Improved for Gas Masks

Principal Investigator: Raymond Tu

The City College of New York

Silk has always been an adaptable, flexible fiber. For millennia, it has been spun into satin, jacquard, shimmery Thai silk and rough, absorbent “raw” silk. Now a team led by Raymond Tu of the City College of New York is working on ways to manipulate silk at an even more basic level, taking it back to a liquid state that can then be re-spun according to precise criteria.

The final goal: better gas masks that can filter out specified gases. “Silk is very common feedstock material. It’s cheap,” said Tu, an associate professor of chemical engineering at CCNY. It’s also strong, flexible and doesn’t irritate human skin.

“It has traditionally just been used in the fibrous state that comes from the silkworms,” Tu added. “But if you do some fairly simple processing, you can take it from the fibrous state to a liquid state. You can precipitate it, spin it on a surface, or you can do some other tricks.”

Silkworms usually just spin silk to make their cocoons. But silk spinners such as spiders can vary the property of the silk they spin, as needed. They can make it thicker or thinner, sticky or strong. “It’s crazy,” Tu said. “Silk actually transitions from a liquid form into a solid form as they are spinning it. How they spin it, with mixtures of different proteins, affects its properties.”

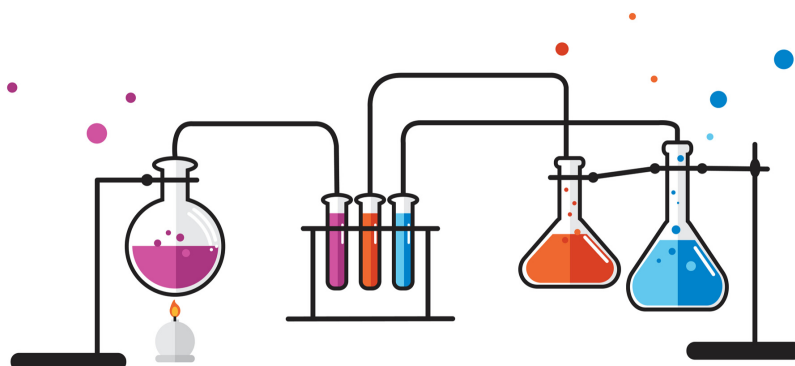
Tu’s team uses lithium bromide to break down the silk material so that it can be remade into a fabric precisely tuned to filter out particles of certain sizes. The trick is to make a fabric that can filter, while allowing the free flow of air that the wearer needs to breathe.

With the help of the Minority Serving Institutions Science, Technology, Engineering and Mathematics Research and Development Consortium (MSRDC), Tu’s lab won a Department of Defense grant to start the work. He’d like to continue it.

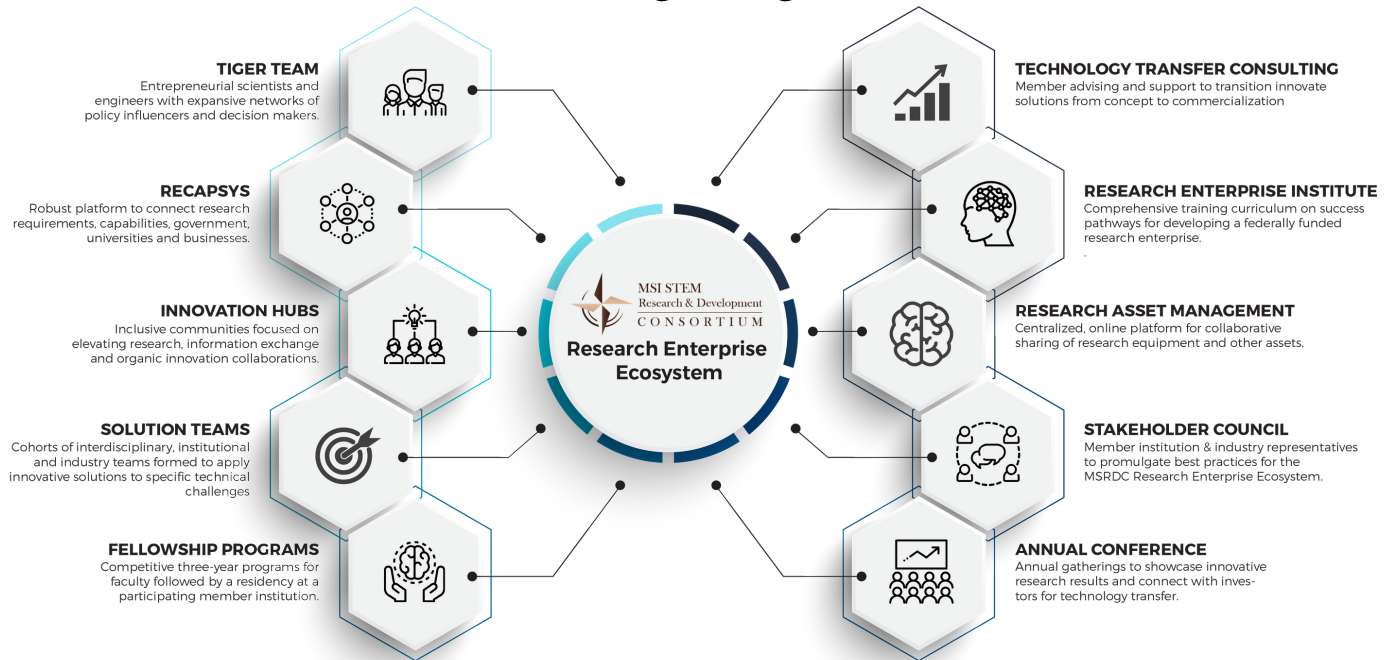
“The DoD has very particular targets and we have a bunch of fundamentals that we would like to explore,” Tu said.

“I don’t know a lot about what they are trying to filter. I don’t know a lot about filtration masks,” he added. But he’s found a route to precisely tune the silk proteins so they have specifically sized pores. It could be mass produced, he said, and the project is providing a valuable learning experience for his students.

“I think that, particularly at a place like CCNY, a lot of the students come from first-generation families,” he said. “Many of our students are the first in their families to go to college, and most are paying (tuition) for themselves,” he added. “I think those students make for the best researchers. They are driven to be successful. They are on their own, and there is no lifeboat. This is both their first chance and their last chance.”



We are a **force multiplier** to help you scale your research portfolio building strategies



## THE MSRDC TIGER TEAM

Our group of dedicated professionals that constantly hunts for new opportunities to expand our members' research portfolios. The Tiger Team's core functions are:

### Relationship Building

We create relationships that create the foundation for research portfolio growth.

### Needs & Expertise Alignment

We work closely with our partners to identify their research needs and how our members can help.

### Research Priority Alignment

We align our members' expertise with our partners' priorities for a harmonious collaboration.

### Creation & Ideation

We create new pathways to bring research ideas to life.

### Capability Marketing

We proactively hunt for new opportunities for our members every day.



# LET'S WORK TOGETHER

*Elevate your research and advance your mission. Tomorrow's success begins with you, today.*



**BUSDEV@MSRDCONSORTIUM.ORG**



**(202) 684-7953**



**MSRDCONSORTIUM.ORG**



**1050 CONNECTICUT AVE. NW, SUITE 500  
WASHINGTON, DC 20036**





**Engage diverse talent. Promote innovation. Engineer futures.**