MSI STEM
Research & Development
CONSORTIUM

Member Institution Research Capabilities

From science and mathematics to engineering and technology, our members have the ability to perform complex, interdisciplinary research to meet the needs of our federal partners.

This list is continually updated.

Science & Mathematics

Our members apply advanced mathematics and science to develop solutions for complex, challenging issues that deliver sustainable results across multiple disciplines and solutions.

- Abstract differential equations
- Applied cancer technology and therapeutics
- Applied geographic information science
- Artificial intelligence
- Atmospheric science
- Big spatial data
- Bioinformatics
- Biological defense
- Cancer biology & modeling
- Cancer diagnostics & monitoring
- Chemical defense
- Cloud computing
- Coastal and marine
- Communication systems
- Computational biology
- Computational science
- Cyber geographic information science
- Data coordinating
- Drug devices
- Drug therapeutics & development
- Earth science
- Environmental applications
- Functional data analysis
- Genetic disorders
- High-dimensional statistics
- Integrated regenerative
- Language acquisition
- Language and cognitive neuroscience
- Manipulate failure physics
- Microbial sciences
- Nature genetics
- Networking and fiber optics
- Optical communications
- Space science
- Spatiotemporal problem-solving
- System integration and validation
- System operation

Engineering & Technology

Our members develop solutions by applying principles from advanced mathematics, life sciences, physical science, earth and space science, and technology to develop innovative and practical solutions.

- Accelerated learning
- Advanced materials
- Aeronautics engineering
- Air-breathing propulsion systems
- Autonomous systems
- Biomechanics
- Biomedical engineering
- Composite materials
- Concrete engineering
- Cyber security
- Fuel cell test equipment
- High-speed machining
- Machine learning
- Machine vision
- Materials engineering
- Metallurgical engineering
- Mobility research
- Modeling and simulation
- Multi-3D technology
- Nanoscale science
- Nanotechnology
- Nuclear defense
- Nuclear sciences
- Optoelectronics
- Performance engineering
- Radiological defense
- Reliability engineering
- Remote sensing
- Safety engineering
- Sensor networks
- Signal processing
- Space engineering
- Structural engineering
- Unmanned systems
- Urban growth and land change modeling
- Virtual parts engineering

Social Science Research

Our members apply statistical methodologies and advanced social science research techniques to deliver insights and supporting information that enable leaders to make informed, sound decisions across disciplines.

- Data management
- Evaluation reports and analyses
- Sampling and recruitment studies
- Statistical analyses
- Survey design
- Survey research, analysis and reporting

For additional information on our members' capabilities, please contact us at **BusDev@MSRDConsortium.org**.