

Center for Biomedical Research (CBR)

CBR is a multidisciplinary research center devoted to the study of advanced biomaterials, devices, therapeutics, and related biomedical topics for applications in the biomedical industry.

Research and development areas:

- Drug delivery and cancer treatment
- Bioactive glass and bioactive ceramic scaffolds for regenerating bone
- Nanofibrous bioactive glass for healing soft tissue wounds
- Biomarkers for early detection of cancer
- Nanostructured biocompatible phosphate devices for drug and growth factor delivery

Center for Infrastructure Engineering Studies (CIES)

CIES focuses on fundamental and applied research in science and engineering related to transportation and building infrastructure in support of existing and emerging technologies.

Research and development areas:

- Advanced, sustainable materials for infrastructure construction and rehabilitation
- Rehabilitation of bridges and buildings by applying new materials, such as self-consolidating, fiber-reinforced composite materials
- Advanced design methods to resist extreme events, such as earthquakes and tornadoes
- Novel, non-destructive techniques to assess damage and structural health monitoring of infrastructure

Center for Intelligent Infrastructure (CII)

CII creates, conveys, and applies engineering knowledge and operational intelligence to help solve challenges with aging infrastructure for a safe, sustainable and resilient community and environment.

Research and development areas:

- Robotic platforms for infrastructure inspection and maintenance
- Smart materials and sensor integration in infrastructure for intelligent asset management
- Artificial intelligence and decision-making tools for civil and power infrastructure
- Life-cycle assessment, reliability, and stressor mitigation of infrastructure systems
- Post-disaster resiliency and recovery of infrastructure systems
- Condition assessment and monitoring responses to disasters and extreme events
- Cyber-physical-social infrastructure systems for sustainable and resilient society

QUICK FACTS

- 63 faculty researchers are included on a list of the top 2% of researchers in their field for career-long impact ending in 2022, and 50 faculty researchers are recognized for impact in 2022 compiled by Stanford University.
- Research grants more than doubled since 2020.
- Missouri S&T is a partner in the Mid-America Transportation Center, a regional UTC supported by the U.S. Department of Transportation and the Tier-1 UTC for Durable and Resilient Transportation Infrastructure.



POINTS OF DISTINCTION

NATIONALLY RECOGNIZED

by the *New York Times*
for Exceptional Value and
High Earning Potential.

#3

Best Public University
for Career Placement
Princeton Review

#6

Best Value University
in the Nation
Wall Street Journal

TOP 10

Ranking (#5 Nationally,
#1 in Missouri) for Best
College for Engineering
Majors

#18

Best Public University
in the Nation
Wall Street Journal

Center for Research in Energy and Environment (CREE)

CREE serves as the focal point of research, development, and deployment related to energy and environmental technologies and in particular the energy/environment nexus.

Research and development areas:

- Environmental and economic sustainability of energy systems that improve rural economies and expand resource diversity.
- Integrate biological and physical systems involving emerging contaminants in natural and engineered systems.

Center for Science, Technology, and Society (CSTS)

CSTS provides an intellectual space for scholars and students to work together on critical issues related to technical problems and controversies from a global and interdisciplinary perspective.

The Center strives to:

- Advance research in the areas in which science and society intersect
- Support work that presents scientific ideas to general audiences
- Establish opportunities for faculty and students to improve their abilities to convey the significance of their work to the public.

Energetic Materials, Rock Characterization, and Geomechanics Research Center (EMRGe)

EMRGe is a multidisciplinary environment for researching energetic materials and geomechanics in a joint effort of subterranean exploration and national defense to address the many complex challenges in subsurface engineering disciplines.

Research and development areas:

- Rock properties and geomechanics
- Explosions and material fragmentation
- Mining support engineering

DID YOU KNOW?

- Designated as one of 31 Tech Hubs nationwide and one of two hubs focused on critical minerals work with a focus on strategic planning for test-bed construction, workforce development and business development.
- The university also is part of the multi-institutional effort called Electrified Processes for Industry without Carbon (EPIXC) funded by the Department of Energy.

High Performance Computing Center (HPCC)

HPCC provides flexible, high-performance computing and GPU processing capacity to researchers to perform a variety of computationally-intensive research tasks. This includes high-performance computing and GPU processing capacity: Over 11,000 cores; about 160 nodes, including 6 GPU nodes.

Intelligent Systems Center (ISC)

ISC provides an interdisciplinary research environment in which faculty can cooperate and conduct research.

Research and development areas:

- Intelligent manufacturing processes, equipment and systems
- Intelligent cyber-physical systems
- Advanced simulation, sensing, control and communications
- Computational intelligence and embedded systems
- Smart grids and information management

Materials Research Center (MRC)

MRC focuses on interdisciplinary research in materials science and engineering.

Research and development areas:

- Ceramics, Metals, Polymers, Glass, Composites and Coatings

Kummer Center for Advanced Manufacturing

The Center facilitates advanced processes, materials, sensors and integrative workforce development techniques to enable next-generation manufacturing, spurring regional and national economic development. Missouri Protoplex is the future home of this center.

Kummer Center for Artificial Intelligence and Autonomous Systems

The Center deploys the latest machine learning and artificial intelligence techniques to advance the performance and intelligence of a range of robotic and autonomous solutions.

Kummer Center for Resource Sustainability

The Center works on solutions to decrease the footprint of mineral and fuel extraction, increase access to clean drinking water, and leverage regional resources for resilient energy, water and materials utilization.