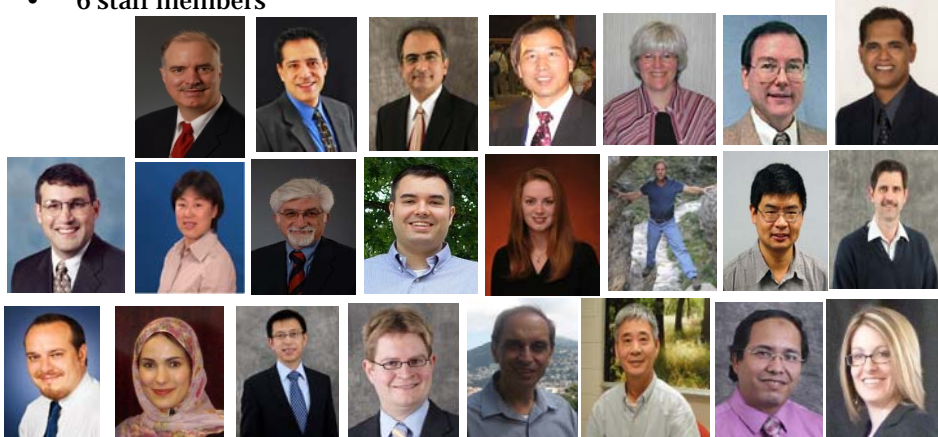


## CIES Quick Facts

- Founded in 1998
- 1 of 8 University-funded S&T centers  
23 faculty members
- 7 departments
- 6 staff members



## Center Mission

- Provide **leadership in research and education** for solving society's problems affecting the nation's infrastructure systems
- Foster **multi-disciplinary R&D** activities in infrastructure engineering with well-focused projects tailored to address the needs of local, state, and federal agencies, and the private sector
- Promote **technology transfer and continuing distance education** to the engineering community

## Research Themes

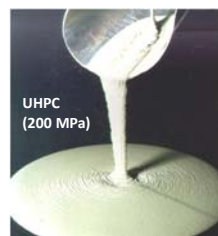
- Development of advanced construction materials for construction and rehabilitation of various infrastructure and building applications
- Advanced design and structural behavior infrastructure and building structures
- Development and use of novel NDT techniques to assess damage and structural health of infrastructure

## Advanced Construction Materials

- Safer infrastructures
- Faster construction
- Longer service life
- Environmentally friendly



Sustainable HPC infrastructure



Roller-compacted concrete

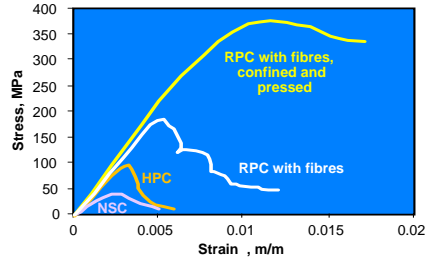


Lightweight aggregate  
Fibers

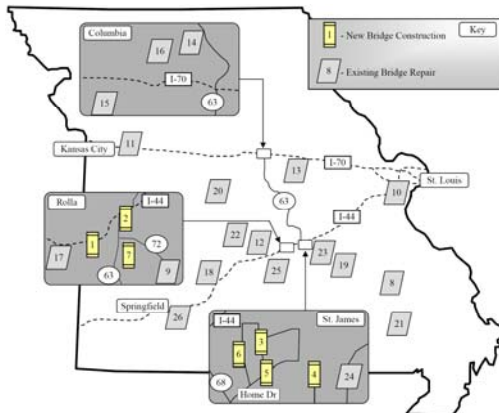


### Advanced Construction Materials - Design and Implementation

- Evaluation of structural behavior
- Monitoring of long-term performance
- Development of sound design procedures
- Establishment of effective guidelines and specifications



### Widespread Implementation of FRP in Missouri



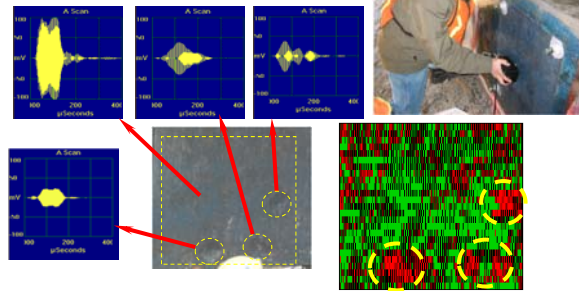
- **More than 30** new and repaired bridges in Missouri over the past decade have been built or repaired to today's standard in Missouri
- Work has led to implementation and advancement in codes and standards (ACI, AASHTO, ...)

(Green County bridge construction)

## Non-Destructive Evaluation Technologies and methods

Monitoring and evaluation of new and repaired structures and system components

Acoustic  
Ultrasonic  
LIDAR technology  
Impact-Echo  
Radar thermography  
Microwave  
Etc.



## Funding Agencies

- Industry (material suppliers, designers, manufacturers, ...)
- State Departments of Transportation (MoDot, CalTrans, IDOT, Kdot, KyDot, NYDot, Fdot, ...)
- National Science Foundation (NSF)
- National Cooperative Highway Research Program (NCHRP)
- Federal Highway Administration (FHWA)
- National Institute for Standards and Testing (NIST)
- Military Related Organizations
  - Air Force Research Laboratory (AFRL)
  - Army Research Laboratory (ARL)
  - Leonard Wood Institute (LWI)
  - US Army Corps of Engineers ...