

IOWA STATE UNIVERSITY

Institute for Transportation



— CREATING, SHARING, AND APPLYING TRANSPORTATION KNOWLEDGE —

From traffic safety to big data and from preservation to education, InTrans focuses on research and service that impact transportation now and into the future.

ABOUT INTRANS

Since its inception in 1983 as a technical assistance program for Iowa’s rural transportation agencies, the Institute for Transportation has evolved into a \$16-million-per-year hub for local, regional, and national transportation-focused research, education, and technology transfer.

InTrans, located at Iowa State University, administers 14 centers and programs with several distinct yet affinitive research specialties and a variety of technology transfer and professional education initiatives.

Our innovative research program (with nearly 300 projects underway) is supported by a variety of state and national organizations, including our primary sponsor—the Iowa Department of Transportation.



IOWA STATE UNIVERSITY
Senior Vice President and Provost



Vice President for Research



Institute for Transportation



InTrans Centers and Programs

FOCUS AREAS



SAFETY

Focusing on the evaluation of roadway countermeasures and developing data-driven solutions to reduce traffic fatalities



INFRASTRUCTURE

Developing new ways to construct and preserve America's roads, bridges, and other forms of infrastructure



MOBILITY, DATA ANALYTICS, AND RESILIENCY

Studying resilience measures for extreme weather events, investigating the future of autonomous vehicles, and analyzing traffic “big data” to support improved mobility decision-making



CONSTRUCTION MANAGEMENT

Enhancing transportation efficiency and cost-effectiveness through innovative construction technologies and processes



OUTREACH AND EDUCATION

Seeking to impact lives by improving the skills and knowledge of transportation workers through workshops offered by InTrans centers and programs

SERVICES

- Statewide urban design and specifications
- Training, professional development, advice, and referral
- Safety/law enforcement liaison
- Traffic safety and crash analysis services
- Conferences and workshops
- Technical support for traffic safety initiatives (e.g., GIS application design, data integration, implementation, and training services)
- Pavement management systems
- REACTOR Laboratory
- Bridge management systems
- Focus groups to determine research needs through a collaborative agreement with Iowa's Board of Regents universities



COLLABORATIONS

InTrans is synergistic, which means that we work with a variety of organizations, both here in Iowa and across the country. Our partnerships with the Iowa DOT, Minnesota DOT, and Federal Highway Administration are long-lasting, as is our relationship with the faculty and staff in Iowa State's Department of Civil, Construction, and Environmental Engineering.

We value the connections we have made, and continue to make, with numerous universities, state DOTs, cities, counties, regional planning organizations, industry associations, equipment manufacturers, materials suppliers, and other groups.



RESEARCH, PUBLICATIONS, PRODUCTS

InTrans researchers use innovative methods, materials, and technologies to advance the transportation field. InTrans provides tangible products that fulfill clients' needs while ensuring that research is oriented toward real-world results.

PUBLICATIONS

- Guides/manuals
- Reports
- Tech transfer summaries
- Tech briefs
- Peer-reviewed articles
- Newsletters, brochures, etc.

MORE PRODUCTS

- Technical presentations
- Decision support tools/systems
- Standards and specifications
- New processes and designs
- Outreach and extension activities to advance the state of the practice



INSTITUTE FOR TRANSPORTATION

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CENTERS

Bridge Engineering Center (BEC)

Conducting research to solve real-world structural problems

Justin Dahlberg, Director | bec.iastate.edu

Center for Transportation Research and Education (CTRE)

Exploring safety, infrastructure management systems, and sustainability in transportation

Omar Smadi, Director | ctre.iastate.edu

Center for Weather Impacts on Mobility and Safety (CWIMS)

Facilitating better and safer ways to travel when weather impacts transportation systems

Zach Hans, Director | cwims.intrans.iastate.edu

Midwest Transportation Center (MTC)

Employing data-driven performance measures for enhanced infrastructure condition, safety, and project delivery

Shauna Hallmark, Director | mtc.intrans.iastate.edu

National Center for Wood Transportation Structures (NCWTS)

Integrating research, demonstration, and education to improve wood transportation structures

Justin Dahlberg, Codirector | woodcenter.org

National Concrete Pavement Technology Center (CP Tech Center)

Serving as the national hub for concrete pavement research and technology transfer

Peter Taylor, Director | cptechcenter.org



National Concrete Pavement
Technology Center





PROGRAMS

Asphalt Materials and Pavements Program (AMPP)

Improving asphalt pavements through research and education

Chris Williams, Director | ampp.intrans.iastate.edu

AURORA Program

Working to advance road weather information systems technology

Zach Hans, Director | aurora-program.org

Construction Management and Technology (CMAT) Program

Researching innovative construction technologies and processes for the transportation industry

Jennifer Shane, Director | cmat.intrans.iastate.edu

Iowa Local Technical Assistance Program (Iowa LTAP)

Helping Iowa's local governments keep up with growing transportation demands

Keith Knapp, Director | iowaltap.iastate.edu

Iowa Statewide Urban Design and Specifications (SUDAS)

Providing uniform design guidelines and construction specifications for Iowa's urban public improvement projects

David Carney, Director | iowasudas.org

Program for Sustainable Pavement Engineering and Research (PROSPER)

Investigating and integrating innovative, sustainable pavement materials and technologies

Halil Ceylan, Director | prosper.intrans.iastate.edu

Real-Time Analytics of Transportation Data (REACTOR) Laboratory

Completing traffic calculations within seconds to enable the delivery of near real-time solutions

Codirectors: Anuj Sharma, Neal Hawkins, and Skylar Knickerbocker | reactor.ctre.iastate.edu

Smart Work Zone Deployment Initiative (SWZDI)

Investigating better ways to control traffic through work zones

Keith Knapp, Director | swzdi.intrans.iastate.edu

THE INSTITUTE FOR TRANSPORTATION IS
THE FOCAL POINT FOR TRANSPORTATION
— AT IOWA STATE UNIVERSITY —

INTRANS PERFORMS

transportation research for
public and private agencies
and companies.

INTRANS CONTRIBUTES

to Iowa State University and
the College of Engineering's
educational programs for
transportation students and
provides K-12 outreach.

INTRANS CONDUCTS

local, regional, and national
transportation services and
continuing education programs.



IOWA STATE
UNIVERSITY

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