VIRGINIA TECH TRANSPORTATION INSTITUTE

For 35 years, VTTI has been conducting research to save lives, time, and money and protect the environment. In our world-class facilities, we investigate, invent, design, develop, refine and test transportation systems of the future. As one of seven premier research institutes created by Virginia Tech to answer national challenges, VTTI is continually advancing transportation through innovation and has affected public policy on national and international levels.

VTTI is known for robust transportation studies, both with public partners and through proprietary research with private entities, original equipment manufacturers, and suppliers. Established in 1988 as the University Center for Transportation Research, VTTI is now the premier university-level transportation institute in the U.S. and is home to the largest group of driving safety researchers in the world.

RESEARCH AREAS

The Institute is divided into nine divisions and centers that all strive to achieve a vision of ubiquitously safe and effective mobility through our mission and cover all aspects of transportation research.

- Division of Data & Analytics
- Division of Freight, Transit, & Heavy Vehicle Safety
- Division of Technology Development & Deployment
- Division of Technology Implementation
- Division of Vehicle, Driver, & System Safety
- Center for Injury Biomechanics
- Center for Sustainable & Resilient Infrastructure
- Center for Sustainable Mobility
- Global Center for Automotive Performance Simulations (affiliated company)

WORLD-CLASS FACILITIES AND CAPABILITIES

Our facilities provide a research - and automation-friendly environment that government agencies, original equipment manufacturers, and suppliers can use to test and certify their systems, providing a path from test-track to real-world deployment.

- Virginia Smart Roads test tracks providing highway, urban, and rural roadway environments, weather-making and lighting configurations
- VTTI-designed data acquisition systems, capturing rich data from crash vehicle and infrastructure at scale
- Labs for driver interface development, data reduction, lighting research, crash analysis, pavement research, and traffic simulation
- Fleet of instrumented vehicles that can be tailored to project specifications
- High-performance computing and data warehousing to unleash the potential of data analytics using cutting edge data processing pipelines
- GCAPS state of the art indoor tire test facility
- Engineering labs to rapidly prototype novel technologies for tests and evaluation

Our Impact
Virginia Tech Transportation Institute

NATURALISTIC DRIVING

VTTI is the pioneer of Naturalistic Driving Studies, a research method that involves equipping vehicles to record real-world driver behavior and performance. This data helps researchers and policymakers to address important issues related to driver risks such as distraction, fatigue, inattention, and impairment, as well as to develop crash countermeasures.

- 20+ years of experience in advanced analytics of driving data
- 90% of the world's naturalistic driving data is housed at VTTI
- Data encompasses light-vehicle and heavy-vehicle drivers as well as motorcyclists; from teens to aging drivers; U.S. and international studies

STUDENT PROGRAMS

We are educating the next generation of transportation leaders.

- VTTI's InternHUB gives students the opportunity to work on industry projects while completing their degrees.
- The Human Factors of Transportation Safety Graduate Certificate Program provides students with in-depth understanding and hands-on experience in transportation safety.

OUTREACH & ENGAGEMENT

VTTI is committed to collaborative efforts in all areas of transportation.

- Engage Virginia Tech faculty from 30 departments
- Produce more than 300 publications each year
- Translate our research into meaningful outreach efforts that impact all users of the road
- Provide webinars where researchers discuss their project results
- Provide opportunities for students and the community to visit our world-class facilities and learn from our researchers

To learn more about our work and get more involved, please contact us at:
- 540-231-1500
- inquiries@vtti.vt.edu
- www.vtti.vt.edu

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Advancing Transportation Through Innovation