



### About Us

*Transportation systems are needed to move people and goods to keep our economies working, but they have significant impacts on the environment. Sustainable mobility means efficiently transporting people and goods while also minimizing emissions and other environmental impacts, reducing fuel and other resource consumption, and decreasing negative impacts to communities.*

At the Center for Sustainable Mobility, researchers tackle complex projects relevant to society's transportation mobility, energy, environmental, and safety needs. Creating sustainable mobility opportunities is a major challenge - and opportunity - for society. Using the world-class facilities at VTTI, we focus on:

**Innovative Research** to advance the state of knowledge

**Educating** qualified engineers to meet today's transportation demands & tomorrow's transportation challenges

**Gathering & Sharing** critical information needed by engineers and policy makers to evolve society towards more sustainable transportation systems

**Translating** research results into realistic & workable applications through tooling and education

### Programs

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- **Large-Scale Multi-modal Transportation and Communication Modeling & Analysis**
  - **Connected and Automated Vehicles**
  - **Traffic Prediction and Control**
  - **Emerging Transportation Modes**
  - **Multi-modal Energy and Emission Modeling & Optimization**
  - **Transportation System Safety Modeling & Assessment**
  - **Application of Artificial Intelligence in Transportation**

### Our Impact

**Industry Best Practices** - We advance the industry through innovative optimization tools and modeling software used in various projects throughout the world.

**Innovation** - We conduct fundamental research and publish in peer-reviewed journals. We develop novel large-scale agent-based transportation modeling tools, traffic signal controllers to reduce traffic congestion and increase capacity of urban roadways, and vehicle control strategies to enhance vehicle safety and reduce vehicle emissions.

**Outreach** - Presenting our research at scientific conferences and developing undergraduate and graduate courses at Virginia Tech are part of our ongoing outreach efforts.

**Protecting the Environment** - Our research includes a focus on substantially reducing fuel/energy consumption by integrating vehicle control strategies with connected vehicle technologies. We are assessing important variables in freight rail that can lead to emissions reduction.



### About VTTI

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.

**To learn more about our work and get more involved, please contact us at:**

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