Selected Energy Research Projects

- Analyzing and Defending Cyberattacks on Electric, Hybrid, and AV Battery Systems
- Design and Demonstration of an Arterial-friendly Local Ramp Metering Control System
- Improving rush hour traffic flow by computer-vision-based parking detection and regulations
- Modeling and Enhancing Freight Mobility in the Philadelphia Region
- Municipal Fleet Vehicle Electrification and Photovoltaic Power In the City of Pittsburgh
- Platooning for Improved Safety and Efficiency of Semi-trucks
- Real Time Traffic Congestion Prediction and Mitigation at the City Scale
- Traffic Impact of CSX Pittsburgh Intermodal Rail Terminal and Mitigation Plans for McKees Rocks

Research Thrusts

- Moving People and Goods
- Connected and Automated Vehicles
- Safety of Vulnerable Road Users
- Assisting the Disadvantaged
- Infrastructure Support
- Policy and Regulations

Selected Equity Research Projects

- Accessibility with Get Going
- Autonomous Food Delivery Impacts on Traffic & Sustainability
- Demand learning and supply optimization for last-mile transportation in disadvantaged neighborhoods
- Developing data collection systems to support community-driven integrated mobility services
- Helping Public Agencies Assess how Different Regulatory Structures for Shared Automated Vehicle Services Could Affect Access, Environmental Sustainability, and Profitability
- Helping Transit Agencies Assess Opportunities to Improve Access and Equity With Automated Vehicles
- Ridehailing Service Equity in Normal and Rare Conditions
- Smart and equitable parks
- Transit dependents, choice riders, and service criticality: analysis of determinants of bus ridership in the Philadelphia Region

Transportation R & D & D: Research & Development & Deployment through partnerships