ATLAS CENTER

Advancing Transportation Leadership and Safety

Research and Education Programs

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Research Coordinator

ATLAS Center

- Tier 1 University Transportation Center
- Partnership between University of Michigan and Texas A&M University
  - UM – UM Transportation Research Institute (UMTRI)
  - TAMU – Texas Transportation Institute (TTI)
- Theme: Integrated Solutions for Transportation Safety

ATLAS Center Team

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UMTRI Business Manager

Francine Romine
Communications Coordinator

Ruth Halsey
Financial Manager

Barb Lorenz
TTI Program Coordinator

Integrated solutions for transportation safety

Key Primary Secondary Out of Scope	Haddon matrix		
	Pre-Drive/ Pre-Crash (Education, training, enforcement, ITS, roadway markings, etc.)	**Crash** (Connected vehicles, crashworthiness, etc.)	**Post-Crash** (Crash notification, rescue, etc.)
Vehicle			
Person			
Environment/ Roadway			

ATLAS Center Research

- **Research Excellence Program**
  - ***Competitive Programs at UM and TAMU***
- **Cooperative Research Program**
  - ***Collaborative Projects UMTRI & TTI***
- **Strategic Initiatives Program**
  - ***Addresses MAP-21 Research Priority***
- **Research Funding Total for Years 1 & 2**
  $1,041,000

ATLAS Center Research

- **Research Excellence Program**
  - ***Competitive Programs at UM and TAMU***
  - ***Intended as pilot projects***
  - ***Quad approach required at UM***
    Collaborators from two academic departments, non university (industry, nonprofit, gov't), student
  - ***Outside monitor required at TAMU***
  - ***11 projects funded in years 1 and 2***
    - ***UM - 4.5***
    - ***TAMU – 6.5***

Research Excellence Program Projects

- **Connected Vehicles**
  - Predicting and communicating human driving decisions to automated vehicles in the connected environment - *UMTRI, UM Biostatistics, Ford Motor Co.
  - Incorporating driver behavior into simulations for connected vehicle applications – *TAMU, Univ. of Nebraska
- **Age-related Driving Behavior**
  - Young male risk-taking with passengers - simulated driving – *UMTRI, UM Psychology, Nat. Inst. Of Child Health & Human Develop., Toyota Motor Co.
  - Age and channelized right-turn crashes- *TAMU Civil Engr., FHWA
  - Support for Older Drivers – * TTI, TAMU Industrial and Systems Engr.
- **Driver Distraction**
  - Occlusion compliance test for distraction guidelines – *UMTRI, Univ. of Toronto, Hyundai Kia
  - Touchscreen, multitasking, distraction, *TAMU Psychology, TTI Univ. of Utah, Precision Driving Research

*collaborators and monitors

Research Excellence Program Projects

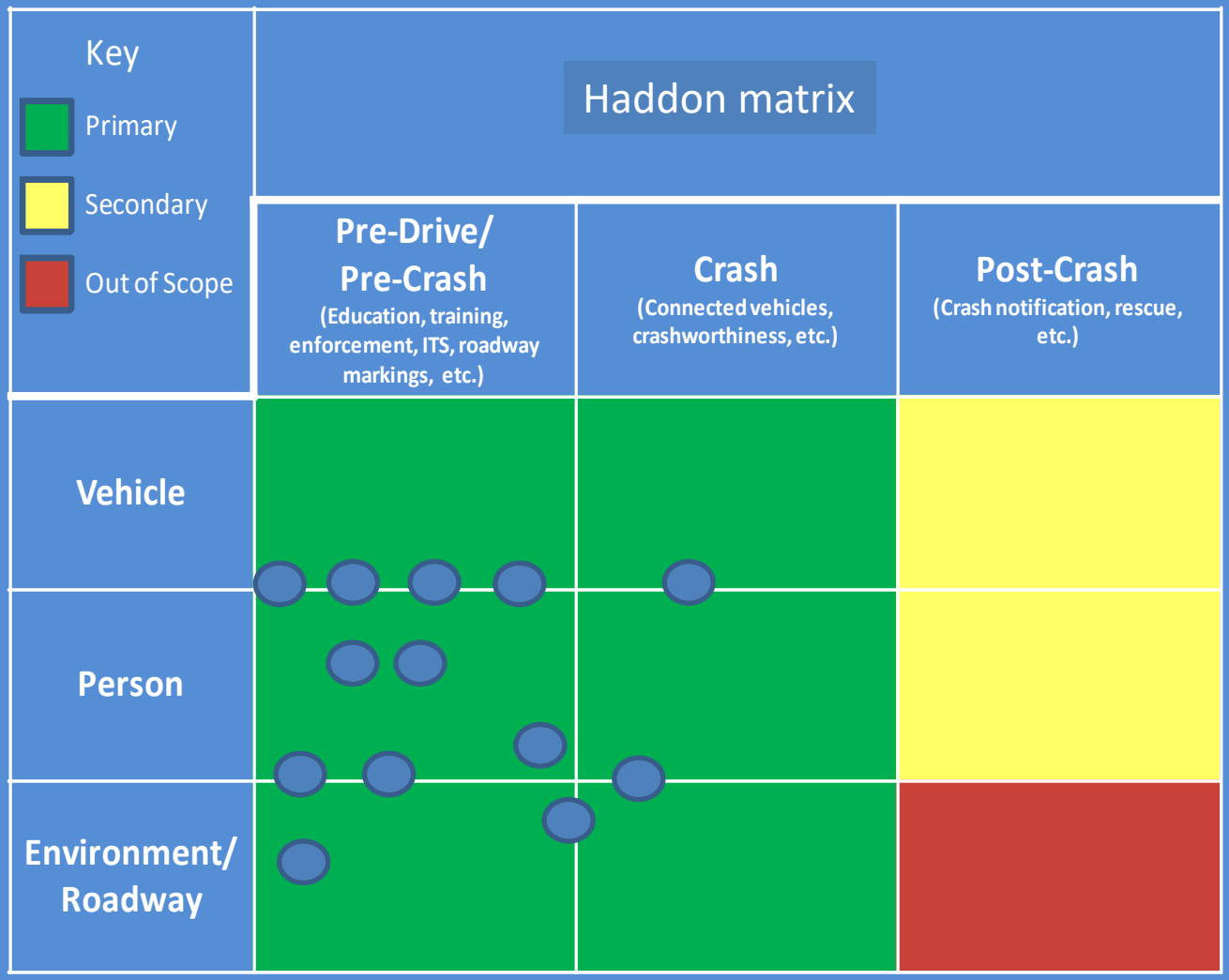
- **Infrastructure Related**
  - Roadside safety hardware and vehicle safety standard evaluation criteria – *UMTRI, TTI, Tenn. DOT
- **Crash Prediction Modeling**
  - Improving Development of Safety Performance Factor (SPF) calibration factors - *TTI, TAMU Civil Engr.
- **Pedestrian Safety**
  - Countermeasures for high-speed-road pedestrian crashes- *TTI, TX DOT

*collaborators and monitors

ATLAS Center Research

- **Cooperative Research Program**
- **Identifying the Potential of Improved Heavy Truck Crashworthiness to Reduce Death, Injury, and Societal Costs of Heavy Truck Crashes**
  - **TTI and UMTRI - heavy truck crash analysis, statistics, biomechanics, finite element analysis**
  - **Advanced crash avoidance technologies (ACATs) have changed distribution of crash types. This project identifies opportunities to further reduce heavy truck driver fatalities and injuries by identifying and quantifying crashes currently not mitigated by ACATs.**
- **Strategic Initiatives Program**
  - **Further Examination of Alcohol-Impaired Closed Course Driving Study Data**
    - **TTI – Human factors, statistical data analysis**
    - **Analysis of effects of BAC levels and night time conditions on driving measures.**

Integrated solutions for transportation safety



ATLAS Center: Education

- Student participation in research (UMTRI/TTI)
- Outstanding Student of the Year Award Program (UMTRI/TTI)
- K-12 Outreach (UMTRI/TTI)
- STEM Outreach Program (UMTRI/TTI)
- ATLAS Symposium Series Program (UMTRI/TTI)
  - Faculty travel between institutions

ATLAS Center: Education

- Workforce Development Partnership Program (UMTRI)
- Emerging Scholars Program (UMTRI)
- Professional Education Program (UMTRI)
- Summer Intern Program (TTI)
  - 3 students from U-M chosen to participate this year
- Student Travel Assistance Program (TTI)
- Community Outreach/Education Program (TTI)

ATLAS Center: Education

- **Advancement Via Individual Determination (AVID) Program Support (TTI):**
  - **College readiness program for underserved students**
- **Summer Transportation Institute (STI) Program Support (TTI)**
  - **Encourage 11th and 12th grader minority and women to attend college and choose STEM majors**

ATLAS Center Research

Information about ATLAS Research and education program - including research project reports and summary videos of completed projects are on our website at www.ATLAS-Center.org

Thank You!