

CFIRE Grant Year 4 Proposal Abstracts

STAR: Design, Materials, and Construction Processes for Highway, Harbor, and Rail Infrastructure

Proposal ID 2010-1	PI: Jian Zhao, UW-Milwaukee	Title: Impact of Overweight Vehicles on Bridge Deck Deterioration
Proposal ID 2010-2	PI: Awad Hanna, UW-Madison	Title: A New System Dynamics Approach to Improve Change Management for Highway Construction
Proposal ID 2010-3	PI: Awad Hanna, UW-Madison	Title: Using System Dynamics Simulation and Neural Networks to Optimize Security of Transportation Construction Sites
Proposal ID 2010-4	PI: Tuncer Edil, UW-Madison	Title: A Novel Approach to Mitigating Ballast Fouling and Enhancing Rail Freight Capacity
Proposal ID 2010-5	PI: Hani Titi, UW-Milwaukee	Title: Feasibility Study for a Freeway Corridor Infrastructure Health Monitoring Instrumentation Testbed
Proposal ID 2010-6	PI: Konstantin Sobolev, UW-Milwaukee	Title: Superhydrophobic Engineered Cementitious Composites for Highway Bridge Applications: Phase 1
Proposal ID 2010-7	PI: Hussain Bahia, UW-Madison	Title: QC/QA of Hot Mix Asphalt Compaction & Performance Using Two-Dimensional Imaging Techniques
Proposal ID 2010-8	PI: Hussain Bahia, UW-Madison	Title: Designing Texture of Asphalt Pavements to Optimize Fuel Economy and Friction for Trucks

STAR: Multimodal Systems Planning and Optimization

Proposal ID 2010-9	PI: Richard Stewart, UW-Superior	Title: Modeling Multimodal Wood Pellet Freight Movement in the Northern Midwest Region
Proposal ID 2010-10	PI: Richard Stewart, UW-Superior	Title: Improving Log Transportation with Data Based Monitoring and Analysis in Northern Wisconsin and Upper Peninsula of Michigan
Proposal ID 2010-11	PI: Ananth Krishnamurthy, UW-Madison	Title: Towards Collaborative Supply Chains for Freight Sustainability
Proposal ID 2010-12	PI: Jason Bittner, UW-Madison	Title: Air Cargo in the Mississippi Valley Freight Coalition Region
Proposal ID 2010-13	PI: Bob Gollnik, UW-Madison	Title: Enriching Freight Planning Data through Sustained Industry Engagement
Proposal ID 2010-14	PI: Tito Homem-de-Mello, UIC	Title: Freight Routing for Efficient, Sustainable, and Reliable Travel
Proposal ID 2010-15	PI: Kouros Mohammadian, UIC	Title: A GPS-Based Survey of Freight Movements in the Midwest Region
Proposal ID 2010-16	PI: Teresa Adams, UW-Madison	Title: Assessing Public Benefits and Costs of Freight Transportation Projects: Measuring Shippers' Value of Delay on the Freight System

STAR: Traffic Operations and Safety		
Proposal ID 2010-17	PI: Yue Liu, UW-Milwaukee	Title: Modeling Truck Driver Behavior Patterns and Impacts on Traffic Safety at High-Speed Signalized Intersections
Proposal ID 2010-18	PI: David Noyce, UW-Madison	Title: Developing Safety Risk Index for Truck Preferred Arterial Corridors
Proposal ID 2010-19	PI: Habib Tabatabai, UW-Milwaukee	Title: Color-Based Visual Detection of Icy Pavement Surfaces to Improve Safety of Roadways and Runways
Proposal ID 2010-20	PI: Jason Bittner, UW-Madison	Title: Development of an Area-Wide Estimate of Truck Freight Value in the Urban Mobility Report
Proposal ID 2010-21	PI: Yue Liu, UW-Milwaukee	Title: Heavy Vehicle Performance During Recovery from Forced-Flow Urban Freeway Conditions Due to Incidents, Work Zones, and Recurring Congestion
Proposal ID 2010-22	PI: Madhav Chitturi, UW-Madison	Title: Development of Next Generation Intersection Control

STAR: Energy and Environment		
Proposal ID 2010-23	PI: Jane Lin, UIC	Title: Investigation of Carbon Cap-and-Trade Programs for Freight Transportation in Urban Areas
Proposal ID 2010-24	PI: Mei Cao, UW-Superior	Title: Simulating the Effect of Gate Strategies in Emissions Reduction
Proposal ID 2010-25	PI: Tracey Holloway, UW-Madison	Title: Freight from Space: Evaluating Freight Activity and Emissions Trends from Satellite Data
Proposal ID 2010-26	PI: Jason Bittner, UW-Madison	Title: Can We Achieve Sustainable Freight Access in Mega-Regions? A Case Study of the Great Lakes Mega-Region
Proposal ID 2010-27	PI: Paul Meier, UW-Madison	Title: Does Natural Gas Make Sense for Freight? Environmental and Resource Implications of the "Pickens Plan"
Proposal ID 2010-28	PI: Bob Gollnik, UW-Madison	Title: Maximizing Freight Movements in Local Food Markets
Proposal ID 2010-29	PI: Matthew Petering, UW-Milwaukee	Title: An Investigation of the Potential for a Midwest High Speed Freight Rail System: Feasibility Studies, Capacity Analysis, and Energy Implications