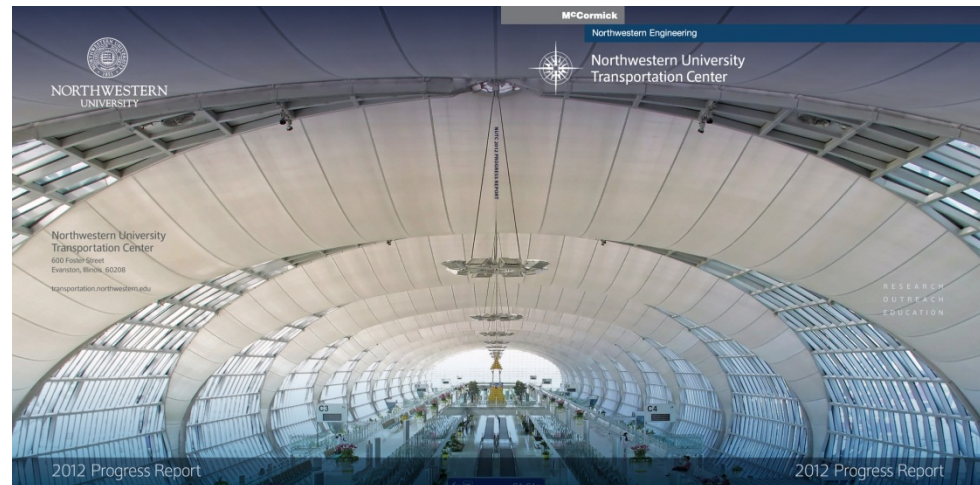


# Our Transportation Center: Staying on Track

Hani S. Mahmassani

Presentation to the BAC  
October 31, 2012



# Strategic Vision: A Refresher

- Pre-eminent think-tank and laboratory in the world for *cutting-edge research that matters* on a global scale.
- Provide the *premier educational program* in transportation systems.
- Essential academic partner for *novel, high-impact collaborative* research.
- Advance state of practice industry applications through a mix of engaged *application-driven research* and *fundamental advances*.

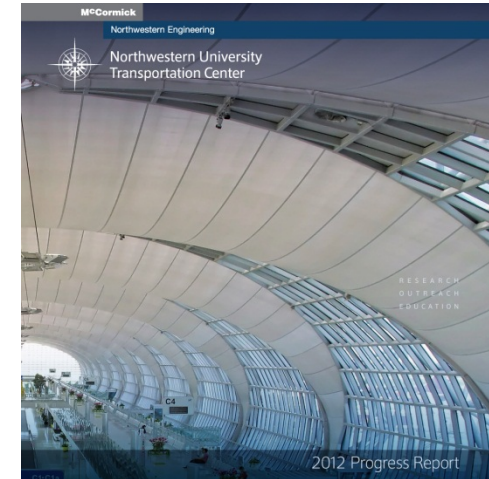
## Progress Highlights: 2012- (I)

### BAC Membership

- **8** new companies, **8** new members

### Sponsored Research Activity

- Active:           **28** projects   **\$3.65 M**, **12** faculty
  - Students Supported: **34**
- Submitted:   **10** proposals, **\$1.47 M**,   **5** faculty



## Progress Highlights: 2012- (II)

### Executive Education

- Partner with Chalmers University, Supply Chain & Management program (open to 5 BAC members) (Nov. 12-15, 2012)
- Pricing Highway Infrastructure (Sept. 10-12, 2012)
- Freight Transportation & Logistics – Delivering Value in a Volatile Market (May 14-16, 2012) → *next program May 2013*

### International Technical Assistance

- **New National Transportation Center for Ministry of Transport, Kingdom of Saudi Arabia**

## Progress Highlights: 2012- (III)

### Outreach, Events, Public Policy

- Workshop: **The Electrification of Transportation: A Look at the Road Ahead**
- Hosted **White House Round Table** featuring The Honorable David L. Strickland, Administrator of the National Highway Traffic Safety Administration (NHTSA)
  - “Safety Without Borders: Raising the Bar on Traffic Safety Across the Globe Through Data, Research, and Collaboration”
- **Transportation Deregulation and Safety: A Retrospective and Reflection after 25 Years** (May 3, 2012)
- Organized **2<sup>nd</sup> International Conference on Evacuation Modeling & Management (ICEM’ 12)** – August 13-15, 2012.

# Progress Highlights: 2012- (IV)

## Upcoming Events

- **Sixth William O. Lipinski Symposium on Transportation Policy** – *Advancing Transportation Infrastructure through Public Private Partnerships*

- January 28, 2013

- **Hosting Kuhmo NECTAR Conference and Summer School on Transportation Economics: Annual Conference of the International Transportation Economics Association 2013**

- July 8 – 12, 2013

# Execution Education Survey

- **COPING WITH CARBON:** Sustainable Strategies for the Transportation and Logistics Enterprise
- **PRICING TRANSPORTATION SERVICES:** Economic principles, common practices, new trends
- **INSURANCE IN TRANSPORTATION:** Policies, Issues & Strategic Decisions
- **DATA MINING AND ANALYTICS FOR DECISION MAKING IN TRANSPORTATION**
- **SUPPLY CHAIN NETWORK DESIGN:** What is SCND?, The Science Behind SCND, and How to Do SCND.

# Graduate Education Update

## **Professional Masters in Analytics (offered by IEMS in McC)**

*Director: Diego Klabjan*

*Launched this Fall, with first class of ~30 students.*

## **Contemplated Transportation Infrastructure specialization under Professional Masters in Project Management (offered by CEEin McC)**

*Director: Ray Krizek*

*Next year launch?*



# BAC: New Member Companies

Chrysler



Florida East Coast  
Railway



TranzAct



# BAC: Target Sectors for New Members

Shippers with significant logistics operations

International Carriers

Trucking / Logistics companies

Transportation Equipment / Systems  
Manufacturers

Technology Providers

## Students: Our Core Mission (I)

- TC adds *value to student experience* through industry exposure, seminars by authorities in the field, travel funds for conferences, fellowship stipends— essential differentiator for recruiting top talent
- Many opportunities for *undergraduates* interested in transportation; increasing engagement in research, *internship* placement with *BAC companies*
- *Industry support is critical* to our mission and to making a Northwestern Education in Transportation the unique experience it is.



## Students: Our Core Mission (II)

- 4** *Dissertation Year Fellows* (2012-13)
  - 15** *New graduate students* in Fall 2012
  - 3** *Transportation & Logistics* graduating seniors
- 15 T&L students in all classes

# Students: Dissertation Year Fellows



**Yikai Chen** (Civil & Environmental Eng.)  
*Statistical Health-Monitoring for Transportation Infrastructure*



**Luis de la Torre** (Industrial Eng. & Mgt Science)  
*Models and Algorithms for Coordination in Humanitarian Logistics;*



**Jiwon Kim** (Civil & Environmental Eng.)  
*Reliability in Traffic Simulation Models*



**Timothy Sweda** (Industrial Eng. & Mgt Science)  
*Decision Making for Electric Vehicles*

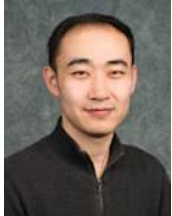
## Students: External Awards



**Charlotte Anne Frei**, PhD candidate, C & E Engineering  
Eisenhower Transportation Fellowship, 2012–2013



**Madison Fitzpatrick**, PhD candidate, Transportation  
NSF Fellowship: “Reach for the Stars: Computational Models for Teaching and Learning in Physics, Astronomy and Computer Science”



**Yue Geng**, PhD candidate, Ind. Engineering & Mgt Science  
CII (Containerization & Intermodal Institute) Scholarship, 2012



**Ali Zockaie Kheiraie**, PhD candidate, C & E Engineering  
Graduate Student Participation Grant to attend 8th National Aviation System Planning Symposium, 2012



**Ramón L Torres**, PhD candidate, C & E Engineering  
NSF Fellowship: “Reach for the Stars: Computational Models for Teaching and Learning in Physics, Astronomy and Computer Science”

# Faculty: Selected Recognition (I)



## **Jan Achenbach**

2012 Medal: American Society of Mechanical Engineers (ASME)



## **Zdenek Bazant**

Symposium Honor, Annual ASCE Engineering Mechanics Conference, 2012

# Faculty: Selected Recognition (II)



## **Irina Dolinskaya**

Junior William A. Patterson Professor of  
Transportation



## **Joel Horowitz**

2012 Econometric Theory Multa Scripsit  
Award



## **Marco (Yu) Nie**

Promoted to Associate Professor



## NUTC Staff Transitions



**Robert Reddy**

*Communications Specialist*

# Research Proposal (I)



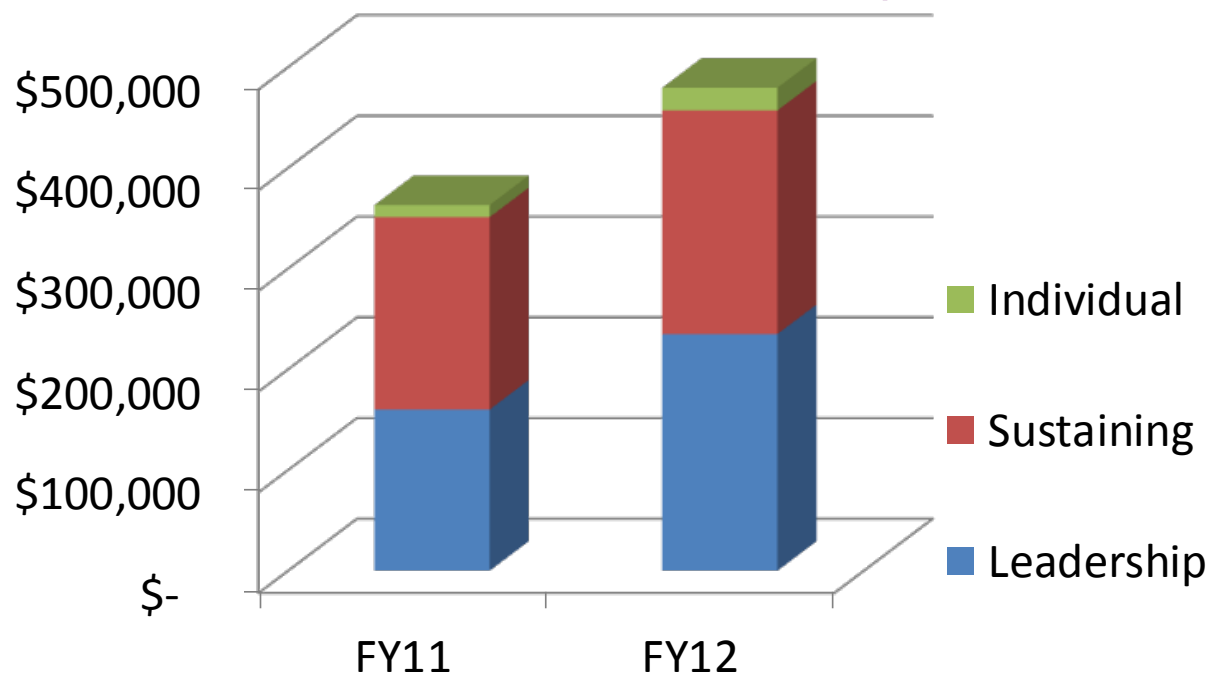
## US Department of Transportation Center

- National Transportation Center
  - *5 Awards, \$3M /year for 2 years*
  - Safety, State of Good Repair, **Economic Competitiveness**, Livable Communities, Environmental Sustainability
  - **Our Strategy** → focus on freight, logistics, intermodal
    - Partner with BAC companies
- Other Options
  - *Tier I Center: 20 awards, \$1.5M /year for 2 years*
  - *Regional Center: 10 awards, \$2.75M / year for 2 years*

Recent or new research  
engagements with BAC and other  
industry partners



# BAC Contributions: FY11, FY12



<b>FY 11</b>	\$350,000	\$260,000	\$363,000
<b>FY 12</b>	\$400,000	\$257,000	<b>\$464,500</b>
<b>FY 13</b>	<b>\$475,000</b>		



# Patterson Lecture 2013



Dr. Irwin Jacobs  
*Chairman and Founder*



April 24, 2013

Spring BAC Dates: April 24 and 25, 2013



# Looking Ahead

- New faculty hire in Transportation (demand/planning/sustainability)
- Strategic additions to BAC
- Research engagement with at least three more BAC companies
- Moving forward with big initiatives – if successful
- Raising endowment for Leon N. Moses Distinguished Lecture



# Closing Thoughts

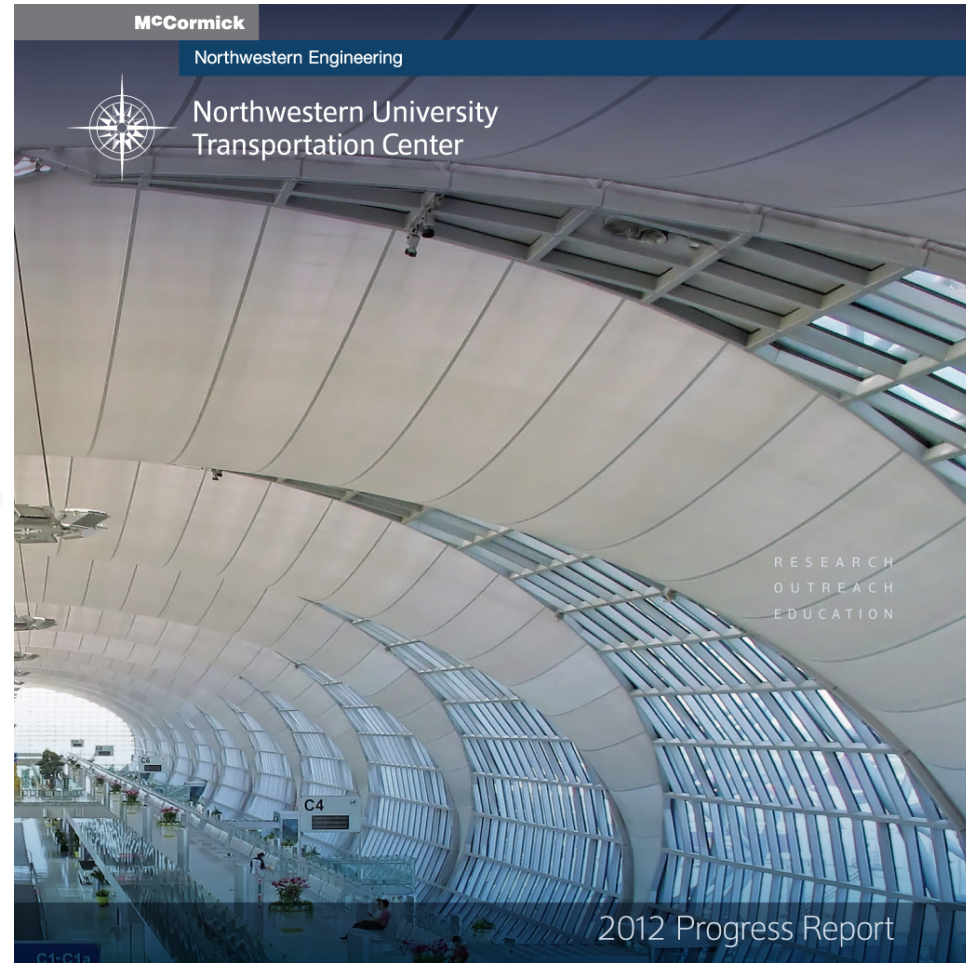
- **AT NORTHWESTERN**
  - Uniquely successful industry-engaged approach to transportation research and education
- What we do at the NUTC matters
  - BAC engagement and support critical to what we do, and how well we do it

**McCormick**

Northwestern Engineering

**Northwestern University Transportation Center**

**MORE  
HERE**







# BAC: New Leadership Members Here Today



Jim Compton  
*Executive Vice President,  
Chief Revenue Officer*



# BAC: Members with New Companies Here Today



Dan Avramovich  
*Chairman and CEO*



William Cook  
*Director - Logistics and Customs*



Jean Reagan  
*Chairman and CEO*





Thank you!