RESEARCH THAT MOVES YOU
Northwestern University Transportation Center
Visit transportation.northwestern.edu to learn more.
WHAT IS NUTC?

PLATFORM

COLLABORATION

KNOWLEDGE CREATION

TRANSFORMATION
NUTC AS COLLABORATION PLATFORM

- Incoming programs
- Interests
- Different Departments
- International programs
- Carriers
- Shippers
- 3PLs
- Technology Providers
- Local
- State
- Federal
- International

AGENCIES
INDUSTRY (BAC)
FACULTY RESEARCHERS
STUDENTS

SERVICE/ADVICE
LEADERS/HUMAN CAPITAL
KNOWLEDGE
DISSEMINATION/OUTREACH ACTIVITIES
APPLICATIONS/TRANSFORMATION

KNOWLEDGE LEADERS/HUMAN CAPITAL
APPLICATIONS/TRANSFORMATION
DISSEMINATION/OUTREACH ACTIVITIES
SERVICE/ADVICE
LEADERS/HUMAN CAPITAL
KNOWLEDGE

Knowledge Leaders/Human Capital
Applications/Transformation
Dissemination/Outreach Activities
Service/Advice
Leaders/Human Capital
Knowledge

Knowledge Leaders/Human Capital
Applications/Transformation
Dissemination/Outreach Activities
Service/Advice
Leaders/Human Capital
Knowledge

Knowledge Leaders/Human Capital
Applications/Transformation
Dissemination/Outreach Activities
Service/Advice
Leaders/Human Capital
Knowledge

Knowledge Leaders/Human Capital
Applications/Transformation
Dissemination/Outreach Activities
Service/Advice
Leaders/Human Capital
Knowledge

Knowledge Leaders/Human Capital
Applications/Transformation
Dissemination/Outreach Activities
Service/Advice
Leaders/Human Capital
Knowledge

Knowledge Leaders/Human Capital
Applications/Transformation
Dissemination/Outreach Activities
Service/Advice
Leaders/Human Capital
Knowledge

Knowledge Leaders/Human Capital
Applications/Transformation
Dissemination/Outreach Activities
Service/Advice
Leaders/Human Capital
Knowledge

Knowledge Leaders/Human Capital
Applications/Transformation
Dissemination/Outreach Activities
Service/Advice
Leaders/Human Capital
Knowledge

Knowledge Leaders/Human Capital
Applications/Transformation
Dissemination/Outreach Activities
Service/Advice
Leaders/Human Capital
Knowledge

Knowledge Leaders/Human Capital
Applications/Transformation
Dissemination/Outreach Activities
Service/Advice
Leaders/Human Capital
Knowledge
NUTC IMPACT?

Industry Study: *Trucking Firm*

50K

$1.35M annual, recurring, cost reduction (10% of addressable cost)

through *analytics and optimization*. 
NUTC IMPACT?

Selected Faculty Recognition

Karen Smilowitz
INFORMS Business Analytics Prize for SAFE (Situational Awareness for Events) tool for the Chicago Marathon

Hani Mahmassani
2018 Best Paper Award Transportation Research Part C Advisory Board to Prince of Monaco on Smart Cities Advisory Board to Panama Canal Authority
NUTC IMPACT?

Selected Faculty Recognition

Gianluca Cusatis
Elected Fellow of
ASCE Engineering Mechanics Institute (EMI)

Joel Horowitz
Elected Fellow of
International Association for Applied Econometrics
NUTC IMPACT?

Direct Student Funding Through NUTC

![Bar chart showing funding from FY14 to FY18 for Travel/Events, Fellowships, and Tuition/Stipend.]
NUTC IMPACT?

WE PRODUCE LEADERS

Michael Hyland

US DOT Eisenhower Fellow and NUTC Dissertation Year Fellow

Completed PhD Dissertation
Real-time Operation of Shared-use Autonomous Vehicle Fleets: Modeling, Optimization, Simulation, and Analysis

Started Tenure-track Faculty Position at University of California-Irvine
NUTC IMPACT?

WE ATTRACT THE BEST

Over 85 applicants annually for Transportation Systems (TRN) graduate programs

6 of 7 PhD offers accepted Fall 2018

6 new MS and 6 new PhD students in CEE Transportation Systems (TRN) graduate program

5 PhD students supported via NUTC Dissertation Year Fellowships

19 T&L minor students last year (6 graduated in 2018)
NUTC IMPACT?

Recent Rankings

Kellogg School of Management
– MBA Program ranked #2 by *Economist* magazine (2018)

Industrial Engineering & Management Science

Civil and Environmental Engineering
Prof. Joseph Schofer, organizing committee chair

• Transportation Research Board
• Featured BAC member John Larkin
  • Panel Five: Science Fiction to Engineering Facts – A Visionary Panel
  • Addressed future changes in manufacturing, purchasing, distribution, and freight performance needs and management.
NUTC IMPACT?
You Make it Possible

BAC Contributions: FY08 – FY18

FY08 Goal: $625,000+
NUTC IMPACT?

You Make it Possible

BAC Contributions: FY08 – FY18

<table>
<thead>
<tr>
<th>Year</th>
<th>60th</th>
<th>Association</th>
<th>Individual</th>
<th>Sustaining</th>
<th>Leadership</th>
<th>Column1</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY08</td>
<td>$-</td>
<td>$100,000</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
</tr>
<tr>
<td>FY09</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
</tr>
<tr>
<td>FY10</td>
<td>$-</td>
<td>$100,000</td>
<td>$200,000</td>
<td>$300,000</td>
<td>$400,000</td>
<td>$500,000</td>
</tr>
<tr>
<td>FY11</td>
<td>$-</td>
<td>$200,000</td>
<td>$300,000</td>
<td>$400,000</td>
<td>$500,000</td>
<td>$600,000</td>
</tr>
<tr>
<td>FY12</td>
<td>$-</td>
<td>$300,000</td>
<td>$400,000</td>
<td>$500,000</td>
<td>$600,000</td>
<td>$700,000</td>
</tr>
<tr>
<td>FY13</td>
<td>$-</td>
<td>$400,000</td>
<td>$500,000</td>
<td>$600,000</td>
<td>$700,000</td>
<td>$800,000</td>
</tr>
<tr>
<td>FY14</td>
<td>$-</td>
<td>$500,000</td>
<td>$600,000</td>
<td>$700,000</td>
<td>$800,000</td>
<td>$900,000</td>
</tr>
<tr>
<td>FY15</td>
<td>$-</td>
<td>$600,000</td>
<td>$700,000</td>
<td>$800,000</td>
<td>$900,000</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>FY16</td>
<td>$-</td>
<td>$700,000</td>
<td>$800,000</td>
<td>$900,000</td>
<td>$1,000,000</td>
<td></td>
</tr>
<tr>
<td>FY17</td>
<td>$-</td>
<td>$800,000</td>
<td>$900,000</td>
<td>$1,000,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY18</td>
<td>$-</td>
<td>$900,000</td>
<td>$1,000,000</td>
<td>$1,100,000</td>
<td>$1,200,000</td>
<td>$1,300,000</td>
</tr>
</tbody>
</table>
NUTC IMPACT?

You Make it Possible

Undergraduate Transportation Research Fellowship

• Funded through $100,000 gift from Greenbriar
• Funds Undergraduate Fellowships during summer
• Launched in Summer 2018
  – Robert Belson: *Inflight Wi-Fi Characterization Tool* (Computer Science – Fabian Bustamante)
NUTC IMPACT?

You Make it Possible
NUTC 60th Fundraising

• Schneider Family Graduate Endowed Fellowship Program
  – 2 projects funded
• Ruan Family Transportation Fund
• Diana Marek Student Experience Fund
  – 1st 2 contributions of $25k each scheduled for 2018, and early 2019
BAC: New Membership

5 new companies (net 1 company in total)

Leadership
Allstate
Bluegrace Logistics
Cummins Inc.

Sustaining
Seabury Capital

Association
Eno Center for Transportation
BAC: Membership by Category

November 2018

- Trucking/Intermodal: 5.7%
- Technology: 6.8%
- Shippers: 8.0%
- Rail: 14.8%
- Professional: 11.4%
- Other: 1.1%
- Air: 12.5%
- Associations: 6.8%
- Banking / Finance: 12.5%
- Logistics: 14.8%
- Maritime: 5.7%
Executive Education

E-Fulfillment 1 Day Executive “Conference”
April 17, 2019
Registration forthcoming

Freight Transportation and Logistics 3-Day Short Course
May 20-22, 2019
Registration forthcoming
Selected Research Initiatives

New Competition:
Two US DOT National Centers

1. CONGESTION RESEARCH
   Congestion Relief

2. INFRASTRUCTURE RESEARCH
   Improving Durability and Extending Life of Transportation Infrastructure
Joint Research Initiative on Autonomous Vehicles
Smart Transportation Infrastructure Initiative (STII)

- Partners: NUTC, University of Illinois-Urbana Champaign (UIUC) and University of Illinois-Chicago (UIC)
- STII Industry Forum / Request for Information, June 2018
- One-on-One Meetings with Industry, September 2018
- STII Academic Meeting, July 2018
- Met with Illinois Dept. of Transportation Secretary, Oct 2018
- Illinois Executive Order opening State for testing, Oct. 2018
MORE HERE

http://www.transportation.northwestern.edu/documents/about/progress-reports/2016-17.pdf
NUTC STAFF

Bret Johnson
Associate Director

Cindy Ross
Assistant Director of Research & Operations

Joan Pinnell
Assistant Director of Communications & Outreach

Hillary Bean
Financial Administrator
BAC: New Members, New Companies

Leadership

Satish Chandra
Director – Growth Office, Corporate Strategy, Cummins Inc.

Bobby Harris
Founder & CEO
BAC & Speaker Guests Here Today

- **John Anderson**, Managing Director, Greenbriar Equity Group
- **Larry Gross**, President, Gross Transportation Consulting
- **Ken Heller**, Senior Vice President, Operations for DSC Logistics
- **Jason Kuehn**, Vice President, Oliver Wyman Group
- **Nick Lawson**, Director, Executive Operations, Bluegrace Logistics
- **Jim McGowan**, Director, Information Management & Situational Awareness at American Red Cross
- **Dan McLaughlin**, CA, Assistant Vice President - Premium Marketing, Union Pacific Railroad
- **Michael Zamost**, Vice President of Intermodal, Vice President of Carrier Solutions, Echo Global Logistics
RESEARCH THAT MOVES YOU
Northwestern University Transportation Center
Visit transportation.northwestern.edu to learn more.