

June 2023

***Irina Vladimirovna Benedyk***

Assistant Professor  
Department of CSEE

**Work Address**

204E, Ketter Hall  
University at Buffalo  
Buffalo, New York 14260  
tel: +1 (716) 645-4346  
e-mail: [birina@buffalo.edu](mailto:birina@buffalo.edu)

**Home Address**

50 Arielle Ct.  
Buffalo, New York 14221

**Education**

**Ph.D. in Civil Engineering**, Purdue University, West Lafayette, IN, U.S., 2021  
*Advisor: Srinivas Peeta*  
*Title: Modeling Behavior of Multiple Stakeholders for Intermodal Facility Investment Decision-Making Process*

**M.S. in Civil Engineering**, Purdue University, West Lafayette, IN, U.S., 2016  
*Advisor: Srinivas Peeta*  
*Title: Risk Management in a System View of Intermodal Facility Investment under Uncertainty in Freight Commodity Flow*

**Ph.D. in Economics**, Saint Petersburg State University of Engineering and Economics, St. Petersburg, Russia, 2008  
*Advisor: Svetlana Ivanova*  
*Title: Modeling Track Routing Factoring Human Behavior*

**B.S./M.S. in Economics and Management**, Novorossiysk State Maritime Academy, Novorossiysk, Russia, 2003  
(Diploma with honors / kvalifikacia economist-manager)  
*Advisor: Natalia Onishenko*  
*Title: Operational and Economic Efficiency of ZAO "Russian Container"*

**PROFESSIONAL EXPERIENCE**

**Assistant Professor**, Department of Civil,  
Structural, and Environmental Engineering  
University at Buffalo, Buffalo, NY, U.S.

Aug 2019 - present

- Research Assistant**, Aug 2013 – Jul 2019  
Department of Civil Engineering  
Purdue University, West Lafayette, IN, U.S.
- Specialist**, Head of Sales Department Aug 2007 – Aug 2013  
Rusmarine-Logistic-N, Novorossiysk, Russia
- Specialist**, Custom Service & Logistic Department Feb 2005 – Jul 2007  
CMA CGM S.A., Novorossiysk, Russia
- Part-Time Lecturer**, Bachelor Diploma Advisor Sep 2003 – Aug 2012  
Department of Economics and Management in Transportation  
Novorossiysk State Maritime Academy  
Novorossiysk, Russia

### Honors and Awards

- 2018 Editor’s Choice Award from the Journal Maritime Economics & Logistics for paper A Binary Probit Model to Analyse Freight Transportation Decision-Maker Perspectives for Container Shipping on the Northern Sea Route
- 2020 AT020 Committee Certificate of Appreciation TRB Annual Meeting, TRB International Trade and Transportation Committee
- 2021 Interservice/Industry Training, Simulation and Education Conference (I/ITSEC) Best Tutorial Award
- 2022 Best Paper Award TRB AED60 Committee on Statistical Methods
- 2022 TRB Blue Ribbon Committee Award (AT020 committee)

### Grants and Contracts

#### Summary of Research Funding:

<b>Funding Category</b>	<b>Total</b>	<b>Candidate’s Share</b>
External sources	\$260,213	\$260,213
Internal sources	\$49,844	\$49,844
Total Funded Research	\$310,057	\$310,057

#### Current Funding:

1. Principal Investigator: *Designing weekly group assignments and course project to explore social impacts of transportation projects while design, 03/2023, SUNY at Buffalo EJAC Faculty Development Micro-Grant, \$5,000, (Effort: 50%).*

UB Collaborators: None.  
External collaborators: None.

2. Principal Investigator: *eFellow for Postdoctoral Fellow: Utilizing Smart and Connected Technologies to Battle Extreme Snow in Western New York*, **09/2022**, ASEE, \$260,213, (Effort: 100%).

UB Collaborators: None.  
External collaborators: None.

3. Principal Investigator: *Theoretical Framework and System Architecture Design that Utilizes Smart and Connected Technologies for Winter Road Maintenance and Improving Winter Traveler Satisfaction and Safety*, **12/2021**, SUNY at Buffalo SSISTL, \$49,844, (Effort: 100%).

UB Collaborators: None.  
External collaborators: None.

Pending Funding:

4. Co-Investigator: *Center of Excellence on New Mobility and Automated Vehicles (NEMAV)*, **05/2023**, Federal Highway Administration \$7,499,997, (Effort: 15%).

PI: Adel Sadek (35%)

UB Collaborators: Alex Anas (0%), Panagiotis Anastasopoulos (7.5%), Austin Angulo (7.5%), Rajan Batta (7.5%), Daniel Hess (7.5%), Jee Eun Kang (7.5%), Chunming Qiao (17.5%).

External collaborators: Arizona State University, University of Washington, National Renewable Energy Lab.

5. Principal Investigator: *AAAFTS Topic #1: Understanding Factors Influencing Drivers' Compliance with "Slow Down, Move Over" Laws*, **05/2023**, AAA Foundation for Traffic Safety, \$298,327, (Effort: 50%).

UB Collaborators: Panagiotis Anastasopoulos (20%), Austin Angulo (20%), Indranil Goswami (10%).

External collaborators: None.

6. Co-Investigator: *AAAFTS Topic #2: Evaluation and Development of Easy-to-Adopt Behavioral Nudges to Influence Safe Driver Behavior towards Roadside Assistance Personnel*, **05/2023**, AAA Foundation for Traffic Safety, \$350,187, (Effort: 20%).

PI: Indranil Goswami (50%)

UB Collaborators: Panagiotis Anastasopoulos (10%), Austin Angulo (10%), Nallan Suresh (10%).

External collaborators: None.

7. Co-Investigator: *Equipment: MRI: Track #1 Development of a Hybridized Immersive Virtual Environment (HIVE) for Road User Interaction Simulation*, **02/2023**, National Science Foundation, \$1,205,070, (Effort: 25%).

PI: Austin Angulo (50%)

UB Collaborators: Oliver Kennedy (25%).  
External collaborators: None.

### Non-Funded Proposals:

8. Principal Investigator: *Exploring Economical, Logistical, Infrastructure, Policies and Regulation Needs to Maximize Benefits of Automated Trucks Deployment Starting from Level 3 of Automation*, **02/2023**, National Bureau of Economic Research, \$50,000, (Effort: 100%).  
UB Collaborators: None.  
External collaborators: None.
9. Principal Investigator: *Traveler Behavior under Intelligent Road Weather Information System during Extreme Winter Events*, **12/2022**, National Science Foundation, \$589,274, (Effort: 100%).  
UB Collaborators: None.  
External collaborators: Clemson University.
10. Co-Investigator: *Integrating and Connecting Air Mobility with Rural and Urban Transportation Systems (ICARUS)*, **08/2022**, USDOT subaward through University of Illinois at Chicago, \$250,000, (Effort: 25%).  
PI: Panagiotis Anastasopoulos (40%)  
UB Collaborators: Alex Anas (5%), Marina Blanton (5%), Souma Chowdhury (5%), John Crassidis (5%), Daniel Hess (5%), Chase Murray (5%), Nallan Suresh (5%).  
External collaborators: University of Illinois at Chicago, University of California, Berkeley, University of South Florida, Purdue University, Georgia Institute of Technology, Oregon State University, Stevens Institute of Technology, Embry-Riddle Aeronautical University, University of Puerto Rico, Mayaguez.
11. Co-Investigator: *Transportation Automation for Resilient, Affordable and Accessible Mobility (TRAAM) Tier I University Transportation Center*, **08/2022**, USDOT, \$2,000,000, (Effort: 15%).  
PI: Adel Sadek (20%)  
UB Collaborators: Alex Anas (10%), Huei-Yen Chen (10%), Jee Eun Kang (10%), Jordana Maisel (10%), Victor Paquet (10%), Chunming Qiao (15%).  
External collaborators: University of Texas El-Paso, George Mason University, University of Washington, University of Pennsylvania.
12. Co-Investigator: *Center for Proactive, Resilient, Equitable, and Sustainable Transportation (PRESET)*, **08/2022**, USDOT subaward through University of Nevada Las Vegas, \$400,000, (Effort: 15%).  
PI: Adel Sadek (15%)  
UB Collaborators: Alex Anas (10%), Rajan Batta (10%), Chunming Qiao (15%), Nallan Suresh (10%), Aditya Vedantam (10%), Xiaoqiang Wang (10%), Janet Yang (15%).

External collaborators: University of Nevada Las Vegas, others are not known.

13. Co-Principal Investigator: *Collaborative Research: GCR: OUTSHINE: Optimizing Urban-air-mobility Towards Social-good with Human-autonomy Interaction and Network Evolution*, **02/2022**, NSF, \$2,599,021, (Effort: 10%).  
 PI: Souma Chowhury (25%)  
 UB Collaborators: Panagiotis Anastasopoulos (15%), Zhangyu Guan (20%), Kevin Hulme (2.5%), Kristen Moore (7.5%), Ehsan Tarkesh Esfahani (20%).  
 External collaborators: None
14. Co-Principal Investigator: *MRI: Development of AVIATES: A Virtual Instrument for Advanced Air Mobility Training, Education, and Simulation*, **01/2022**, NSF, \$2,992,428, (Effort: 15%).  
 PI: Panagiotis Anastasopoulos (25%)  
 UB Collaborators: Souma Chowdhury (15%), Daniel Hess (15%), Kevin Hulme (7.5%), Rachel Su Ann Lim (7.5), Shambhu Upadhyaya (15%).  
 External collaborators: Georgia Institute of Technology
15. Principal Investigator: *LEAP-HI: Perspective Engineering of Ground-Air-Transportation Sustainable Urban Systems (PEGASUS)*, **09/2021**, NSF, \$ 1,997,307, (Effort: 50%).  
 UB Collaborators: Alex Anas (15%), Panagiotis Anastasopoulos (15%), Daniel Hess (15%), Kevin Hulme (10%), Rachel Su Ann Lim (10%), Ryan Muldoon (15%).  
 External collaborators: None.
16. Co-Principal Investigator: *CONVERGENT: Construction and Verification of Game-based learning to improve ENgagemenT and outcomes in post-secondary Engineering Education*, **09/2021**, Institute of Education Science, \$1,999,993, (Effort: 16%).  
 PI: Presentacion Rivera Reyes (20%)  
 UB Collaborators: Aaron Estes (16%), Kevin Hulme (16%), Rachel Su Ann Lim (16%), Carl Lund (16%).  
 External collaborators: None.
17. Senior Personnel: *Standardization of Scalable Software Simulation tools for the future of human transportation through Advanced Air Mobility (AAM)*, **08/2021**, NSF, \$550,000, (Effort: 20%).  
 PI: Kevin Hulme (20%)  
 UB Collaborators: Panagiotis Anastasopoulos (20%), Souma Chowdhury (20%), Karthik Dantu (20%).  
 External collaborators: CUBRC Incorporated.
18. UB Principal Investigator: *Leveraging Artificial Intelligence and Big Data to Enhance Safety Analysis*, **06/2021**, NCHRP subaward through Applied Research Associates Incorporated, \$650,000, (Effort: 50%).  
 UB Collaborators: Panagiotis Anastasopoulos (50%).

External collaborators: Applied Research Associates Incorporated, etc.

19. Principal Investigator: *SCC-PG: Utilizing Smart and Connected Technologies to Battle Extreme Snow in Western New York*, **02/2021**, NSF, \$150,000, (Effort: 50%).  
 UB Collaborators: Kevin Hulme (25%), Darrell Kaminski (25%)  
 External collaborators: CUBRC Incorporated.
20. Principal Investigator: *Research Center: Center for Rising Equitable and Accessible Transportation (CREAT)*, **12/2020**, DOT, \$1,000,000, (Effort: 50%)  
 UB Collaborators: Panagiotis Anastasopoulos (50%).  
 External collaborators: Purdue University, Georgia Institute of Technology
21. Co-Principal Investigator: *Advanced Air Mobility Testing and eXploration (AAM Test-X): Ensuring equity, sustainability, safety, and security for the next transportation revolution*, **05/2021**, W.M. Keck Foundation, \$1,000,000, (Effort: 20%).  
 PI: Panagiotis Anastasopoulos 35%  
 UB Collaborators: Souma Chowdhury (10%), Daniel Hess (10%), Kevin Hulme (5%), Chase Murray (10%), Stephen Still (10%).  
 External collaborators: None.
22. Senior Personnel: *NSF ERC for Integrating and Connecting Air-Mobility with Rural and Urban eco-Systems (ICARUS)*, **10/2020**, NSF, Pre-Proposal, (Effort: 10%).  
 PI: Panagiotis Anastasopoulos 30%  
 UB Collaborators: Kemper Lewis, Javid Bayandor, Shambhu Upadhyaya, Wen Yao Xu, Alex Anas, Winnie Chen, John Crassidis, Souma Chowdhury, Kevin Hulme, Marine Blanton, Stephen Still, Daniel Hess, Jennifer Zirnheld, Chase Murray, Moises Sudit, Nallan Suresh.  
 External collaborators: University of California, Berkeley, University of South Florida, Purdue University, Georgia Institute of Technology, Oregon State University, Embry-Riddle Aeronautical University, University of Puerto Rico, Mayaguez, Texas Tech, Miami U of Ohio, Napier University, CUBRC Incorporated, Calspan Corporation, GBNRTC, Inferenx, MOOG, NFTA, NITTEC, PAL-V, PlaneEnglish, TruWeather.
23. Principal Investigator: *SCC-CIVIC-PG Track B: Confronting Extreme Weather with Information: Plowing a Pathway towards Smart and Connected Community*, **10/2020**, NSF, \$50,000 (Effort: 50%).  
 UB Collaborators: Kevin Hulme (25%), Darrell Kaminski (25%)  
 External collaborators: None.
24. Principal Investigator: *Incorporating Driver Behavior and Characteristics into Safety Prediction Methods*, **03/2020**, NCHRP subaward through CUBRC Incorporated, \$399,997 (Effort: 34%).

UB Collaborators: Panagiotis Anastasopoulos (33%), Kevin Hulme (33%).  
External collaborators: CUBRC Incorporated.

25. Co-Principal Investigator: *IDIQ Vehicle Electronic Systems Safety, 10/2020*, IDIQ subaward through Calspan Corporation, Pre-Proposal (Effort: 25%).

PI: Panagiotis Anastasopoulos 35%

UB Collaborators: Kevin Hulme (25%), Stephen Still (5%), Rachel Su Ann Lim (5%), Liza Zimmerman (5%).

External collaborators: Calspan Corporation, CUBRC Incorporated.

26. Co-Principal Investigator: *IUSE/PFE: RED Innovation. Bringing Revolution into Department Culture and Guidance in Engineering Education (BRIDGE<sup>2</sup>)*, PI: Atkinson, **02/2020**, NSF, \$2,000,000 (Effort: 20%).

PI: Joseph Atkinson 20%

UB Collaborators: Panagiotis Anastasopoulos (20%), Kevin Hulme (0%), Christine Human (0%), Andrew Olewnik (0%), Presentacion Rivera Reyes (20%), Stephen Still (0%), Paul Tesluk (20%).

External collaborators: None.

27. Co-Principal Investigator: *MRI: Development of FLITES: Flying-Car Logistics - Integrated Simulation Test Environment for Next-Generation Transportation Sustainability, 01/2020*, NSF, \$3,999,703 (Effort: 25%).

PI: Panagiotis Anastasopoulos (25%)

UB Collaborators: Kevin Hulme (25%), Stephen still (25%).

External collaborators: Georgia Institute of Technology, Calspan Corporation.

28. Co-Principal Investigator: *A (naturalistic, virtual, and clinical) Holistic Evaluation Framework to Manifest Aspects of Driver Performance for Detection of Early-Onset Dementia, 01/2020*, National Institute on Aging, \$5,000,000 (Effort: 25%).

PI: Kevin Hulme 50%

UB Collaborators: Panagiotis Anastasopoulos (25%).

External collaborators: CUBRC Incorporated, The Alzheimer's Association of Western New York, Dent Neurologic Institute, Erie County Medical Center.

## Publications

Google Scholar:

<https://scholar.google.com/citations?user=KFTEKnoAAAAJ&hl=en>

Google Scholar Citations: 91, h-index: 5, i-10 index: 4

ORCID: <https://orcid.org/0000-0003-3971-0619>

ResearcherID: NA

Scopus Author ID: NA

## Refereed Journal Articles

(\*advised graduate student; +advised undergraduate student; academic advisor is underlined; °corresponding author)

*Published after joining UB*

1. \*Pang, J., \*A.Krathaus, **I.V.Benedyk**, S.S.Ahmed, P. Anastasopoulos (2022). A temporal instability analysis of environmental factors affecting accident occurrences during snow events: The random parameters hazard-based duration model with means and variances heterogeneity. *Analytic methods in accident research*, V. 34, ISSN 2213-6657, <https://doi.org/10.1016/j.amar.2022.100215>.
2. Agrawal, S., S. Peeta, **I.V. Benedyk** (2022). Evaluating the Cognitive and Psychological Effects of Real-Time Auditory Travel Information on Driver using EEG. *Behaviour & Information Technology*, pp. 1-23 DOI: 10.1080/0144929X.2022.2093273.
3. Guo, Y., D.J. Souders, S. Labi, S. Peeta, **I.V. Benedyk**, Y. Li. (2021). Paving the Way for Autonomous Vehicles: Impacts of Attitudinal Factors and Prospective Roadway Designs on Autonomous Vehicle Adoption and Vehicle Fuel Choice. *Transportation Research Part A: Policy and Practice*, V.154, pp. 364-398, ISSN 0965-8564, <https://doi.org/10.1016/j.tra.2021.10.018>.
4. Guo, Y., S. Agrawal, S. Peeta, **I.V. Benedyk**. (2021). Safety and Health Implications of Location-based Augmented Reality Mobile Apps. *Accident Analysis & Prevention*, V. 161, ISSN 0001-4575, <https://doi.org/10.1016/j.aap.2021.106354>.
5. Guo, Y., S. Peeta, S. Agrawal, **I.V. Benedyk**. Impacts of Pokémon GO on Route and Mode Choice Decisions: Exploring the Potential for Integrating Augmented Reality, Gamification and Social Interactions in Mobile Apps to Influence Travel Decisions (2022). *Transportation*, V. 49(2), pp. 395-444, <https://doi.org/10.1007/s11116-021-10181-9>.
6. Ahmed, S.S., K.F. Hulme, G. Fountas, U. Eker, **I.V. Benedyk**, S.E. Still, P.C. Anastasopoulos (2020). The Flying Car—Challenges and Strategies Toward Future Adoption. *Frontiers in Built Environment*, V. 6, pp. 1-11.
7. Galimullin, E.Z., **I.V. Benedyk** (2020). Northern Sea Route: In the Context of Russian-American Relations. *International Trends: Journal of International Relations Theory and World Politics*, V. 17 (4), pp. 115-134.

*Published before joining UB*

8. **Benedyk, I.V.**, S. Peeta (2018). A Binary Probit Model to Analyze Freight Transportation Decision-Maker Perspectives for Container Shipping on the Northern Sea Route. *Maritime Economics & Logistics*, V. 20(3), pp. 358-374. (***Editor's choice best paper award.***)
9. °**Benedyk, I.V.**, S. Peeta, H. Zheng, Y. Guo, A.V. Iyer (2016). Scenario-Based Dynamic Model of Investment Decision-Making Process in Intermodal Facilities under Demand Uncertainty. *Transportation Research Record Journal of the Transportation Research Board*, V. 2548, pp. 24-34.

*Submitted*

10. \*Krathaus, A., **I.V.Benedyk**, P.Anastasopoulos. Wider Social Network Effects in Social Activity-Travel Participation: A Grouped Random Parameters Hazard-Based Duration Model with Heterogeneity in Means Approach. *Under*



*preparation for Behaviour & Information Technology. To be submitted in March 2023.*

11. \*Mahmood, K., \*J.Pang, S.S.Ahmed, \*G.Yu, M.T.Sarwar, I.V.Benedyk, P.Anastasopoulos (2023) Lessons Learned from Naturalistic Driving Data Processing in a Secure Data Enclave: Preliminary Discoveries from Analyzing Dash Camera Videos. *Submitted to Safety Science, February 2023.*
12. Souders, D.J., S. Agrawal, **I.V. Benedyk**, Guo, Y., Y. Li, S. Peeta. Inflating System Expectations Prior to Sae Level 3 Automated Vehicle Use: Effects on Monitoring Behavior, Resumption of Control, and Attitudes Toward Driving Automation. *Submitted to Heliyon, March 2023. Preprint: <https://dx.doi.org/10.2139/ssrn.4468416>*

#### *Papers Under Preparation*

13. \*Humbert, E.Q.N, and **I.V.Benedyk**. Is Electric Truck a Solution? Exploring Environmental Impact of Intermodal Freight Transportation along the Danube River Corridor. *To be submitted to TRR, July 2023.*
14. \*Yu, G., \*J.Pang, **I.V. Benedyk**, Exploring the Impacts of the Intelligent Information System on Travel Choices in Winter Weather: A Reveal-Preference Survey Preliminary Study. *To be submitted to TRR, July 2023.*
15. \*Pang, J., **I.V.Benedyk**. Information System Architecture Design to Facilitate Winter Road Maintenance. *Under preparation for Frontiers in Built Environment. To be submitted in July 2023*
16. \*Pang, J., **I.V.Benedyk**, Z.J.Vacek, \*G.Yu, \*K.Mahmood, S.S.Ahmed, P.Anastasopoulos. Intelligent Winter Road Information System and Its Impact on Travel Decisions during Winter Weather Event.s *Behaviour & Information Technology. To be submitted in August 2023.*
17. \*Yu, G., S.S.Ahmed, \*J.Pang, G.Fountas, **I.V.Benedyk**, P.Anastasopoulos. Impact of COVID-19 Pandemic on Travelers' Satisfaction with Airport Surface Access Trips: An Empirical Exploratory Analysis. *Behaviour & Information Technology. To be submitted in July 2023.*

#### Refereed Proceedings Articles

(\*advised graduate student; +advised undergraduate student; academic advisor is underlined)

#### *Presented after joining UB*

1. Agrawal, S., S.Peeta, **I.V.Benedyk** (2023). Evaluating the Cognitive and Psychological Effects of Real-Time Auditory Travel Information on Drivers using EEG. *Accepted for presentation at the 102nd Transportation Research Board Annual Meeting Compendium of Papers, January 2023.*
2. \*Mahmood, K., \*J.Pang, S.S.Ahmed, \*G.Yu, M.T.Sarwar, **I.V.Benedyk**, P.Anastasopoulos (2023). Lessons Learned from Naturalistic Driving Data Processing in a Secure Data Enclave: Preliminary Discoveries from Analyzing Dash Camera Videos. *Accepted for presentation at the 102nd Transportation Research Board Annual Meeting Compendium of Papers, January 2023.*
3. \*Krathaus, A., **I.V.Benedyk**, P.Anastasopoulos (2023). Wider Social Network Effects in Social Activity-Travel Participation: A Grouped Random Parameters

- Hazard-Based Duration Model with Heterogeneity in Means Approach. *Accepted for presentation at the 102nd Transportation Research Board Annual Meeting Compendium of Papers, January 2023.*
4. \*Pang, J., A. \*Kratzhaus, **I.V. Benedyk**, S.S.Ahmed, P. Anastasopoulos (2022). Investigate Environmental Factors Affecting the Accidents Occurrence during Snow events based on New York States Accidents Data. Presented at the *101st Transportation Research Board Annual Meeting Compendium of Papers*, Virtual Meeting, January, 2022.
  5. Guo, Y., D.J. Souders, S. Labi, S. Peeta, **I.V. Benedyk**, Y.Li (2021). Impacts of Attitudinal Factors and Prospective Roadway Designs on Autonomous Vehicle Adoption and Vehicle Fuel Choice. Presented at the *100th Transportation Research Board Annual Meeting Compendium of Papers*, Virtual Meeting, January, 2021.
  6. Souders, D.J., S. Agrawal, **I.V. Benedyk**, Y. Guo, Y. Li, S. Peeta (2020). Highlighting the Driver's Responsibilities When Using Conditional Driving Automation: Effects on Take-over Performance and Monitoring. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*. 2020; V. 64,(1), pp. 1996-1996. doi:10.1177/1071181320641481
  7. Guo, Y., S. Peeta, S. Agrawal, **I.V. Benedyk** (2020). Understanding the Impacts of Pokémon GO on Route and Mode Choice Decisions. *99th Transportation Research Board Annual Meeting Compendium of Papers*, Washington D. C., U.S.A., January, 2020.
  8. Guo, Y., S. Peeta, S. Agrawal, **I.V. Benedyk** (2020). Understanding Safety Implications of Location-based Augmented Reality Mobile Apps: Perception, Attitude, and App Usage Behavior. *99th Transportation Research Board Annual Meeting Compendium of Papers*, Washington D. C., U.S.A., January, 2020.
  9. Guo, Y., S. Peeta, S. Agrawal, **I.V. Benedyk** (2020). Exploring safety and health implications of location-based augmented reality mobile apps. *ASCE International Conference on Transportation & Development*, Seattle, Washington, U.S.A. May 26th, 2020.
- Presented before joining UB*
10. Agrawal, S., **I.V. Benedyk**, S. Peeta (2019). Evaluating the impacts of real-time auditory travel information provision on driver cognition using EEG spectrum analysis. *10th International Conference on Applied Human Factors and Ergonomics (AHFE)*, Washington, D.C., U.S.A., July 2019
  11. Guo, Y., S. Peeta, S. Agrawal, **I.V. Benedyk** (2019). Paving the Way for Autonomous Vehicles in a Multi-modal Transportation Environment: Impacts of Roadway Design and Policy on Autonomous Vehicle Adoption and Mode Choice. *ASCE International Conference on Transportation & Development*, Alexandria, Virginia, U.S.A., June, 2019.
  12. Agrawal, S., **I.V. Benedyk**, S. Peeta, D. Song (2018). Evaluating Driver Cognitive State Under Real-Time Travel Information Provision Using Physiological Factors and its Impacts on Route Choice Behavior. *15th International Conference on Travel Behavior Research (IATBR)*, Santa Barbara, CA, U.S.A., July 2018
  13. Peeta, S., S. Agrawal, **I.V. Benedyk**, J. Wang, D. Song, Y. Guo (2017). Quantifying the Physiological Impacts of Real-Time Travel Information on Route Choice Behavior: A Driving Simulator-Based Study. *Applied Human Factors and*

- Ergonomics*, Los Angeles, CA, U.S.A., July 2017.
14. **Benedyk, I.V., S. Peeta**, H. Zheng, Y. Guo, A.V. Iyer (2017). Risk Management in a Systems View of Intermodal Facility Investment under Uncertainty in Freight Commodity Flow. *Transportation Research Board 96th Annual Meeting Compendium of Papers*, V. 17-00371, 21 pages.
  15. **Benedyk, I.V. S. Peeta** (2016). A Binary Probit Model to Analyze Cargo Owner and Forwarding Company Perspectives for Container Shipping on the Northern Sea Route. *Transportation Research Board 95th Annual Meeting Compendium of Papers*, V. 16-2099, 14 pages.

### Technical Reports

(\*advised graduate student; +advised undergraduate student; academic advisor is underlined)

*Prepared after joining UB*

1. \*Mahmood, K., S.S.Ahmed, T.Sarwar, J.\*Pang, G.\*Yu, **I.V.Benedyk**, P.Anastasopoulos (2022). “An In-Depth Investigation of the Efficacy of High Visibility Crosswalks (HVC) by Regional Difference, Location and Configuration Using SHRP2 NDS Data to Improve Pedestrian Safety”. Technical report Office of Safety and Operations Research and Development. Federal Highway Administration, 150 p.
2. Guo, Y., D. Souders, S.Labi, S.Peeta, **I.V. Benedyk**, (2022). “Design of Urban Landscape and Road Networks to Accommodate CAVs”. Technical Research Report CCAT USDOT Region 5 Regional University Transportation Center, 26 p.
3. Agrawal, S., **I.V. Benedyk**, S. Peeta (2022). “Development of In-vehicle Information Dissemination Mechanisms to Reduce Cognitive Burden in the Information-rich Driving Environment”. Technical Research Report CCAT USDOT Region 5 Regional University Transportation Center, 26 p.

*Prepared before joining UB*

4. Agrawal, S., D.Y. Song, S. Peeta, **I.V. Benedyk** (2018). “Driving Simulator Based Interactive Experiments: Understanding Driver Behavior, Cognition and Technology Uptake under Information and Communication Technologies”. Technical Research Report NEXTRANS Project No. 143PUY2.1, USDOT Region 5 Regional University Transportation Center, 39 p.
5. **Benedyk, I.V.**, S. Peeta, H. Zheng, Y. Guo, A.V. Iyer (2017). “Intermodal Infrastructure Investment Decisions and Linkage to Economic Competitiveness”. Technical Research Report NEXTRANS Project No. 161PUY2.2, USDOT Region 5 Regional University Transportation Center, 55 p.

### **Technical Presentations**

#### Invited Talks

- CEE Seminar Series at FAMU-FSU College of Engineering: “Information and Travel Behavior”, October 2023.

- Tech Grove Connect Webinar on rapidly emerging transportation technologies related to advanced air mobility (AAM): “Advanced Air Mobility (AAM) – Innovating Modeling and Simulation (M&S) to Revolutionize the Future of Transportation”, September 2022
- Third Northeast Regional Conference on Complex Systems (NERCCS 2020), “Cooperative Arrangements in Intermodal Transportation: Who is paying for these decisions?” <https://nerccs2020.github.io/>, April 2020
- Stephen Still Institute for Sustainable Transportation and Logistics Seminar Series, “Modeling Behavior of Multiple Stakeholders for Intermodal Facility Investment Decision-Making Process”, March 2018

### Abstract-Reviewed Papers and Other Conference Presentations

#### *Presented after joining UB*

1. \*Yu, G., \*J.Pang, **I.V. Benedyk** (2023). Exploring the Travel Behavior and Travel Decision-Making during Winter Weather Events. *2023 International Road Weather & Winter Maintenance Conference, May 2023.*
2. \*Pang, J., **I.V. Benedyk** (2022) An Algorithm for Winter Road Maintenance During Snowy Weather Condition that Generates the First-tier Road Network and Design Vehicle Routing, *INFORMS Annual Meeting, Indianapolis, IN, U.S.A, October 2022.*
3. \*Pang, J., **I.V. Benedyk**, \*Z.J.Vacek, \*G.Yu, K.\*Mahmood (2022). A Framework for the Intelligent Winter Road Information System (IWRIS), *International Conference on Transportation & Development, ASCE, Seattle, May 2022.*
4. \*Pang, J., **I.V. Benedyk** (2022). An Algorithm for Winter Road Maintenance During Snowy Condition that Generates the First-tier Road Network and Design Operational Routine, *International Conference on Transportation & Development, ASCE, Seattle, May 2022.*
5. \*Pang, J., **I.V. Benedyk**, K. \*Mahmood (2020). Modeling Maritime Carrier Competition while Factoring the Effects of Terminal Congestion and Demand Variation. *INFORMS Annual Meeting, Virtual Meeting, October 2020.*
6. **I.V. Benedyk**, S. Peeta (2019). Coordination Arrangements in Intermodal Transportation: Game Theoretic Analysis. *INFORMS Annual Meeting, Seattle, WA, U.S.A, October 2019.*
7. Agrawal, S., **I.V. Benedyk**, S. Peeta (2019). Evaluating the Impacts of Real-Time Travel Information on Driver Physiology. *INFORMS Annual Meeting, Seattle, WA, U.S.A., October 2019.*

#### *Presented before joining UB*

8. Agrawal, S., **I.V. Benedyk**, S. Peeta (2019). Poster session, Modeling Driver Physiological State Using EEG under Auditory Real-time Travel Information Provision. *105th Purdue Road School Transportation Conference and Expo, Purdue University, West Lafayette, IN, U.S.A., March 2019.*
9. Agrawal, S., **I.V. Benedyk**, S. Peeta (2019). Poster session, Modeling Driver Physiological State Using EEG under Auditory Real-time Travel Information Provision. *Autonomous Vehicles Workshop organized by Institute for Pure & Applied Mathematics, University of California, Los Angeles, CA, U.S.A., February 2019.*
10. Souders, D.J., S. Agrawal, **I.V. Benedyk**, Y. Guo, Y. Li, S. Peeta (2019).

- Highlighting the Driver's Responsibilities when Using Conditional Driving Automation: Effects on Attitudes, Monitoring, and Take-over Performance. *Autonomous Vehicles Workshop organized by Institute for Pure & Applied Mathematics*, University of California, Los Angeles, CA, U.S.A., February 2019.
11. Agrawal, S., **I.V. Benedyk**, S. Peeta (2018). Evaluating the Cognitive Effects of Real-Time Travel Information Using Physiological Indicators. *Global Symposium on Connected and Automated Transportation and Infrastructure*, Ann Arbor, MI, U.S.A., March 2018.
  12. Guo, Y., S. Peeta, S. Agrawal, **I.V. Benedyk** (2018). Integrating Augmented Reality, Gamification and Social Interactions in Mobile Apps to Influence Short- and Long-term Travel decisions. *INFORMS Annual Meeting*, Phoenix, AZ, U.S.A., November 2018.
  13. Agrawal, S., **I.V. Benedyk**, S. Peeta (2018). Evaluating the Cognitive Effects of Real-time Travel Information Using Psychophysiological Analysis and Their Implications for Driver Decision-making. *INFORMS Annual Meeting*, Phoenix, AZ, U.S.A., November 2018.
  14. Agrawal, S., **I.V. Benedyk**, D.Y. Song, S. Peeta (2017). Quantifying Impacts of Real-time Travel Information on Route Choice Behavior using Psychophysiological Analysis: A Driving Simulator-based Study. *INFORMS Annual Meeting*, Houston, TX, U.S.A., November 2017.
  15. **Benedyk, I.V.**, S. Peeta(2017). Investigating the Impacts of Information Sharing on Intermodal Infrastructure Investment Decision-Making Process under Demand Uncertainty. *INFORMS Annual Meeting*, Houston, TX, U.S.A., November 2017.
  16. **Benedyk, I.V.**, S. Peeta (2016). Intermodal Accessibility for Project Prioritization. *INFORMS Annual Meeting*, Nashville, TN, U.S.A., November 2016.
  17. **Benedyk, I.V.**, S. Peeta (2015). A Bivariate Probit Model to Analyze Perspectives for Container Shipping on the Northern Sea Route. *INFORMS Annual Meeting*, Philadelphia, PA, U.S.A., November 2015.
  18. **Benedyk, I.V.**, S. Peeta, H. Zheng, Y. Guo, A.V. Iyer (2015). Downside Risk Analysis for Planning Intermodal Facility Investments. *INFORMS Annual Meeting*, Philadelphia, PA, U.S.A., November 2015.
  19. **Benedyk, I.V.**, S. Peeta (2014). Shipper Attitudes for Container Transportation on the North Sea Route. *INFORMS Annual Meeting*, San Francisco, CA, U.S.A., November 2014.
  20. **Benedyk, I.V.**, S. Peeta, H. Zheng, Y. Guo, A.V. Iyer (2014). Scenario-based Dynamic Model of Investment Decision Process in Multimodal Facility under Stochastic Demand. *INFORMS Annual Meeting*, San Francisco, CA, U.S.A., November 2014.

### Post-Doctoral research Associates

Sania Esmailzadeh Seilabi, appointment Spring 2023 – Fall 2024

## **UNDERGraduate Students**

Adam Krathaus, project, CSEE, graduated Spring 2021  
 Nicholas Boulton, project, CSEE, graduated Spring 2021

## **Graduate Students**

### Dissertations/Theses Directed (as major professor unless otherwise indicated)

#### *Ph.D. degree*

Gongda Yu, major advisor, planned graduation May 2026  
 Jianjun Pang, co-advising, planned graduation May 2024  
 Kaiser Mahmood, co-advising, planned graduation August 2023

#### *M.S. degrees (theses/projects)*

Emeric Humbert, thesis, ISTL, planned graduation Fall 2023

#### *M.S. degrees graduated*

Haris Ismail, project, SSISTL, Graduated Spring 2023  
 Adam Krathaus, thesis, CSEE, Graduated Fall 2022  
 Nicholas Boulton, project, SSISTL, Graduated Fall 2022  
 Afif Allahma Farabi, project, SSISTL, Graduated Fall 2022  
 Hao Wang, project, SSISTL, Graduated Summer 2022  
 Mustafa Shakoor, project, SSISTL, Graduated Spring 2022  
 Nicolas Hernandez-Rojas project, SSISTL, Graduated Spring 2022  
 Karla Rivera, project, SSISTL, Graduated Spring 2022  
 Dante Bucci, cumulative experience, SSISTL, Graduated Spring 2022  
 Anton Balanevskiy, cumulative experience, SSISTL, Graduated Spring 2022

### Dissertations/Theses in Progress

NA

### Special Achievements of Graduate Students

Adam Krathaus, 2023 NSF Graduate Research Fellowship Program (GRFP) Award  
 Kaiser Mahmood, Robert P. Apmann Memorial Award, May 2020  
 Jiajun Pang and Adam Krathaus, Best Paper Award TRB AED60 Committee on  
 Statistical Methods, January 2022

### Dissertation/Thesis Committee Member

Sheikh Shahriar Ahmed, Ya-Tin Ho

## **PROFESSIONAL ACTIVITIES**

### Leadership

#### *Professional Organizations*

Committee communications coordinator for  
 TRB International Trade and  
 Transportation Committee (AT020) Jun 2018 - ongoing  
<https://www.trbtradetransportation.org/irina-benedyk/>

Other Service*Journal and Conference Reviewer*

Transportation Research Record  
 Travel Behaviour and Society  
 Journal of Infrastructure Systems  
 Sustainability  
 Aerospace Science and Technology

*Proposal Reviewer*

NA

Membership in Professional and Honor Societies

ITE	2013 – ongoing
ASCE	2021 - 2023

**UNIVERSITY SERVICE**Department Committees

Member, Graduate Study Committee, CSEE	2019 - ongoing
Co-Chair, Graduate Study Committee, ISTL	2021 - 2022
Member, Graduate Study Committee, SS ISTL	2020 - 2021
Member, Transportation Faculty Search Committee	2021-2022
Chair, Transportation Faculty Search Committee	2019 – 2020

School Committees

NA

University Committees

NA

**OUTREACH ACTIVITIES**

Organizing ITE/ISTL Seminar series:	Fall 2022, Spring 2023
Relaunching and advisement of the ITE student chapter	2020 - present
Launched and moderate the transportation students bi-weekly research meetings	2020 - present

*Service and Outreach Activities before Joining UB*

Next-Generation Transportation Systems Conference 2019	May 2019
Member of organizational (steering) committee,	

Purdue University, West Lafayette, IN

Women in Engineering Program Outreach K-12 Jun 2015 – Aug 2018  
Member of Leadership Team, Purdue University,  
West Lafayette, IN

Student Leadership Summit 2017 Sep 2017  
Member of organizational committee, Purdue  
University, West Lafayette, IN

ITE Purdue Student Chapter Aug 2015 – Jul 2016  
TRB coordinator, Purdue University, West  
Lafayette, IN

## Media

- Tech Grove Connect September Webinar – Is It a Car that Flies or a Plane That Drives?!?  
[https://youtu.be/tvE8Tkf\\_Uvc](https://youtu.be/tvE8Tkf_Uvc)
- Georgia Tech, School of Civil and Environmental Engineering News. Maritime journal editor: Paper on shippers' reluctance to use Northern Sea Route the year's top research  
<https://ce.gatech.edu/news/maritime-journal-editor-paper-shippers-reluctance-use-northern-sea-route-year-s-top-research>

## Professional Development

Certificate in Deep Learning Specialization / by *Deeplearning.AI* (3 courses)

SUNY at Buffalo training:

Conflicts of Interest Training

Social & Behavioral Research Investigators

Social and Behavioral Responsible Conduct of Research Course