ILIA PAPAKONSTANTINOU

Ph.D. in Transportation Planning & Engineering
New York University

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SKILLS

Key Skills: Statistics, Optimization, Project Management, Machine Learning
Programming Languages: Python, R, Matlab
Databases: SQL
Tools: Pandas, Numpy, Matplotlib, Scipy, Seaborn, Scikit-learn, NLTK, JSON, Google Cloud, MS Office

EXPERIENCE

New York University, New York City, USA **Jan. 2020- Present**
Postdoc Associate
- Research on optimizing the fleet size, charging stations and battery capacity for electric bus routes.
- Consulting bus authorities in Jeju Island, South Korea, to implement electric bus routes, minimizing the total costs.

Insight Data Science, New York City, USA **Sept. 2019 - Nov. 2019**
Data Science Fellow
- Consulting for an online marketplace with multiple sellers to deduplicate their database.
- Cleaned & managed complex json dataset, used customized NLP to identify product type, normalized data into taxonomies.
- Reduced the dimensionality of the problem by clustering, used Google Cloud Vision API to find image similarities.

New York University, New York City, USA **Aug. 2016- Dec. 2019**
Graduate Research Assistant, NSF funded project
- Identified optimal strategies for highway infrastructure protection against sea level rise, by applying optimization and game theory using python libraries.
- Multidisciplinary project in collaboration with hydrodynamic and policy making teams from UC Berkeley & UC Davis.
- Processed large datasets (OD matrices, hydrodynamic simulations) using SQL.

New York University Abu Dhabi, UAE **Aug. 2015- Jul. 2016**
Instructor in Engineering Courses
- Taught 5 engineering courses (eg. Computational Methods) and more than 50 students.
- Developed lab manuals and experiments.
- Advanced coding skills and algorithms by teaching programming in Matlab.

Masdar Institute of Science & Technology (in collaboration with MIT), Abu Dhabi, UAE **Jan. 2014- Dec. 2015**
Graduate Research Assistant, Teaching and Lab Assistant (eg. System Optimization)
- Used time-series datasets from a hypermarket chain to optimize the integrated inventory, distribution and production planning for a perishable food supply chain aiming to minimize waste.

New Planners S.A Energy Services Company, Athens, Greece **July 2011- Oct. 2012**
Engineer Consultant - Renewable Energy Sources Department
- Understand customers' needs and propose a customized version of a renewable energy product.

Athens Special Olympics 2011, Athens, Greece **Summer 2011**
Volunteer IT support

National Greek Telecommunications (OTE), Athens, Greece **Nov. 2006 - June 2007**
Customer service & complaint management (internship)

EDUCATION

New York University, New York City, USA **Aug. 2016 - Jan. 2020**
Ph.D. in Transportation Planning & Engineering
Global Fellowship, National Science Foundation supported research
Ph.D. Dissertation: "Highway Infrastructure Protection against Sea Level Rise using Game Theory"

Masdar Institute of Science & Technology (in collaboration with MIT), Abu Dhabi, UAE **Jan. 2014 - Jan. 2016**
Master of Science in Engineering Systems & Management
Thesis: "An Integrated Inventory, Distribution& Production Optimization Model in the Food Industry"

National Technical University of Athens, Greece **Oct. 2005 - Feb. 2011**
Diploma (5-year degree) Master of Engineering in Electrical & Computer Engineering ECE
Majors: Energy, Electric Power Systems, Management and Decision Support Systems

PUBLICATIONS

- Papakonstantinou, I., Tcheukam, S.A & Madanat, S. M., 2020. Effects of sea level rise induced land use changes on traffic congestion. *Transportation Research Part D: Transport and Environment* (forthcoming).
- Lee, J., Chung, K., Papakonstantinou, I., Kang, S. and Kim, D.K., 2020. An optimal network screening method of hotspot identification for highway crashes with dynamic site length. *Accident Analysis & Prevention.*
- Madanat, S., Papakonstantinou, I., Lee, J., 2019. The Benefits of Cooperative Policies for Transportation Network Protection from Sea Level Rise. *Transport Policy.*
- Papakonstantinou, I., Lee, J., Madanat, S., 2019. Optimal Levee Installation Planning for Highway Infrastructure Protection against Sea Level Rise. *Transportation Research Part D*.
- Papakonstantinou, I., Lee, J., Madanat, S., 2019. Game theoretic approaches for highway infrastructure protection against sea level rise: Co-opetition among N players. *Transportation Research Part B*.

CONFERENCE PRESENTATIONS & POSTERS (selected)

- Papakonstantinou, I., Lee, J., Madanat, S. Highway Infrastructure Protection against Sea Level Rise: Policy Recommendations for Cooperative and Competitive Decision-Makers. 15th World Conference on Transport Research, Mumbai May 2019.
- Lee, J., Papakonstantinou, I., Madanat, S. Optimal Levee Installation Planning for Highway Infrastructure Protection against Sea Level Rise. Transportation Research Board, 98th Annual Meeting, Washington D.C. January 2019.
- Papakonstantinou, I., Lee, J., Madanat, S. Highway Infrastructure Protection against Sea Level Rise: Game Theoretical Approach. INFORMS 2018 Annual Meeting, Phoenix November 2018.
- Papakonstantinou, I., Lee, J., Madanat, S. Highway Infrastructure Protection Planning against Sea Level Rise under various decision maker scenarios. 14th Annual Inter-university Symposium on Infrastructure Management, Delaware June 2018.
- Lee, J., Papakonstantinou, I., Chung, K., Kim, D. High Collision Concentration Location Identification Method Based on Optimization Technique. Transportation Research Board, 97th Annual Meeting, Washington D.C. January 2018.

HONORS AND AWARDS

- Full Scholarship: MIT Short Program, July 2018
  "Transportation Networks and Smart Mobility", Lead Instructor: Ben-Akiva
- Best Paper Award: 14th Annual Inter-university Symposium on Infrastructure Management, Delaware June 2018
- Best Abstract Award: 2nd NYUAD Annual Research Poster Day 2017
- NYU Global PhD Fellowship, 2016-2020
- Excellency Graduation Award, Masdar Institute of Science and Technology, 2016
- Masdar Institute Fellowship 2014-2016
- EuroBank Scholarship for 1st-in-school ranking, Highest Honors Award; October 2005

REFEREE ACTIVITIES FOR PEER-REVIEWED JOURNALS

Transportation Research Part D

LANGUAGES

Greek (Native)**, English** (C1, Proficiency 2003), **French** (B2, DELF 2nd degree 2002), **Italian** (B1, Celi 3, 2007)

CO-CURRICULAR ACTIVITIES

Swimming: 2nd and 3rd places in Greek national championships