

CI (JESSIE) YANG, Ph.D.

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Dept. of Civil and Envir. Eng., Rutgers University
Currently Residing in Newton, MA

EDUCATION

RUTGERS UNIVERSITY, New Brunswick, NJ

Ph.D. in Civil and Environmental Engineering (Transportation Engineering), Oct 2015 GPA: 3.85 / 4.00

M.S. in Statistics (Statistics), Jan 2014 GPA: 3.95 / 4.00

Graduate Certificate in Edward J. Bloustein School of Planning and Public Policy and School of Engineering
(Transportation Studies), Jan 2014 GPA 4.00 / 4.00

TEXAS A&M UNIVERSITY – KINGSVILLE (TAMUK)

M.S. in Environmental Engineering (Air quality modeling), Dec 2009 GPA: 3.80 / 4.00

PEOPLE'S UNIVERSITY OF CHINA / RENMIN UNIVERSITY OF CHINA (RUC), Beijing, China

B.S. in Environmental Science, Jul 2007 GPA: 3.14 / 4.00

RELEVANT COURSES

Traffic Operations | Seminar in Urban Planning | Public Transportation System | Transportation and Land Use
Traffic Engineering | Environmental Data | Environmental Informatics | Deterministic Models in IE
Survey Sampling | Non-parametric Stat | Numeric Analysis | Design of Experiment | Interpretation of Data
Applied Time Series Analysis | Regression Analysis

TECHNICAL SKILLS

Programming: R, SAS, SQL, MATLAB, Excel-VBA

Applications: ArcGIS, SQL Server, PostgreSQL, Microsoft Office, PARAMICS, AutoCAD

Certification: Engineer in Training (EIT), SAS Base, SAS Advance

WORK EXPERIENCE

Rutgers University, Center for Advanced Infrastructure and Transportation (CAIT), New Brunswick, NJ

Research Program Coordinator, Jan 2015 – June 2015

Graduate Research Assistant, May 2014 – Dec 2014

- Manage New Jersey vehicle crash database (Plan4Safety) and control data quality.
- Perform data quality analysis and safety / fatality risk modeling using Plan4Safety.
- Develop academic paper ideas and prepare journal publications.
- Coordinate Models Detecting Horizontal Curves project.

Rutgers University, Department of Civil and Environmental Engineering, New Brunswick, NJ

Graduate Research Assistant, Sep 2012 – Present

- Assisted Dr. Eric Gonzales and group members on various transportation research projects in a fast-paced computer lab environment.
- Gathered literatures / data and conducted research using large GPS datasets from Taxis to Understand Public Transit Demand and Mode Choice in NYC as a major investigator.
- Designed systematic procedures to clean, filter, manipulate, and visualize large-scale spatial taxi datasets using ArcGIS, SQL Server, and Excel.
- Developed a series of numerical and statistical methods to analyze and model taxi demand, such as linear regression, Poisson / negative binomial regression, logistic regression, and GLM, to predict taxi demand pattern using SAS and R.
- Achieved two first-authored peer-reviewed journal publications and four conference proceedings.

WORK EXPERIENCE, CONTINUED**Texas Environmental Studies and Analysis (TX-ESA), Kingsville, TX***Environmental Data Analyst*, Feb 2010 – Aug 2010

- Worked with a team of 10 on wind farm projects under the supervision of Dr. Margaret Land.
- Performed environmental risk assessment of wind energy turbines on wildlife (birds and bats) count data and survival analysis on carcass removal time; assessed environmental impacts using SAS and Excel.

TAMUK, Department of Environmental Engineering, Kingsville, TX*Graduate Research Assistant*, Aug 2007 – Dec 2009

- Assisted Dr. Kuruvilla John and students on air quality research project “Corpus Christi Ozone Near Non-attainment Area Air Quality Research and Planning Activities.”
- Collected and analyzed air quality monitoring data to identify the sources and corresponding contribution of each source of air pollutants particulate matter (PM) and volatile organic compounds (VOC) in Corpus Christi area.
- Utilized EPA’s Positive Matrix Factorization (PMF) to perform multivariate factor analysis.

ACTIVITIES & HONORS

- Awarded Outstanding Student in ITS-NJ Annual Meeting, 2014 (in [2014 ITS-NJ October Newsletter](#))
- Awarded WTS-GNY Leonard Braun Memorial Graduate Scholarship, 2013
- Volunteer for Alan M. Voorhees Transportation Center (VTC) New Brunswick Ciclovía Survey, 2013
- Student Poster Winner at ITE Northeastern District Meeting, 2013 (in [2013 ITE The New England Chronicle](#), Page 15)
- Awarded School of Engineering (SOE) Fellowship at Rutgers University, 2010 & 2011
- Nominated for “2008 Who’s Who Among Students in American Universities and Colleges” by the Department of Environmental Engineering at TAMUK, 2008
- Received First-class Award for Voluntary Service at RUC, 2004

PUBLICATIONS***Peer-reviewed Journals:***

Yang, Ci and Gonzales, Eric. (2015) “Modeling Taxi Demand and Supply in New York City Using Large-Scale Taxi GPS Data.” *Seeing Cities Through Big Data - Research, Methods and Applications in Urban Informatics* (In Press).

Yang, Ci and Gonzales, Eric. (2014) “Modeling Taxi Trip Demand by Time of Day in New York City.” *Transportation Research Record*, No. 2429, pp. 110-120.

Yang, Ci, Morgul, Ender, Gonzales, Eric, and Ozbay, Kaan. (2014) “Comparison of Mode Cost by Time of Day for Non-driving Airport Trips to and from New York City's Pennsylvania Station.” *Transportation Research Record*, No. 2449, pp. 34-44.

Peer-reviewed Conference Proceedings:

Yang, Ci and Gonzales, Eric. (2014) “Modeling Taxi Trip Demand by Time of Day in New York City.” Transportation Research Board (TRB) 93rd Annual Meeting, 12-16 Jan, Washington D.C.

Yang, Ci, Morgul, Ender, Gonzales, Eric, and Ozbay, Kaan. (2014) “Comparison of Mode Cost by Time of Day for Non-driving Airport Trips to and from New York City's Pennsylvania Station.” Transportation Research Board (TRB) 93rd Annual Meeting, 12-16 Jan, Washington D.C.

Other Publications and Reports:

Gonzales, Eric, Yang, Ci, Morgul, Ender, and Ozbay, Kaan. (2014) “Modeling Taxi Demand with GPS Data from Taxis and Transit.” Mineta National Transit Research Consortium (MNTRC) Report 12-16 (Released on July 21, 2014), available [HERE](#), also covered in media by WFSB-TV 3, TickerTech.com, and Securities Technology Monitor.

PUBLICATIONS, CONTINUED

- Yang, Ci and Hill, David. (2012) “Modeling Stream Flow Extremes Under Non-time-stationary Conditions.” International Conference on Computational Methods in Water Resources (CMWR), 17-21 June, Champaign, IL.
- Yang, Ci. (2009) “Source Apportionment of Volatile Organic Compounds in Urban Areas of South Texas Using Positive Matrix Factorization.” Masters’ Thesis, TAMUK, Kingsville, TX.
- Yang, Ci. (2007) “An Analysis on the Development of Recycling Regenerated Resource Industry.” Bachelor’s Thesis, RUC, Beijing, China.
- Yang, Ci. (2004) “A Discussion of Energy Use on Public Buildings in Universities of Beijing.” Bachelor’s Project, RUC, Beijing, China.

PRESENTATIONS***Conference Presentations:***

- Yang, Ci and Gonzales, Eric. (2014) “Modeling Taxi Demand and Supply in New York City Using Large-Scale Taxi GPS Data.” Workshop on Big Data and Urban Informatics (BDUIC), 2nd meeting, 11-12 August, Chicago, IL.
- Yang, Ci and Gonzales, Eric. (2014) “Modeling Taxi Trip Demand by Time of Day in New York City.” Transportation Research Board (TRB) 93rd Annual Meeting, 12-16 January, Washington D.C.
- Yang, Ci, Morgul, Ender, Gonzales, Eric, and Ozbay, Kaan. (2014) “Comparison of Mode Cost by Time of Day for Non-driving Airport Trips to and from New York City’s Pennsylvania Station.” Transportation Research Board (TRB) 93rd Annual Meeting, 12-16 January, Washington D.C.
- Yang, Ci and Gonzales, Eric. (2013) “Analysis of Taxi Demand versus Subway Accessibility in New York City.” Institute of Transportation Engineers (ITE) Northeastern District Annual Meeting, 22-24 May, Northampton, MA. (Best Poster Award)
- Yang, Ci and Hill, David. (2012) “Modeling Stream Flow Extremes Under Non-time-stationary Conditions.” International Conference on Computational Methods in Water Resources (CMWR), 17-21 June, Champaign, IL.

Other Project Presentation:

- Townle, Chris, Yang, Ci, Tsoulou, Ioanna, Ren, Kuo, and Shrivastava, Ruchi. (2013) “New Brunswick Ciclovía.” Walking and Cycling (Course No. 970:660), Rutgers University, New Brunswick, NJ.
- Yang, Ci and Kuo, Ren. (2013) “The Kingdom of Bicycles – China.” Walking and Cycling (Course No. 970:660) Rutgers University, New Brunswick, NJ.
- Yang, Ci. (2013) “Taxi Trip Generation in New York City.” Transportation and Land Use (Course No. 970:554) Rutgers University, New Brunswick, NJ.

MEMBERSHIPS

- American Society of Civil Engineers (ASCE)
- Boston Society of Civil Engineers Section (BSCES)
- Friends of Nature in China (FON)