

Abhilash Chandra Singh

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EDUCATION	PhD, Transportation Engineering 2019 - September 2023 (tentative) Imperial College London, UK <i>Committee: Aruna Sivakumar (advisor), Dan Graham (internal examiner)</i> <i>Thesis: Endogeneity and choice set issues in residential location choice modelling</i>
	MS, Transportation Engineering 2016 - 2017 The University of Texas at Austin, USA <i>Committee: Chandra Bhat (advisor), Stephen Boyles (examiner)</i> <i>Thesis: Quantifying the relative contribution of factors to household vehicle miles of travel</i>
	BTech, Civil Engineering 2012 - 2016 Indian Institute of Technology Bombay, India <i>Committee: Tom Mathew (advisor), Raaj Ramsankaran</i>
RESEARCH	Theoretical and applied econometrics, Machine learning, Behavioural modelling, Transportation systems engineering and planning
HONOURS	Imperial College Global Fellowship UK, 2022
	Turing Scheme Research Award UK, 2022
	Department Dixon Scholarship UK, 2019 - 2023
	Wellcome Trust Scholarship UK, 2019 - 2023
	Professional Development Award USA, 2018
	Texas District Student Fellowship USA, 2017
	Graduate fellowship USA, 2016-2018
	University of Alberta Research fellowship Canada, 2015
PAPERS	IITBAA-NY Chapter scholarship USA, 2014
	17. Singh, A.C. and N. Daina*. Choice-based optimization of electricity consumption during overnight charging of electric vehicles (<i>working paper</i> , *invited for INFORMS presentation, October 2023, Arizona, USA).
	16. Watanabe H. and A.C. Singh . A probit instrumental variable model for addressing endogeneity in multinomial choice and its choice set formation (accepted for presentation at World Conference on Transportation Research (WCTR) 2023, Montreal, Canada; <i>working paper</i>).
	15. Sivakumar, A., A.C. Singh , F. Guo and A. Gough. Incorporating the impacts of air pollutants and exposure to crime into accessibility-based planning: A London Case Study (accepted for presentation at Irish Transport Research Network Conference 2023, Sligo, Ireland; <i>working paper</i>).
	14. Singh, A.C. , A. Faghih-Imani, A. Sivakumar, Y. Xi and E. J. Miller. A joint analysis of accessibility and household trip frequencies by travel mode (accepted for presentation at World Conference on Transportation Research (WCTR) 2023, Montreal, Canada; R&R with Transportation Research: Part A).
	13. Singh, A.C. , A. Sivakumar. Accessibility in the Era of Big Data and Emerging Technologies (submitted to Transport Reviews).
	12. Singh, A.C. , A. Sivakumar. Semi-compensatory probabilistic model for residential location choices. 7 th International Choice Modeling (ICMC), Reykjavik, Iceland, May 2022.
	11. Singh, A.C. , H. Bouscasse, A. Sivakumar. Psychosocial Factors associated with Intended Use of Automated Vehicles: A Latent-Class and Latent-Variable Analysis. 9 th Symposium of the European Association for Research in Transportation (hEART), Lyon, France,

February 2021.

10. Singh, A.C., K.C. Abel, J.W. Hutchinson, K.M. Faust, and C.R. Bhat. Food Access for Low Income Individuals. Session on Highlights from the 2017 NHTS Data Workshop. 98th Annual Meeting of the Transportation Research Board, Washington, DC, January 2019.

9. Singh, A.C., K.C. Abel, J.W. Hutchinson, K.M. Faust, and C.R. Bhat. Predictive Food Desert Simulation Modelling to increase Food Access in Underserved Communities. National Household Travel Survey (NHTS) Data for Transportation Applications Workshop in Washington, DC in August 2018.

8. Singh, A.C., P. Lavieri, T. Kim, C.R. Bhat, and R.M. Pendyala. Evaluating the Effects of Consumer's Perceptions of Safety and Productive Use of Time on the Intention to Adopt Autonomous Vehicle Technology. 15th International Conference on Travel Behaviour Research, Santa Barbara, California, July 2018.

7. Bouscasse H., A.C. Singh, S. Astroza, C.R. Bhat. Modeling Simultaneous Choices in Transportation. Rencontres Francophones Transport-Mobilité (RFTM), Lyon, June 2018.

6. Copperman R., J. Lemp, T. Rossi, A.C. Singh, C.R. Bhat, R.M. Pendyala, S. Khoeini, S. Astroza. Adapting an Existing Activity Based Modeling Structure for the New York Region. 2018 TRB Innovations in Travel Modeling Conference, June 2018.

5. Singh, A.C., S. Astroza, V.M. Garikapati, R.M. Pendyala, C.R. Bhat, and P.L. Mokhtarian (2018), Quantifying the Relative Contribution of Factors to Household Vehicle Miles of Travel. Transportation Research Part D, Vol. 63, pp. 23-36.

4. Singh, A.C., S. Astroza, V.M. Garikapati, R.M. Pendyala, and C.R. Bhat. Quantifying the Contribution of Various Factors to Household Vehicle Miles of Travel. 97th Annual Meeting of the Transportation Research Board, Washington, DC, January 2018.

3. Boyles, S. D., C. Bhat, J. Duthie, N. Jiang, F. Dias, E. Jafari, V. Pandey, A.C. Singh, and C. Yahia. (2017) Methods for Improving Consistency between Statewide and Regional Planning Models. Texas Department of Transportation Report FHWA/TX-17/0-6900-1

2. Singh, A.C., L. Yang, and M. Al-Hussein. Predicting the Energy Output for Solar PV Systems: A Statistical Analysis. University of Alberta Research Experience (UARE) Poster Symposium, Edmonton, Alberta, July 2015

1. Yang L., E.K. Salim, A.C. Singh, H. Awad, H. Yu, M. Gül, and M. Al-Hussein. Integrating solar PV systems into residential buildings in cold-climate regions. University of Alberta Research Experience (UARE) Poster Symposium, Edmonton, Alberta, July 2015.

INVITED TALKS

10. "Semi-compensatory probabilistic model for residential location choices" TU Berlin Kai Nagel's Lab, July 2022

9. "Semi-compensatory probabilistic model for residential location choices" ICMC, May 2022

8. "Theoretical and Applied Choice Modelling" ASDA, March 2022

7. "Incorporating the impacts of air pollutants and exposure to crime into accessibility-based planning: A London Case Study." WSTLUR, Sep 2021

6. "Exploring and quantifying the effect of weather on sales." The Alan Turing Institute, July 2021

5. "Psychosocial Factors associated with Intended Use of Automated Vehicles: A Latent-Class and Latent-Variable Analysis." hEART, Feb 2021

4. "Food Access for Low Income Individuals." TRB, Jan 2019
3. "Evaluating the Effects of Consumer's Perceptions of Safety and Productive Use of Time on the Intention to Adopt Autonomous Vehicle Technology." IATBR, July 2018
2. "Quantifying the Contribution of Various Factors to Household Vehicle Miles of Travel." TRB, Jan 2018
1. "Integrating solar PV systems into residential buildings in cold-climate regions." UARE, July 2015

TEACHING EXPERIENCE	Imperial College London	
	Transport Demand and Economics (CIVE70016)	2022
	Advanced Transport Modelling (CIVE97126)	2020, '21, '22
SERVICE	Steering Committee Member: Imperial Network of Excellence	2021 - present
	Urban Systems Lab, Imperial College London	2021 - present
	Mentor — The AMOS Bursary and TechLabs London	2021 - 2022
	IIT Bombay Department Academic Mentorship Program (DAMP)	2015 - 2016
	Reviewing Activities:	
	Data Science for Transportation	2023 - present
	Journal of Transport and Land Use	2022 - present
	Transportation	2021 - present
	Transportmetrica A: Transport Science	2021 - present
	World Symposium on Transport and Land Use Research	2021
	Transportation Research Record	2019 - 2021
WORK EXPERIENCE	Senior Data Scientist - ASDA Business Services	
	Leeds, UK	2021 - 2022
	Alan Turing Institute &	
	Leeds Institute of Data Analytics, UK	Summer 2021
	WELLCOME Trust - Pathways to Equitable Healthy Cities	
	Imperial College London	2019 - present
	Transit Performance and Reliability Evaluation for Arterial Corridors	
	Center for Transportation Research, Austin	Spring 2019
	Activity Based Model for Qatar	
	ItalConsult & Ministry of Transport and Communication Qatar	2017 - 2018
	New York Best Practice Model Base Year Update	
	Cambridge Systematics & NYMTC, New York	2016 - 2018
	Coordinating consistency between state and regional planning models	
	Texas Department of Transportation	2016 - 2017
	Hindustan Construction Company, India	Fall 2015
	University of Alberta &	
	Landmark Group of Builders, Canada	Summer 2015
	Indian Institute of Management Lucknow, India	Summer 2014

RELEVANT COURSES

Imperial College London

2019 - present

Teaching training: Introduction to Assessment and Feedback for Learning
Teaching training: Introduction to Learning and Teaching
Teaching training: Applying for Associate Fellowship (AFHEA)
Ensuring Integrity: Plagiarism (Online Course)
Research Computing: Writing Theses in LaTeX
Impact in Academia: Alternative Ways to Measure Your Research Impact
Econometrics Methods for Causal Inference (Kings College London, *audit*)
Econometrics for Research (London School of Economics, *audit*)
Writing a Research Paper
Data Processing with Python Pandas
Research Computing: Object-Oriented Python

The University of Texas at Austin

2016 - 2018

[*Statistics and Econometrics Coursework*] Mathematical Statistics 1, Econometrics 1 (MS) and 2 (PhD), Bayesian Statistical Methods, Longitudinal Data Analysis, Maximum Likelihood Estimation Statistics
[*Transportation Engineering Coursework*] Transportation Systems Management, TransCAD GIS, Transportation Network Analysis, Discrete Choice Methods

Indian Institute of Technology Bombay

2012 - 2016

Traffic Analysis and Design, Urban Transportation Planning,

REFERENCES

Dr. Aruna Sivakumar

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