

Abhilash Chandra Singh

(+44)7459334955

abhilashcsingh.github.io

abhilash.singh19@imperial.ac.uk

EDUCATION	Doctor of Philosophy (PhD) in Transportation 2019 - September 2023 (tentative) Department of Civil and Environmental Engineering Imperial College London, UK <i>Committee: Aruna Sivakumar (advisor), Dan Graham (internal examiner)</i> <i>Thesis: Endogeneity and consideration set issues in residential location choice modelling</i>
	Master of Science in Engineering (MSE) in Transportation 2016 - 2018 Department of Civil and Environmental Engineering 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>
	Bachelor of Technology (BTech) in Civil Engineering 2012 - 2016 Department of Civil Engineering Indian Institute of Technology Bombay, India <i>Committee: Tom Mathew (advisor), Raaj Ramsankaran (faculty mentor)</i>
RESEARCH	Transportation systems engineering and planning, Urban Systems, Behavioural modelling, Theoretical and applied econometrics, Machine learning and Artificial Intelligence
AWARDS	Imperial College Global Fellowship UK, 2022 – Awarded grant funding of £1,400 to conduct research in Germany
	Turing Scheme Research Award UK, 2022 – Awarded grant funding of £1,500 to conduct research in Germany
	Department Dixon Scholarship UK, 2019 - 2023 – Awarded funding of £8,654 per annum (total = £25,962) for PhD in the UK
	Wellcome Trust Scholarship UK, 2019 - 2023 – Awarded funding of £17,009 per annum (total = £59,531) for PhD in the UK
	Professional Development Award USA, 2018 – Awarded \$500 to support research development in Texas, USA
	Texas District Student Fellowship USA, 2017 – Awarded \$1,000 to support research development in Texas, USA
	Graduate fellowship USA, 2016-2018 – Awarded funding of \$52,812 per annum (total = \$105,524) for graduate education in USA
	University of Alberta Research fellowship Canada, 2015 – Awarded research grant of \$5,000 to conduct research in Canada
	IITBAA-NY Chapter scholarship USA, 2014 – Awarded bursary of \$5,000 for studies as an exchange student in New York
WORKING PAPERS	6. Singh, A.C., A. Sivakumar. Accessibility in the Era of Big Data and Emerging Technologies.
	5. Singh, A.C., A. Faghih-Imani and Audrey de Nazelle. Route choice analysis with Moves data: The PASTA project
	4. Singh, A.C. and N. Daina. Choice-based optimization of electricity consumption during overnight charging of electric vehicles.

3. Singh, A.C., H. Watanabe and A. Sivakumar. Combining Consideration-Set and Endogeneity in Residential Location Choices: An Application of Control Function Methods incorporating Decision Trees.

2. Watanabe H. and **A.C. Singh**. A probit instrumental variable model for addressing endogeneity in multinomial choice and its choice set formation.

1. Sivakumar, A., A. Gough, **A.C. Singh**, and F. Guo. Incorporating the impacts of air pollutants and exposure to crime into accessibility-based planning: A London Case Study.

JOURNAL PAPERS

4. Singh, A.C., A. Sivakumar and R. Moeckel. Semi-compensatory probabilistic model for residential location choices (R&R with Journal of Choice Modelling).

3. Singh, A.C., A. Faghieh-Imani, A. Sivakumar, Y. Xi and E. J. Miller. A joint analysis of accessibility and household trip frequencies by travel mode (R&R with Transportation Research: Part A).

2. 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.

1. 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

CONFERENCE PAPERS

14. Singh, A.C. and N. Daina*. Choice-based optimization of electricity consumption during overnight charging of electric vehicles (*invited for INFORMS presentation, October 2023, Arizona, USA).

13. 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).

12. 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).

11. Singh, A.C., A. Faghieh-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).

10. Singh, A.C., A. Sivakumar. Semi-compensatory probabilistic model for residential location choices. 7th International Choice Modeling (ICMC), Reykjavik, Iceland, May 2022.

9. Singh, A.C., H. Bouscasse, A. Sivakumar. Psychosocial Factors associated with Intended Use of Automated Vehicles: A Latent-Class and Latent-Variable Analysis. 9th Symposium of the European Association for Research in Transportation (hEART), Lyon, France, February 2021.

8. 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.

7. 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.

	<p>6. 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.</p> <p>5. Bouscasse H., A.C. Singh, S. Astroza, C.R. Bhat. Modeling Simultaneous Choices in Transportation. Rencontres Francophones Transport-Mobilité (RFTM), Lyon, June 2018.</p> <p>4. 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.</p> <p>3. 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.</p> <p>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</p> <p>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.</p>																					
INVITED TALKS	<p>4. “Semi-compensatory probabilistic model for residential location choices” TU Berlin Kai Nagel’s Lab, July 2022</p> <p>3. “Theoretical and Applied Choice Modelling” ASDA, March 2022</p> <p>2. “Exploring and quantifying the effect of weather on sales.” The Alan Turing Institute, July 2021</p> <p>1. “Integrating solar PV systems into residential buildings in cold-climate regions.” UARE, July 2015</p>																					
TEACHING EXPERIENCE	<p>Imperial College London</p> <table><tr><td>Transport Demand and Economics (CIVE70016)</td><td>2022</td></tr><tr><td>Advanced Transport Modelling (CIVE97126)</td><td>2020, '21, '22</td></tr></table>	Transport Demand and Economics (CIVE70016)	2022	Advanced Transport Modelling (CIVE97126)	2020, '21, '22																	
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SERVICE	<table><tr><td>Steering Committee Member: Imperial Network of Excellence</td><td>2021 - present</td></tr><tr><td>Urban Systems Lab, Imperial College London</td><td>2021 - present</td></tr><tr><td>Mentor — The AMOS Bursary and TechLabs London</td><td>2021 - 2022</td></tr><tr><td>IIT Bombay Department Academic Mentorship Program (DAMP)</td><td>2015 - 2016</td></tr></table> <p>Reviewing Activities:</p> <table><tr><td>Data Science for Transportation</td><td>2023 - present</td></tr><tr><td>Journal of Transport and Land Use</td><td>2022 - present</td></tr><tr><td>Transportation</td><td>2021 - present</td></tr><tr><td>Transportmetrica A: Transport Science</td><td>2021 - present</td></tr><tr><td>World Symposium on Transport and Land Use Research</td><td>2021</td></tr><tr><td>Transportation Research Record</td><td>2019 - 2021</td></tr></table>	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	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	
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WORK EXPERIENCE	<table><tr><td>Senior Data Scientist - ASDA Business Services Leeds, UK</td><td>2021 - 2022</td></tr><tr><td>Alan Turing Institute & Leeds Institute of Data Analytics, UK</td><td>Summer 2021</td></tr><tr><td>WELLCOME Trust - Pathways to Equitable Healthy Cities</td><td></td></tr></table>	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																
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Imperial College London

2019 - present

Transit Performance and Reliability Evaluation for Arterial Corridors; Activity Based Model for Qatar; New York Best Practice Model Base Year Update

Center for Transportation Research, U.T.Austin; ItalConsult & Ministry of Transport and Communication Qatar; Cambridge Systematics & NYMTC, New York

2016 - 2019

RELEVANT COURSES

Imperial College London

2019 - 2023

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

Reader in Consumer Demand Modelling And Urban Systems

Urban Systems Lab and Center for Transport Studies, Imperial College London

South Kensington Campus, London SW7 2AZ, U.K.

Email: a.sivakumar@imperial.ac.uk

Dr. Eric Miller

Professor and Director

University of Toronto Transportation Research Institute (UTTRI)

35 St. George St., Toronto, Ontario M5S 1A4, Canada

Email: eric.miller@utoronto.ca

Dr. Rolf Moeckel

Associate Professorship of Travel Behavior

Technical University of Munich

Augustenstr. 44, Munich 80333, Germany

Email: rolf.moeckel@tum.de

Dr. Ahmadreza Faghieh Imani

Teaching Fellow

Centre for Environmental Policy, Imperial College London

South Kensington Campus, London, SW7 2AZ, U.K.

Email: s.faghieh-imani@imperial.ac.uk

Dr. Fangce Guo

Research Fellow

Centre for Transport Studies, Imperial College London

South Kensington Campus, London, SW7 2AZ, U.K.

Email: fangce.guo@imperial.ac.uk