

Abhilash Chandra Singh

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EDUCATION	Doctor of Philosophy (PhD) in Transportation 2019 - 2023 Department of Civil and Environmental Engineering Imperial College London, UK PhD Viva (defense) and result: 11/09/2023 - Successful (no corrections) PhD award date (tentative): 01/11/2023 Committee: Aruna Sivakumar (advisor), Dan Graham (examiner), Jonas De Vos (examiner) Dissertation: Endogeneity and consideration set issues in residential location choice models
	Master of Science in Engineering (MSE) in Transportation 2016 - 2018 Department of Civil and Environmental Engineering University of Texas at Austin, USA Committee: Chandra Bhat (advisor), Stephen Boyles (examiner) Thesis: Quantifying the relative contribution of factors to household vehicle miles of travel
	Bachelor of Technology (BTech) in Civil Engineering 2012 - 2016 Department of Civil Engineering Indian Institute of Technology Bombay, India Committee: Tom Mathew (advisor), Raaj Ramsankaran (faculty mentor)
AWARDS, FELLOWSHIPS & GRANTS	Marie Sklodowska Curie Postdoctoral Fellowship (submitted) Netherlands, 2023 – Submitted grant proposal <i>B-GAME: Behavioural GAME-theoretical METHodology for solving the paradox of risk and safety on roads</i> , with Dr Amir Afghari, Safety & Security Science section at TU Delft
	Imperial College Research Fellowship (submitted) UK, 2023 – Submitted grant proposal <i>Future Cities: Sustainable Urban Development through Integrated Land Use, Transport, Energy and Environment (ILUTEE) modelling</i> , with Dr. Audrey de Nazelle, Center for Environmental Policy. Imperial College London
	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 for sustainable transport with Moves data: The PASTA project
4. **Singh, A.C.** and N. Daina. Choice-based optimization for sustainable overnight charging of electric vehicles.
3. **Singh, A.C.**, A. Sivakumar and H. Watanabe. An instrumental variable model for addressing endogeneity in residential location choice.
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 (in prep for Journal of Choice Modelling).
3. **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 (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 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. 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).
12. Watanabe H. and **A.C. Singh**. A probit instrumental variable model for addressing endogeneity in multinomial choice and its choice set formation (16th World Conference on Transportation Research (WCTR) 2023, Montreal, Canada).
11. **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 (16th 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.

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.

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

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.

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.

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

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

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

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

1. "Integrating solar PV systems into residential buildings in cold-climate regions." UARE, July 2015

TEACHING EXPERIENCE

Lecturer/Tutor: University of Limerick, Ireland

Design Studio (CE4023)

2023

Invited teacher for Fall 2023 semester, with a class of 42 students.

Teaching Assistant: Imperial College London, UK

Transport Demand and Economics (CIVE70016)

2022

Advanced Transport Modelling (CIVE97126)

2020, '21, '22

SERVICE

Steering Committee Member: Imperial Network of Excellence

2021 - present

Seminar series, 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:

Transportation Research Board Annual Meeting

2017, 2019, 2021, 2023

	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; 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 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, <i>audit</i>) Econometrics for Research (London School of Economics, <i>audit</i>) Writing a Research Paper Data Processing with Python Pandas Research Computing: Object-Oriented Python	2019 - 2023
	The University of Texas at Austin [<i>Statistics and Econometrics Coursework</i>] Mathematical Statistics 1, Econometrics 1 (MS) and 2 (PhD), Bayesian Statistical Methods, Longitudinal Data Analysis, Maximum Likelihood Estimation Statistics [<i>Transportation Engineering Coursework</i>] Transportation Systems Management, TransCAD GIS, Transportation Network Analysis, Discrete Choice Methods	2016 - 2018
	Indian Institute of Technology Bombay Traffic Analysis and Design, Urban Transportation Planning (in addition to the entire Civil Engineering curriculum)	2012 - 2016

REFERENCES

Dr. Aruna Sivakumar

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Dr. Eric Miller

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Dr. Rolf Moeckel

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