

Curriculum Vitae: Ying Jin, Department of Architecture

Education/Qualifications

- 1991 PhD in Urban Modelling, Department of Architecture, University of Cambridge
- 1983 Bachelor of Architecture and University Diploma, School of Architecture, Tsinghua University

Professional History

- 2019- Deputy Head (Research), Department of Architecture, University of Cambridge
- 2018- University Reader in Architecture and Urbanism, University of Cambridge
- 2018-19 Inaugural Visiting Fellow, Bennett Institute for Public Policy, University of Cambridge
- 2017- Director of Research, Department of Architecture, University of Cambridge
- 2017- Director, Martin Centre for Architectural and Urban Studies, University of Cambridge
- 2017-19 Chair of the Faculty Research Committee, Faculty of Architecture and History of Art
- 2016-19 Chair of Examiners, MPhil Programme in Architecture & Urban Design (MAUD; ARB/RIBA Part II)
- 2016-19 Exam Moderator, Architect's Registration Board (ARB) & RIBA Part III Programme
- 2015-17 Director of Graduate Education, Department of Architecture
- 2015-17 Member of the Graduate Education Committee, School for Arts and Humanities
- 2015-17 Co-Director, MPhil Programme in Architecture & Urban Studies
- 2014-18 University Senior Lecturer, University of Cambridge
- 2014-15 On sabbatical, visiting Institute of Urban and Regional Development, UC Berkeley, USA
- 2013- Leader of the Cities and Transport Research Group, Department of Architecture, Cambridge
- 2012-14 Deputy Chair of Graduate Committee, Department of Architecture
- 2011- Elected Fellow Academician, Academy of Urbanism, London, UK
- 2011- Member of Faculty Board & Degree Committee of Architecture and History of Art (except 2014-15)
- 2010-14 Deputy Director, Martin Centre for Architectural and Urban Studies
- 2009- Fellow and Director of Studies in Architecture, Robinson College, Cambridge
- 2008-14 University Lecturer, University of Cambridge
- 2001-08 Associate Director then Technical Director, WSP Group plc, UK
- 1992-01 Senior Consultant then Associate Director, ME&P Ltd, UK
- 1990-92 Research Fellow, Martin Centre for Architectural and Urban Studies, University of Cambridge

Other appointments and affiliations

- 2019- Member, UK Joint Department for the Environment, Food and Rural Affairs and Department for Transport Air Quality Unit - Technical Independent Review Panel (T-IRP) for assessing the technical quality of air quality improvement initiatives in all English city regions
- 2019- Member, Cambridgeshire and Peterborough Combined Authority Cambridge Autonomous Mobility Technical Advisory Committee (TAC)
- 2018-19 Member, University of Cambridge Special Interest Group on Intellectual Property
- 2018-19 Member, Technical Board for Cambridgeshire and Peterborough Independent Economic Review
- 2018- Member, International Advisory Committee, Beijing Innovation Center for Future Urban Design
- 2016- Member, University of Cambridge Environmental Sustainability Strategy Committee

Notable research projects

- 2020- PI, UK2070 Commission project 'Post-COVID-19 Scenario Modelling'
- 2020- Lead from Cambridge, Royal Society's Rapid Assistance in Modelling the Pandemic (RAMP) Programme Urban Analytics and Small Spaces Tasks
- 2020- PI, Cambridge Ahead research project 'Modelling in response to Covid-19'
- 2020- PI at Cambridge, Implications of the development of rental housing for urban sustainability: Outlooks

for China and the UK. Collaborative project with Prof Li Tian (PI at Tsinghua), Tsinghua University-Cambridge University Joint Research Initiative Fund in Sustainability and Future Emerging Technologies

- 2019- PI, Lincoln Institute for Land Policy project 'The longer-term potential of land value uplift'
- 2019- PI, Centre for Digital Built Britain project 'Modelling the evolution of built form in the UK'
- 2019- PI, UK2070 Commission project 'The future of UK countries and regions case studies'
- 2018- PI, UK2070 Commission project 'UK2070 Futures – scenario design, analysis and modelling'
- 2018-2019 PI, Newton Fund-British Council project 'Rural revitalization in a mega-city region'
- 2018-2019 PI, Centre for Digitally Built Britain project 'A new digital interface for interdisciplinary city design'
- 2018- Principal Advisor for the 'Urban spatial modelling and decision-support system' project at the Beijing Innovation Centre for Future Urban Design of Beijing Municipal Government's Science and Technology Commission
- 2018-2019 Principal Advisor for 'Big data, land use development and commuting study' for Beijing District Governments
- 2017- Core Executive Committee Member, Lead Investigator for city-scale research at the £27m EPSRC Centre for Smart Infrastructure and Construction (CSIC)
- 2017- PI, 'Alternative growth scenarios' for the Cambridgeshire and Peterborough Combined Authority
- 2016- PI, 'Alternative growth scenarios' of Greater Cambridge to 2051 (Cambridge Futures Phase 3)
- 2016-2017 Principal Advisor, Beijing Municipality Advisory Project 'Big data and urban spatial equilibrium model for the Tongzhou Municipal Subsidiary Centre', Beijing Municipal Government
- 2016-2017 PI, Transport Research Innovation Grant project 'Novel applications of structural equation models'
- 2016- Co-Investigator, EPSRC project 'Managing air quality in green inner cities' (MAGIC)
- 2011- Co-Investigator, EPSRC Centre for Smart Infrastructure and Construction (Phase 1 & 2)

Notable editorial and convening roles

- 2019 Lead editor, Special issue on 'Rural areas in mega-city regions' at field-leading journal 'Cities'
- 2019- Lead editor, Special issue on 'Interdisciplinary contributions of Lionel March' at Ev't & Planning B
- 2018 Host, UK Innovation Corridor Workshop
- 2013- Chair of Working Group for 'Traffic in Towns: the Next 50 Years', a continuous collaborative online compendium by scholars from Cambridge, MIT, Imperial College, Tsinghua University & IIT Delhi
- 2013 Lead editor, Special issue on urban modelling in field-leading journal Environmental & Planning B
- 2013 Lead editor, Special Issue on modelling in field-leading journal Transactions in GIS
- 2011- Lead convenor, International Symposia on Applied Urban Modelling (annual till 2015; now biennial)
- 2006- Founding member of editorial board for Journal of Urban and Regional Planning

Advisory roles in the wider world

- 2016- ESRC Peer Review College member
- 2016- Lead Advisor on data analytics and advanced urban modelling applications for Beijing Municipal Urban Planning Institute and Beijing Institute of Architectural Design and Research
- 2015-2017 Major Research Project Assessor and Rapporteur for European Commission DG-Communications Networks, Content & Technology INSIGHT project
- 2015- International Organisation for Standardisation – Member of ISO Technical Committee AHC02 (transportation) and AHC03 (information sharing)
- 2015- UK external expert for British Standards Institution committees on sustainability and AI (2017-)
- 2015- EPSRC Peer Review College Member
- 2007- Consultant to the World Bank on regional economic impacts, transport planning, land use and transport modelling and conservation in historic cities

- 2006- Member of European Transport Conference Committees for transport economics and appraisal, applied methods and methodological innovation
1996- Guest Research Professor, Institute of Architectural and Urban Studies, Tsinghua University

International urban design workshops, charrettes and studios

- 2019- Joint Cambridge-Beijing Innovation Center for Future Urban Design Workshop on Urban Modelling
2019 UK lead of Joint Cambridge-Peking University Workshop on Rural Areas in Mega-city Regions, Supported by the UK Newton Fund and National Science Foundation of China
2016- Overall Lead, Annual Joint Cambridge-Berkeley Urban Design Workshop
2014-2015 Tsinghua-Cambridge-MIT Urban Design Studio; Lead of Cambridge Team
2012 North West Cambridge Urban Design Workshop, Co-Lead (with Professor John Ellis)

Notable double-blind peer reviewed journal papers and research reports

Jahanshahi, K and Y Jin (2020). Identification and mapping of spatial variations in travel choices through combining structural equation modelling and latent class analysis: findings for Great Britain. *Transportation (First Online)*, DOI: 10.1007/s11116-020-10098-9

Hillel, T, M Bierlaire, M Elshafie and Y Jin (2020). A systematic review of machine learning classification methodologies for modelling passenger mode choice. *Journal of Choice Modelling* (forthcoming).

Yang, T, Jin, Y, Yan, L, & Pei, P (2019). Aspirations and Realities of Polycentric Development: Insights from Multi-source Data into the Emerging Urban Form of Shanghai. *Environment and Planning B: Urban Analytics and City Science*, 46(7), 1264-1280. DOI: 10.1177/2399808319864972 (16 pages).

Yang, T., Pan, H., Hewings, G., & Jin, Y. (2019) Understanding Urban Sub-centers with Heterogeneity in Agglomeration Economies—Where do Emerging Commercial Establishments Locate? *Cities*, 86, 25-36.

Jin, Y, S Denman and L Wan (2019). UK2070 Futures Technical Report. UK2070 Commission. See <http://uk2070.org.uk/wp-content/uploads/2019/05/UK2070Commission-MODELLING-TECHNICAL-REPORT.pdf>.

Nochta, T., Wan, L., Schooling, J. M., Lemanski, C., Parlikad, A. K., & Jin, Y. (2019). Digitalisation for smarter cities: moving from a static to a dynamic view. *Proceedings of the Institution of Civil Engineers - Smart Infrastructure and Construction*, 0(0), 1–14. <https://doi.org/10.1680/jsmic.19.00001> (14 pages)

Wan, L., & Jin, Y. (2019). Assessment of model validation outcomes of a new recursive spatial equilibrium model for the Greater Beijing. *Environment and Planning B: Urban Analytics and City Science*, 46(5), 805–825. <https://doi.org/10.1177/2399808317732575>.

Cervero, R, S Denman and Y Jin (2018). Network Design, Built and Natural Environments, and Bicycle Commuting: Evidence from British Cities and Towns. *Transport Policy*. 74: 153-164 See <https://www.sciencedirect.com/science/article/pii/S0967070X1830101X>.

Cambridgeshire and Peterborough Futures Team, CPFT (2018). Cambridgeshire and Peterborough Futures Modelling Final Report. Technical Report accompanying the Cambridgeshire and Peterborough Independent Economic Review (CPIER) Final Report, Cambridgeshire and Peterborough Combined Authority. See <https://www.cpier.org.uk/final-report>.

Hillel, T., Elshafie M., & Jin Y. (2018a). Recreating passenger mode choice-sets for transport simulation: A case study of London, UK. *Proceedings of the Institution of Civil Engineers - Smart Infrastructure and Construction*, Volume 171(1), pp. 29-42. See <https://www.icevirtuallibrary.com/doi/10.1680/jsmic.17.00018>

Ma, M and Y Jin (2018a). Economic impacts of alternative greenspace configurations in fast growing cities – the case of Greater Beijing. *Urban Studies*, 56: 1498-1515. See <http://journals.sagepub.com/doi/abs/10.1177/0042098018770115>.

Ma, M and Y Jin (2018b). What if Beijing had enforced the 1st or 2nd greenbelt? - Analyses from an economic perspective. *Landscape and Urban Planning*. 182:79-91. See <https://doi.org/10.1016/j.landurbplan.2018.10.012>.

Hillel, T, M Bierlaire, M Elshafie and Y Jin (2018b). Validation of probability classifiers. 18th Swiss Transport Research Conference, Monte Verita. See http://www.strc.ch/2018/Hillel_EtAl.pdf.

Zhang, Y., Jin, Y., Steemers, K., & Cao, K. (2017). The study of the effects of built form on pedestrian activities: A GIS-based integrated approach. In Huang, B. (Ed.) *Comprehensive Geographic Information Systems*, pp. 330-344. Reference Module in Earth Systems and Environmental Sciences. Amsterdam and Oxford: Elsevier. See <https://doi.org/10.1016/B978-0-12-409548-9.09676-7>.

Jin, Y, S Denman, D Deng, X Rong, M Ma, L Wan, Q Mao, L Z, Y Long (2017a). Environmental Impacts of Transformative Land Use and Transport Developments in the Greater Beijing Region: Insights from a New Dynamic Spatial Equilibrium Model. *Transportation Research Part D: Transport and Environment*. 52: 548–561.

L Wan and Y Jin (2017). Assessment of model validation outcomes of a new recursive spatial equilibrium model for the Greater Beijing. *Environment and Planning B: Urban Analytics and City Science*. Published online at DOI: 10.1177/2399808317732575.

Wu, P, Y Jin, Y Shi, H Shyu (2017). The impact of carbon emission costs on manufacturers' production and location decision. *International Journal of Production Economics* 193: 193–206.

Jin, Y, K Jahanshahi, L Wan and X Rong (2017b). Novel applications of structural equation models for car ownership and travel choice forecasting. Peer reviewed report for the Transport Research Innovation Grant (T-TRIG). Department for Transport, London.

Martani, C, S Tent, S Acikgoz, K Soga, D Beain and Y Jin (2017). Pedestrian monitoring techniques for crowd-flow prediction. *Journal of Smart Infrastructure and Construction*. <http://dx.doi.org/10.1680/jsmic.17.00001>.

Jahanshahi, K and Y Jin (2017). Mapping interdependencies surrounding car ownership and travel choices in Britain through integrating structural equation modelling with latent class analysis, Full paper peer reviewed and accepted (18-06746) the US Transport Research Board (TRB) for its Annual Meeting.

Martani, C, Y Jin, K Soga and S Scholtes (2016). Design with uncertainty: the role of future options for infrastructure integration. *Computer-Aided Civil and Infrastructure Engineering (CACAIIE)* 10:733-748 (DOI: 10.1111/mice.12214/full).

Jahanshashi, K and Y Jin (2016). Trendbreaking Influences of Built Form on Travel in UK Cities: Evidence from New Quantifications of Within- and Between-Built-Form Variations. *Transportation Research Record: Journal of the Transportation Research Board*, No. 2564. (trid.trb.org/view/2016/C/1393764/DOI: 10.3141/2564-04; published following a podium presentation at US Transportation Research Board Conference, January 2016 after highly competitive selection).

Hillel, T, P Guthrie, M Elshafie and Y. Jin (2016). Assessing the discrepancies between recorded and commonly assumed journey times in London. Proceedings of the International Conference on Smart Infrastructure and Construction. Institute of Civil Engineers, London.

Jahanshashi, K, Y Jin and IN Williams (2015). Direct and indirect influences on employed adults' travel in the UK: New insights from the National Travel Survey data 2002–2010. Transportation Research Part A: Policy and Practice, Vol 80, pp288-306.

(<http://www.sciencedirect.com/science/article/pii/S096585641500227X>).

Hagen-Zanker, A and Y Jin (2015). Adaptive zoning for efficient transport modelling in urban models. 15th International Conference on Computational Science and Its Applications (ICCSA 2015). Banff, AB, Canada, June 22–25. Best Paper Award. (Published as Gervasi, O, B Murgante, S Misra, ML Gavrilova, AMAC Rocha, C Torre, D Taniar and BO Apduhan (eds.) (2015). Computational Science and Its Applications – ICCSA 2015 Proceedings Part III, Springer, Heidelberg, pp673-687).

Deng, DB, S Denman, V Zachariadis and Y Jin, (2015). Estimating traffic delays and network speeds from low frequency GPS taxis traces for urban transport modelling. European Journal of Transport and Infrastructure Research, 15 (Smart Cities special issue), 639-661 see

http://www.tbm.tudelft.nl/fileadmin/Faculteit/TBM/Onderzoek/EJTIR/Back_issues/15.4/2015_04b_01.pdf.

Jahanshashi, K and Y Jin (2015). The built environment typologies in the UK and their influences on travel behaviour: new evidence through latent categorisation in structural equation modelling. Journal of Transportation and Technology, 39:1, 59-77, DoI: 10.1080/03081060.2015.1108083 (Special issue paper selected from Universities Transport Research Groups Conference 2015).

Rong, X., Jin, Y., & Long, Y (2015). Understanding Beijing's Urban Land Use Development 2004-2013 through online administrative data sources. Recent Developments in Chinese Urban Planning. Springer International Publishing, 2015: 183-217.

Jin, Y, RG Bullock, R Yu, N Zhou, J Nan, M Gao, Z Xu, C Guo, L Shi (2014a). Regional Economic Impact Analysis of High Speed Rail in China: main report and step by step guide for regional impact assessment. The World Bank. http://www.worldbank.org/content/dam/Worldbank/document/EAP/China/high_speed-rail-%20in-china-en.pdf.

Jin, Y, RG Bullock and W Fang (2014b). Spatial proximity and productivity in an emerging economy: econometric findings from Guangdong Province, People's Republic of China. Regional Economic Impact Analysis of High Speed Rail in China Working Paper. The World Bank.

<https://openknowledge.worldbank.org/handle/10986/19989> (Appendix to the report above).

Li, W and Y Jin (2014). Review on Applied Urban Modeling and New Trends of Urban Spatial Policy Models. Urban Planning Forum, 1:81-91. http://www.oriprobe.com/Journals/csgghk/2014_1.html.

Ma, M and Y Jin (2014). Understanding Beijing's Moving Urban Fringe through a Spatial Equilibrium Model. International Review for Spatial Planning and Sustainable Development. 2:14-38

(http://dx.doi.org/10.14246/irspsd.2.2_14).

Jin Y, M Echenique and A Hargreaves (2013). A recursive spatial equilibrium model for planning large-scale urban change. Environment and Planning B: Planning and Design (Advance online publication, doi:10.1068/b39134).