

LAND ECONOMY



UNIVERSITY OF
CAMBRIDGE

Lab of Interdisciplinary Spatial Analysis

International Forum

Zero-Carbon Commuting, Housing Mobility, and Spatial Equality: Challenges and Opportunities in the Post- Pandemic Era

Sidgwick Hall, Newnham College, Cambridge

30/11 – 01/12, 2023



Department of Land Economy

The Department of Land Economy is a leading international centre, providing a full programme of taught courses within an intensive, research-oriented environment. The Department has come out on top in the latest Research Excellence Framework, according to the Times Higher Education's (THE) rankings. 67% of the work in the Department's joint submission with Architecture was rated as 'world leading', the best in the country in the relevant field and ahead of the Cambridge average of 62%. The average quality of Land Economy's work was also ranked number 1 by THE.

Land Economy, as a subject, considers the role and use of land, real estate and environment within an economy. It applies particularly the disciplines of economics, law and planning for the analysis of the governance of land use, urban areas and interactions with other environmental resources. The Department addresses contemporary problems as well as more fundamental analysis. This includes both the role of governments in establishing regulatory frameworks within which land and related markets operate and the role of private organisations in owning, managing, and developing physical and financial assets within those markets. This combination gives the Department of Land Economy a unique and valuable perspective of critical public and private issues.

The Department currently has over 40 teaching and research staff and approximately 320 students. We have a three-year undergraduate course and a postgraduate programme that offers both instructional and research-based MPhils, as well as a three-year PhD.

The Lab of Interdisciplinary Spatial Analysis (LISA)

The Lab of Interdisciplinary Spatial Analysis (LISA) is a Geographic Information Lab that allows congregating data, software and expertise for spatial analysis in Land Economy's related subjects (Planning, Real Estate and Finance, Environmental Policy, Environmental and Climate Change). Its members include staff, students, researchers, collaborators from other Universities and private sector.

LISA also acts a geographic information platform, providing the GIS and Spatial Analysis expertise though the provision of GIS and Spatial Analysis courses. The research at LISA focuses on several key areas employing spatial analysis methodologies and metrics, as well as dynamic simulation models. Both 'off-the-shelf' commercial software and software developed by LISA are used.

Examples of research at LISA Lab include complexity analysis and dynamic simulation, creative cities/firms/industries simulation models, energy efficient cities, urban form and decision making, land use change and scenarios for city and regional planning, spatial analysis and urban spatial metrics, integrated land use and transport models, Big Data, data mining, data validation and model calibration, among others.



The Forum

The Lab of Interdisciplinary Spatial Analysis (LISA) is pleased to host the "International Forum on Zero-Carbon Commuting, Housing Mobility, and Spatial Equality: Challenges and Opportunities in the Post-Pandemic Era" at Newnham College, University of Cambridge.

The forum is part of a joint research project, "Between nudges and boosts: behavioural interventions for sustainable residential location decisions", between Prof. Helen Bao from the Department of Land Economy (DLE), University of Cambridge and Dr. Jie Liu from the Northeast Forestry University of China. Funded by the Ministry of Science and Technology of China, this project investigates the dynamics relationships among zero-carbon commuting, housing mobility, and spatial equality.

The forum will be chaired by Prof. Helen Bao, the PI of the joint project. Prof Jie Liu, the CI of the project, will join Prof Bao to report research findings at the forum. Beyond these research presentations, we are also delighted to welcome experts from related fields, new members of the DLE, and PhD students and visiting academics at Cambridge University. Our keynote speakers include the Editor-in-Chiefs of prestigious journals such as *Cities* and *Habitat International*, the Director of LISA and the Cambridge Real Estate Research Centre, and distinguished scholars who are advisors of OECD, European Commission and HM Government. This forum is not just an opportunity to present research findings; it is a platform for dialogue, networking, and collaboration. Established researchers will exchange ideas with early-career scholars, fostering an environment of mentorship and knowledge sharing.

The COVID-19 pandemic has reshaped our world in unprecedented ways, altering societal preferences, accelerating technology advances and adoptions, and raising new questions about resilience and adaptability. At the forum, we will share the lessons learned from the research activities during the pandemic and discuss the challenges and opportunities post-pandemic, with a particular focus on the practical implications of cutting-edge technologies such as LLM and AI, and the transformative potential of harnessing Big Data. Drawing on the insights of experts and the ideas of early-career researchers, we seek innovative solutions for zero-carbon commuting, housing mobility, spatial equality, and sustainable communities.

The forum is a free event without a registration fee. Lunch is included in the round-table discussion session on 1 Dec 2023 (12.30pm – 3pm). Place is limited due to room capacity. To register for the event, please use this link:

https://cambridge.eu.qualtrics.com/jfe/form/SV_eo3kmpap7S8JH8.

For questions or further information about the forum, please contact Jesse Jin at jy349@cam.ac.uk.



Host Organisation

Lab of Interdisciplinary Spatial Analysis, Department of Land Economy,
University of Cambridge

Co-organiser

Northeast Forestry University of China

Organising Committee

Professor Helen Bao, Department of Land Economy, University of Cambridge

Professor Elisabete Silva, Department of Land Economy, University of Cambridge

Dr. Jie Liu, School of Civil Engineering, Northeast Forestry University of China

Administrators

Jesse Yu Jin

Sonny Yangfanqi Liu



Prof. Helen Bao



Dr. Helen Bao is a Professor at the Department of Land Economy, University of Cambridge. Helen's research focuses on government policy and interventions that facilitate market operations and mitigate market failures in urban settings, such as sustainable urbanisation and housing affordability. On the technical front, she specialises in the application of behavioural insights and hedonic price modelling in land and housing markets. Helen's book, "Behavioural Science and Housing Decision Making: A Case Study Approach," pushes the teaching and research frontier of behavioural urban studies. Helen has published extensively on the application of behavioural insights in real estate markets in *Urban Studies*, *Regional Sciences*, *Land Use Policy*, *Housing Studies*,

Journal of Real Estate Finance and Economics, *Cities*, among others. Helen's research has received grants from the Economic and Social Research Council (UK) and the National Natural Science Foundation of China. She is an Associate Editor of *Cities* and an editorial board member of key journals in the urban studies area, such as *Land Use Policy*.

Prof. Eddie Hui



Professor Hui is the Associate Head of the Department of Building and Real Estate, The Hong Kong Polytechnic University. He is the Editor-in-Chief of *Habitat International*, the Associate/Managing Editor of *Urban Planning and Development*, and the Asian/Australian Editor of *International Journal of Strategic Property Management*. He completed his Ph.D. at the Department of Land Economy, University of Cambridge, UK, where he was a fellow of the Cambridge Commonwealth Trust and an Associate of the Cambridge Real Estate Research Centre. Prof Hui's research interests cover not only land and housing, but also real estate economics/finance and urban analysis. Prof Hui is among the top 2% of scientists in the world-- urban and regional planning (Source

Stanford Study 2022). On the professional front, Prof. Hui had served/is serving, for example, Town Planning Board, Long Term Housing Strategy Committee and Securities and Futures Commission (REITs Committee), Building Appeal Tribunal, Housing Authority and Housing Society, Estate Agents Authority, Urban Redevelopment Authority. He is currently the Vice Chairman of the Property Management Services Authority.

Dr. Justin Kadi



Dr. Justin Kadi is a housing researcher, urban studies scholar, and planner, working on topics related to housing policy, urban change, and inequality. His particular interest is in the transformation of housing systems and the ramifications for social and spatial inequalities. He is Assistant Professor in Planning and Housing at the Department of Land Economy, University of Cambridge. Prior to coming to Cambridge, he was a post-doc at the University of Amsterdam, Netherlands, the Bauhaus-Universität Weimar, Germany, and at Vienna University of Technology, Austria, where he initiated and led the Housing Research Group at the Department of Public Finance and Infrastructure Policy between 2017-2023. Justin is Associate

Editor of *The International Journal of Housing Policy*, a major forum for debate in the field of Housing Studies, as well as joint coordinator of the working group Homeownership and Globalization in the European Network for Housing Research (ENHR). He has many years of experience in leading and contributing to basic and applied research around housing issues in various international contexts.

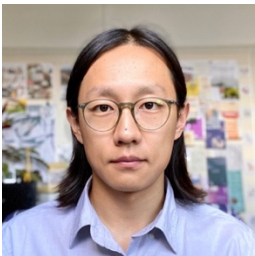


Dr. Jie Liu



Dr. Liu is the Director of Management Science and Engineering Master Programme, Head of Engineering Management (Cooperative Education) /Deputy Director of Engineering Management programme, and a Ph.D. Supervisor at the Northeast Forestry University of China. She was a Visiting Scholar at Tsinghua University and the University of Cambridge (UK), a recipient of the Excellent Youth Fund of Heilongjiang Province and a High-level Talent of Heilongjiang Province. Over the past five years, Dr. Liu has led more than 10 national and provincial level research projects, including projects funded by the National Natural Science Foundation of China and the National Social Science Foundation of China, international collaborative research projects of the Ministry of Science and Technology, and high-level collaborative exchange projects of the Ministry of Science and Technology. She has many publications in peer-reviewed journals such as “*Cities*” and “*Land Use Policy*” and authored two monographs. In 2020, she was selected as one of “Top 100 Postdoctoral” funded by China Postdoctoral Science Foundation. She serves as a youth committee member of the Engineering Management Research Branch of the Architectural Society of China, a committee member of the Chinese Research Institute of Construction Management (CRIOCM), and a director of the Heilongjiang Provincial Society of Management Science and Engineering.

Mr. Sonny Liu



Sonny is a second year PhD student at the Department of Land Economy, University of Cambridge. He obtained his BA and MA from the Department of Urban Planning at the Tsinghua University of China. Sonny is a CSC Cambridge Trust Scholar. His PhD study focuses on the effectiveness of behavioural interventions on improving decisions of housing choices, commute choices, and public place visiting patterns. Sonny is a research assistant of the “Between nudges and boosts: behavioural interventions for sustainable residential location decisions” project.

Prof. Colin Lizieri



Prof. Lizieri has some forty year’s experience as a researcher, consultant and academic in property markets. Prior to joining Cambridge as Grosvenor Professor of Real Estate Finance, he taught at the University of Reading, at City University and the University of Toronto. Recognition of his work includes the award of the David Ricardo medal by the American Real Estate Society, “the highest recognition by ARES of scholarly work in the real estate discipline”; the International Real Estate Society Achievement Award for international real estate research “for outstanding achievement in real estate research, education and practice at the international level”; and election as an honorary fellow of the Society of Property Researchers “in recognition of an outstanding contribution in the field of property research”. Colin chaired the World Economic Forum's Global Agenda Council on The Future of Real Estate and Urbanization 2014-2016. He has acted as a consultant to national governments, central banks, sovereign wealth funds and other major real estate actors and has acted as an expert witness in the Upper Chamber (Lands Tribunal) and the Australian Federal Courts. He was Head of the Department between 2015 and 2019.



Prof. Elisabete Silva



Professor Silva is a British-Portuguese dual citizen, and she has a research track record of more than 25 years, both in the public and private sector and specialised in spatial analysis and planning. Prof. Silva started working in Cambridge in 2006. She is a member of the Royal Town Planning Institute and a Fellow of the Academy of Social Sciences. She is on the editorial board of *Computers, Environment and Urban Systems (CEUS)*, *Planning Theory & Practice*, and *Sustainable Development*.

Prof. Silva research interests are centred on the application of new technologies to spatial planning in particular city and metropolitan dynamic modelling through time. Her areas include Urban Planning, Land Use, Transportation, Spatial Analysis, Data Science & Big Data, Complexity Theory, Smart/Digital Cities, Geographic Information Systems and Planning Support Systems; Space-time dynamic models, Computation and Dynamic Simulation - soft Artificial Intelligence, AI Models (particularly, NN, ABM and CA models).

Prof. Pete Taylor



Prof. Peter Tyler is Emeritus Professor in Urban and Regional Economics in the Department of Land Economy, University of Cambridge and Emeritus Professorial Fellow and former President of St. Catharine's College. He has been Project Director for a very large number of major research projects for governments relating to urban and regional development, twenty-five of which have been of book length. Besides his work in the United Kingdom for HM Government he has also undertaken research for the European Commission, the Organisation for Economic Co-operation and Development on urban, regional, industrial and evaluation policy. He has been an Expert Advisor to the

OECD, European Commission and HM Government, including serving on the National Evaluation Panel for Sure Start (HM Government initiative for children under 5). He was a Programme Leader for the Cambridge MIT initiative and is a Policy Fellow at the Cambridge Centre for Science and Policy. During 2016 he was an Expert Advisor to UN Habitat III.

Peter was made a Master of the Royal Town Planning on the basis of his contribution to urban and regional spatial planning and a Fellow of the Royal Institute of Chartered Surveyors in the light of his considerable knowledge and experience in the spheres of land, property or construction. He is an Academician of the Learned Society for Social Sciences. In recent years he has been involved in research to value the benefits of urban regeneration and economic development (DCLG), the expert evaluation network delivering policy analysis on the performance of EU Cohesion Policy (DG Regio), Co-Investigator on Resilient Regions and Cities (ESRC), the British Urban Transformations project (ESRC) and the Long-Term Dynamics of Interdependent Infrastructure Systems (EPSRC). He has recently undertaken an assessment of the economic impact of the Babraham Research Campus Cambridge and just published with colleagues a book on *Levelling-Up Left Behind Places; The Scale and Nature of the Economic and Policy Challenge* (Routledge, 2022).



Dr. Sofie Walzl



Dr. Sofie Walzl is Assistant Professor in Real Estate Economics and Finance at the Department of Land Economy and Assistant Professor in Economics at the Vienna University of Economics and Business. She is an applied economist interested in housing markets, economic measurement and inequality research.

Before joining the University of Cambridge she had held positions at the Vienna University of Economics and Business, the Luxembourg Institute of Socioeconomic Research (LISER), the European Central Bank (Germany), and the University of Graz (Austria). Additionally, she had research visits at the University of California Berkeley (US), DIW Berlin (Germany), WU Vienna (Austria), the National University of Singapore (Singapore), the University of

Queensland (Australia) and the University of New South Wales (Australia). Additionally, she has provided consultancy work to the ECB and GIZ.

Her research has been published in various academic journals including Explorations in Economic History, International Journal of Housing Markets and Analysis, Journal of Money, Credit and Banking, Management Science, Real Estate Economics, Regional Science and Urban Economics, Review of Income and Wealth, The Journal of Economic Inequality and The Journal of Real Estate Finance and Economics. Additionally, she has successfully applied for competitive research grants, has been awarded several prizes and recognitions, and media outlets worldwide have quoted her research.

Prof. Pengjun Zhao



Prof. Pengjun Zhao is a Full Professor and the Dean of School of Urban Planning and Design of Peking University. He obtained his PhD degree and postdoctoral training in Spatial Planning at University of Groningen, the Netherlands.

Prof. Zhao's research mostly focuses on urban and transport planning, spatial planning, and sustainable mobility. He has obtained more than RMB 35 million of research grants as the Principle Investigator (PI) for 60 research projects which were funded by international and domestic organizations, such as EP7 (EU), EPSRC (UK), NSFC (CN), etc. He has more than 300 research outputs, including 8 books (5 published by Nature Springer), and 160 international peer-reviewed papers. He was ranked as one of Most Cited Chinese Researchers by Elsevier for Year 2014, 2015, 2016, 2017, 2018 and 2019 consecutively, and was awarded as the National Outstanding Scholar by the National Nature Science Foundation of China (NSFC) in 2019.

Prof. Zhao is the Vice Chair of the IGU Commission on Transport and Geography, the Director of Key Laboratory of Earth Surface System and Human–Earth Relations, Ministry of Natural Resources of China, the Deputy Chair of New Urbanisation and Urban & Rural Planning Committee of Chinese Society of Urban Studies (CSUS), a committee member of Urban Planning Society of China (UPSC). He is also an editorial board member for international SSCI journals, such as Journal of Transport Geography, Journal of Environmental Planning and Management, International Development Planning Review, Habitat International.



Forum Agenda

Day One (30 November 2023, Thursday)

Sidgwick Hall, Newnham College, University of Cambridge

Time	Agenda
10am – 10.15am	Welcome speech by Prof. Helen Bao Department of Land Economy, University of Cambridge Fellow in Land Economy, Newnham College, University of Cambridge
10.15am – 11am	Keynote speech: Real Estate and Urban Development: Global to Local Prof. Colin Lizieri, Director, Cambridge Centre for Real Estate Research, Department of Land Economy, University of Cambridge
11am – 11.45am	Keynote speech: The challenges and opportunities of using spatial data, the Emotional Cities Project as an example Prof. Elisabete Silva, Director, Lab for Interdisciplinary Spatial Analysis, Department of Land Economy, University of Cambridge
11.45am – 12noon	Break
12 noon – 12.45pm	Keynote speech: Towards a More Sustainable Development: Low Carbon Transition in China Prof. Eddie Hui Editor-in-Chief, Habitat International Faculty of Construction and Environment, Hong Kong Polytech University
12.45pm – 2pm	Lunch break
2pm – 2.45pm	Keynote speech: Levelling Up Left Behind Places: The Scale and Nature of the Economic and Policy Challenge in the United Kingdom Prof. Pete Taylor Emeritus Professor in Urban and Regional Economics Department of Land Economy, University of Cambridge
2.45 am – 3.30pm	Keynote speech: Decarbonisation pathways for China' freight mobility Prof. Pengjun Zhao Editor-in-Chief, Cities Dean, School of Urban Planning and Design, Peking University
3.30pm – 5pm	Small group discussions with PhD students, PostDocs, and visiting academics (<u>By appointments</u>)

**Day Two (01 December 2023, Thursday)**

Sidgwick Hall, Newnham College, University of Cambridge

Time	Agenda
9am – 9.30am	<p>Presentation: Racial and gender discrimination in the rental housing market</p> <p>Prof. Helen Bao, Department of Land Economy, University of Cambridge</p>
9.30am – 10am	<p>Presentation: The effectiveness of behavioural interventions on residential location choices and commute behaviours: Experimental evidence from China</p> <p>Sonny Liu, Department of Land Economy, University of Cambridge</p>
10am – 10.30am	<p>Presentation: Strategies for promoting low-carbon commuting</p> <p>by Dr. Jie Liu, Northeast Forestry University, China</p>
10.30am – 10.45pm	Break
10.45am – 11.30 noon	<p>Presentation: Equal Price for Equal Place? Demand-Driven Racial Discrimination in the Housing Market</p> <p>By Sofie Walzl, Department of Land Economy, University of Cambridge</p>
11.30 noon – 12.15pm	<p>Presentation: Gentrification and the suburbanization of poverty: Evidence from a highly regulated housing system</p> <p>by Justin Kadi, Department of Land Economy, University of Cambridge</p>
12.30 pm – 3pm	Lunch time roundtable discussions
3pm – 3.15pm	Closing remarks by Prof. Elisabete Silva