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# Regional Science Association International

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## British and Irish Section

## **RSAl-BIS Annual Meeting 2023 Newcastle upon Tyne**



July 4–6, 2023

## **Welcome**

Dear Participant,

The Committee of the Regional Science Association International: British and Irish Section warmly welcomes you to Newcastle upon Tyne. We hope you enjoy your stay and find the conference interesting and useful.

We are very grateful to conference organiser Rachel Franklin, as well as the events and conference staff at our hosts Newcastle University.

The RSAI-BIS welcomes new members. Your conference fee includes annual membership of the Section, with all of the benefits that membership brings. Please get involved with the Section. If you have any suggestions or ideas on how to improve the Section, our annual conference, or developing the Section for all members we would love to hear these.

Also included in this booklet is a form to submit your name for election to the Section's Committee. The Committee is appointed at the AGM which takes place on the Tuesday from 17.00 to 18.00 We welcome applications.

The minutes of the 2022 AGM are also included in this booklet.

Please feel free to discuss any RSAI-BIS or conference matters with our Chair Maria Abreu, Membership Secretary Tasos Kitsos, Treasurer Stuart McIntyre, or myself.

***Richard Rijnks***

**Secretary**

## Message from the RSAI-BIS Chair

Dear Delegate,

I would like to warmly welcome you to our 49<sup>th</sup> annual conference. We are delighted to see so many delegates from the UK and Ireland, as well as many from further afield in Europe, United States and Canada. This promises to be a terrific conference in a wonderful city. Many thanks to Rachel Franklin, our local conference organiser, for putting together a stimulating and exciting programme of presentations and social events.

I would also like to share a few bits of news with you from the past year. We organised the Early Career Colloquium again as an online event on 3-4 November 2022, for the second year running, following a very successful move online during the Covid period. It was a very popular event, with over 30 presenters from across the UK and Ireland, but also other countries, including the Netherlands, Japan, Italy, and India, and expert chairs and discussants in each session. I am very grateful to my fellow members of the Colloquium organising committee, who worked very hard to organise this event: Richard Rijnks, Daragh O'Leary, and Matt Lyons.

As is traditional, we awarded two early career prizes at the Colloquium. The best paper prize was awarded to Rachael Kawasaki, of Kyoto University, for her paper entitled *Regional Effects of Labor Market Integration and Life Satisfaction of Migrants in England*. The prize jury also awarded an Honourable Mention to Conor O'Driscoll of University College Cork, for his paper *Incorporating Opensource Data into Land-Use Sustainability Metrics: A Case Study of European Capital Cities*. In the best presentation category, the jury awarded two prizes. Our best presentation prize winners were Beatriz Jambrina Canseco of the LSE, and Ruth Neville of the University of Liverpool. Honourable Mentions were also awarded to Rachel Sanderson of Newcastle University and Thanasis Ziogas of the University of Groningen. Many congratulations to all the prize winners. I will say more about our prize winners and their papers at the award-giving ceremony during our conference dinner.

As many of you will know, Paul Elhorst, who has edited *Spatial Economic Analysis* for the past 10 years, is stepping down this year. We are hugely grateful to Paul for his hard work and very successful stewardship of the journal. I am also very happy to announce that Ugo Fratesi, Professor of Regional Economics and Policy at Politecnico di Milano, will be taking over as the new Editor in Chief of SEA. This is a very exciting appointment, and we look forward to working closely with Ugo over the next few years. Our *Spatial Economic Analysis* keynote lecture will be given by Francisco Rowe, Professor in Population Data Science at the Department of Geography and Planning of the University of Liverpool. In a new initiative, we will also be having an Early Career Keynote, which will be given by Beatriz Jambrina Canseco, of the LSE, one of our Early Career Colloquium prize winners.

We have also had some very sad news this year, as John Parr, long-standing friend, colleague, and member of our association, sadly passed away. We thought long and hard about how to remember him at the conference, which he attended every year without fail. We are planning an informal get-together for friends, colleagues, and family on Monday 3<sup>rd</sup> July in a private room of the Town Hall pub, and a special session on Tuesday 4<sup>th</sup> July as part of the conference, entitled *Great Minds: John Parr and Peter Hall*, convened by Peter Batey. We hope that many of you will be able to join us for these two sessions, and I will also share some of the many notes we received from those unable to attend in person this year.

Finally, a great many thanks to the officers of the association, who work very hard all year round on a volunteer basis to keep everything on track: Richard Rijnks (Secretary), Stuart McIntyre (Treasurer), and Tasos Kitsos (Membership Secretary). I am also very grateful to the members of the RSAI-BIS committee, for their advice, input, and enthusiasm for the association and our activities.

Thank you for participating in our annual conference. We hope you find the experience both academically rewarding and enjoyable.

Best wishes,

***Maria Abreu***

**Chair, RSAI-BIS**

## Message from the Local Organiser

Dear Participants,

On behalf of the Centre for Urban and Regional Development Studies (CURDS) and Newcastle Data, I am very pleased to welcome you to Newcastle! We have a full programme planned for the next few days, but I hope you'll find time to get out a bit to explore this wonderful city.

Wondering where to start? Very close to our meeting venue, I can highly recommend the newly opened Farrell Centre, whose goals are to, "widen the debate around the crucial roles that architecture and planning play in the contemporary world in ways that are engaging, innovative and challenging." And for those interested in art, our local art museums, the Laing and the Baltic, are both quite nice—the Baltic, our modern art museum, in particular, offers fantastic views and a pleasant walk down to the quayside and across a bridge of your choice to our sister city, Gateshead.

In the city centre, check out Grey's Monument (which is where our walking tour will start from on Wednesday) and then have a stroll down Grey Street, sometimes referred to as the "best street in the UK". Nearby, you can make a quick stop at Grainger Market, our covered market, for local and not-so-local food and drink. And did I mention we have a castle? We also have a football team that's doing quite well at the moment. There are no matches during our conference (and tickets would be miracle), but fans may want to take a gander at St. James Park, where Newcastle United play. Lastly, if there's one thing you definitely make time for, it should be a walk down to the river, to admire our many beautiful bridges!

For those curious to get a bit further afield, why not take a ride on our Metro? That's right, Newcastle has a metro system—one that can deliver you directly to the Coast! In about 30–40 minutes you can get from Haymarket or Monument Station to Tynemouth, where fish and chips or an evening drink by the water at Riley's Fish Shack (frequently written up in national newspapers!) awaits you. For history buffs, the Wallsend station takes you to the end of Hadrian's Wall (hence the name) and also features station signs all in Latin, which is fun.

Lastly, how could I give advice about things to do in Newcastle without mentioning pubs? There are lots of options and everyone has their favourites: these are mine. Close to our meeting venue, for a solid and dependable pub, try the Hotspur. Just a block further lies the externally unprepossessing Mean-Eyed Cat. All I can say is, it's cuter on the inside! This is my preferred pub. Down toward the quayside, I also highly recommend the Crown Posada, not only historical but with a great view on its doorstep. Really, though, it's hard to go wrong.

Newcastle is a unique and special city and we are so excited to share it with you.

Wishing you a wonderful conference!

***Rachel Franklin***

## **Our Association**

Regional science is an expanding field devoted to the development of theory and method in urban and regional analysis and policy. It has a conscious aim of cutting across the traditional disciplinary approaches to these issues. The British and Irish Section of the Regional Science Association International was founded in 1968 and has been active ever since. The membership is drawn, in the main, from academics, consultants, and policymakers in local and national government, who share an interest in spatial issues. They come from a range of disciplines including economics, geography, data science, sociology, and planning.

## **Our Activities**

- Organisation of an annual conference, and occasional workshops and seminars;
- Award of an annual best-paper prize, the Moss Madden Memorial Medal;
- Award of an early career best-paper prize at the annual Early Career Colloquium;
- Engagement with external organisations, and with other sections of the RSAI.

The Section is run by a committee of thirteen elected members. The committee may co-opt a further three members. The Chair and the committee are elected at the Annual General Meeting which is held during the Annual Conference each year. The conduct of the business of the Section is governed by the Constitution.

**We are continually seeking new elected members of our committee. If you are interested in becoming an elected member then please contact our Chair (Maria Abreu), Membership Secretary (Tasos Kitsos), Treasurer (Stuart McIntyre) and/or Secretary (Richard Rijnks) in the first instance.**

# 49<sup>th</sup> RSAI-BIS Annual Conference

Newcastle University

Henry Daysh Building



## General Information

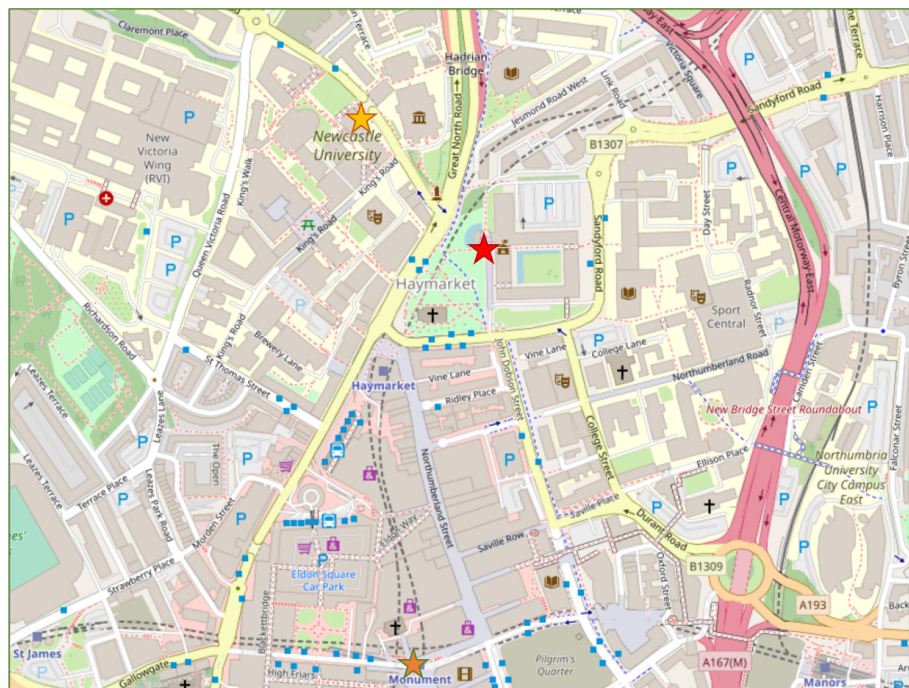
### Social events (see map below for locations)

**Tuesday Pub Quiz:** Off Shore 44, 40 Sandhill, Newcastle upon Tyne, NE1 3JF. Starting at 19:00. A light buffet meal and first drink will be provided; additional drinks to be covered by participants. Now's the time to start brushing up on your trivia!

**Wednesday Walking Tour:** Starts promptly at 14:00 from Grey's Monument, about a 10 to 15 minute walk from the University campus (see map below). The Walking Tour will take approximately 1.5 hours and is an excellent way to learn a bit about this year's host city.

**Thursday conference dinner, Newcastle Civic Centre, Pandon Room** (just down the road from the Henry Daysh Building): Drinks reception starting at 19:00, to be followed by dinner at 19:30. To reach the Pandon Room on the first floor, follow signs for the Grand Entrance on Ceremonial Way.

- ★ Henry Daysh Building for all sessions, tea/coffees, and lunches
- ★ Grey's Monument, starting point for the walking tour
- ★ Newcastle Civic Centre for our conference dinner



Map source: Open Street Map



## **Overview of the Venue**

Welcome to Newcastle and to Newcastle University! The Centre for Urban and Regional Development Studies (CURDS) and the School of Geography, Politics and Sociology are delighted to welcome you.

All of our formal meeting activities will be held on the University campus in the newly refurbished Henry Daysh Building (HDB) on Claremont Road, a short walk from the Haymarket Metro Station and about 20 minutes from Central Station.

Meeting registration can be found on the Ground Floor of the Daysh Building at the Main Entrance (near the Café). Sessions, plenaries and coffee breaks will all be located on the First Floor.

## Programme Overview

	Tuesday, July 4			
	Room A HDB 1.06	Room B HDB 1.09	Room C HDB 1.10	Room D HDB 1.11
08:00–09:30	Registration (throughout the conference) — HDB Ground Floor, Main Entrance			
09:30–11:00	Great Minds: John Parr and Peter Hall (HDB 1.02)			
11:00–11:30	Tea and coffee (HDB 1.04)			
11:30–13:00	1A: Spatial analysis of productivity and labour markets 1	1B: Transportation networks and their regional economic impact 1	1C: Migration, refugees, and integration	1D
13:00–14:00	Lunch (HDB 1.04)			
14:00–15:00	SEA Lecture: Francisco Rowe (HDB 1.02)			
15:00–15:30	Tea and coffee (HDB 1.04)			
15:30–17:00	2A: Spatial analysis of productivity and labour markets 2	2B: Resources	2C	2D: Regional inequalities in health and wellbeing 1
17:00–18:00	AGM (HDB 1.02)			
19:00–	Annual Pub Quiz (Off Shore 44)			

	Wednesday, July 5			
	Room A HDB 1.06	Room B HDB 1.09	Room C HDB 1.10	Room D HDB 1.11
08:00–09:30	Registration (throughout the conference) — HDB Ground Floor, Main Entrance			
09:30–11:00	3A: Spatial analysis of productivity and labour markets 3	3B: New and emerging issues around leveling up 1	3C: SS1: Political discontent and left behind people and places 1	3D: Higher education and impact of universities on regional economies 1
11:00–11:30	Tea and coffee (HDB 1.04)			
11:30–13:00	4A: Spatial analysis of productivity and labour markets 4	4B: Brexit	4C: R&D and Technology	4D: Regional inequalities in health and wellbeing 2
13:00–14:00	Lunch (HDB 1.04)			
14:00–	Excursion — Walking Tour of Newcastle			

	<b>Thursday, July 6</b>			
	<b>Room A HDB 1.06</b>	<b>Room B HDB 1.09</b>	<b>Room C HDB 1.10</b>	<b>Room D HDB 1.11</b>
08:00–09:30	Registration (throughout the conference) — HDB Ground Floor, Main Entrance			
09:30–11:00	5A: Spatial analysis of productivity and labour markets 5	5B	5C: New and emerging issues around leveling up 2	5D: Urban futures (and sustainable cities) 1
11:00–11:30	Tea and coffee (HDB 1.04)			
11:30–13:00	6A: Economic Geography	6B: SS1: Political discontent and left behind people and places 2	6C: Transportation networks and their regional economic impact 2	6D: Urban futures (and sustainable cities) 2
13:00–14:00	Lunch (HDB 1.04)			
14:00–15:00	Early Career Keynote: Beatriz Jambrina-Canseco (HDB 1.02)			
15:00–15:30	Tea and coffee (HDB 1.04)			
15:30–17:00	7A: Externalities	7B: Smart cities: data-driven urban analytics	7C: Transportation networks and their regional economic impact 3	7D: Regional science in business (retail and geodemographics)
17:00–18:00	Committee Meeting (HDB 1.06)			
19:00–	Conference Dinner (Newcastle Civic Centre, Pandon Room)			

## Plenary Sessions

### Spatial Economic Analysis Keynote:

#### **Unleashing the potential of digital footprint data to understand human mobility: Opportunities, challenges and practice**

*Francisco Rowe*

Technological advances have enabled the emergence of 'Big Data' through the production, processing, analysis and storage of large volumes of digital information. Data that could not previously be stored, or used to be captured through analogue devices, can now be digitally recorded. These data offer high geographic and temporal granularity, extensive coverage and instant information to measure and transform our understanding of human mobility. Substantively, studies unleashing the attributes of digital footprint data have contributed to expanding existing theories, developing new explanations, adopting new analytical tools and infrastructures, and advancing new areas of research, such as computational social science and geographic data science. Yet, these data also present major epistemological, methodological and ethical challenges. This talk identifies these challenges and discusses current practices and potential opportunities for future research.



### Early Career Keynote:

#### **Geographies of polarization: How (territorial) inequality fuels political divisions**

*Beatriz Jambrina Canseco*

*2022 RSAI-BIS Early Career Colloquium Winner*

The political economy literature suggests that economic interests shape political preferences, implying that periods of economic turmoil are likely to translate into political polarization. In this sense, a rise in economic inequalities, both inter-personal and inter-territorial, has led to widespread discontent and resentment, susceptible to be channeled through the use of narratives into support for radical parties.

This presentation will delve into the connections between economic, territorial, and political polarization by showcasing the most recent research in this field. We will examine the links between economic inequality, the geography of discontent, and their relation to political outcomes. Our focus will also be on the importance of political supply, showing how local narratives often frame economic inequalities as the result of unfair policies or systemic



failures, effectively mobilizing support for parties that promise to address these concerns. The talk will additionally outline some of the primary empirical challenges in studying these relationships, discuss new and alternative data sources, and provide suggestions for future research.

## Great Minds Session: John Parr, Peter Hall

*Peter Batey, Gordon Mulligan, Geoff Hewings, Kim Swales*

This session will begin by focusing on John's academic career. Three of our colleagues – Gordon Mulligan, Geoff Hewings and Kim Swales – will each speak about three of John's papers that they regard as having special significance for regional science. The papers they have chosen represent different stages in John's career.

*Great Minds in Regional Science* is a project of The Regional Science Academy. Since the Academy was founded in early 2016, highly successful series of sessions, sponsored by the Academy, have been held at locations throughout the world. There are two series: the *Voice of Regional Science* (general and strategic reflections on new topics in regional science); and *Great Minds in Regional Science* (dealing with the intellectual history of regional science through the lens of the contributions made by individual scholars influential to the establishment and development of regional science). The mini-lectures presented at conferences are later amplified into book chapters. The book series associated with *Great Minds* recently published its second volume and work is currently underway on the third. David Plane (University of Arizona) and myself are the series co-editors.

A *Great Mind* can be either a well-known figure or someone whose contribution deserves much greater recognition. The subjects of my own two chapters illustrate this well: Peter Hall, almost a household name in our field; and Philip Sargant Florence, a lesser-known figure who, in the 1930s and 40s, made a major contribution to the application of the social sciences in regional planning that ought to be more widely known.

In the second half of the *Great Minds* session at Newcastle, Peter Batey will speak on Peter Hall: What are his credentials as a regional scientist? What can we, as regional scientists, learn from his eclecticism? This topic should be of particular interest to British and Irish Section members past and present.

## John Brian Parr (1941–2023)



John Parr, a member of the Regional Science Association International (RSAI) since the mid 1960s passed away at his home in London in early January 2023. John was born in the U.K. and graduated from University College, London with a degree in economics in 1962. In 1967, he completed his Ph.D. in economic geography at the University of Washington working with Morgan Thomas and Charles Tiebout. From 1967 until 1975, he was successively Assistant and then Associate Professor in the Department of Regional Science at the University of Pennsylvania. He then returned to the UK and from 1975 until 2015 he was a member of the faculty in what ended up as the Department of Urban Studies, in the University of Glasgow in Scotland; he was promoted to Professor in 1989. After retiring from Glasgow, he returned to London in 2016 when he was appointed an Honorary Professor in the Bartlett School of Planning at his alma mater, University College London. He was a frequent visiting scholar at institutions in the US (especially Illinois and West Virginia), Australia, New Zealand and Israel. After his return to the UK in 1975, he became very active in the British Section (now British & Irish Section) of RSAI, serving as Chairman of the section from 1981-1985; however, he retained an affinity for the North American Regional Science (NARSC) conferences and for the World Congresses of RSAI. He was elected as an Academician (Fellow) of the UK Academy of Social Sciences in 2000. From the RSAI: British and Irish Section, he received the Moss Madden Memorial Medal in 2003 and a Lifetime Achievement Award in 2015. Parr was elected as a Fellow of the RSAI in 2006.

His main interests centered in regional/spatial policy and the spatial structure of regions with a strong commitment to exploring and re-interpreting the works of von Thünen, Christaller and Lösch. In his more recent work, the role of spatial structure infused several papers that explored new interpretations of regional policy, its challenges and, in many cases, its failures viewed through the lens of spatial organization broadly conceived. His publication list is extensive and includes many contributions in the *Papers in Regional Science* (and its earlier form), *Journal of Regional Science*, *Annals of Regional Science*, *Urban Studies*, *Regional Studies*, *Economic Geography*, *Environment and Planning* and *Spatial Economic Analysis*. These works, with different foci and methodology, have in common an excellent writing style; Parr had little patience for obfuscation and felt it important that articles should be easy to read. Editors who attempted to change this style usually received a certain amount of opprobrium with one editor commenting that Parr was the most difficult author with whom he had to deal! After several articles on regional policy (the focus of his doctoral dissertation),



the bulk of his attention was directed to the spatial structure of city systems, initially drawing inspiration from central place theory. He had enormous admiration for Lösch and would return to his contributions frequently throughout his career. For the last decade, he refocused once more on regional policy but now infused with new interpretations based on the structure of regional economies and their embedded urban systems. The ideas ranged from alternative views and definitions of agglomeration economies, the structure of interdependence within urban systems and even returning to consideration of the role of spatial administration.

In many ways, his academic contributions were equaled by his commitment to enhancing the field of regional science, broadly defined. His presence in many conferences each year was a very visible manifestation of this sense of the role of more senior scholars; many colleagues have commented on the myriad ways he assisted them during their careers, one remarking that Parr had become a valued mentor, by being the academic and person he was rather than explicitly giving advice. He had a great sense of humor that was infectious; he took his work seriously but rarely himself and graciously tolerated the gentle ribbing that inevitably occurred.

Parr's wife of 49 years, Pamela, died in 2014; he is survived by his two daughters Sheila and Anne.

## Full Programme

Presenting Author	Title	Room
<b>Session 1A</b>	<b>Spatial analysis of productivity and labour markets 1</b>	<b>1A: HDB 1.06</b>
Christian Calvillo	What will the UK low carbon heat transition mean for jobs and skills at a regional level?	
John Paul Clifford	The FDI impact of business and technology parks on local employment	
<b>Session 1B</b>	<b>Transportation networks and their regional economic impact 1</b>	<b>1B: HDB 1.09</b>
David Emanuel Andersson	How neighbourhood attributes influence transit use: an analysis of the Kaohsiung Metro	
Philip Carthy	Aircraft Noise and Educational Attainment: Evidence from the United States	
Abdoul Karim Zanhouo	The potential importance of creating capacity to exploit overseas export markets for CO2 transport and storage services in realising the economic value of Scottish carbon capture and storage	
<b>Session 1C</b>	<b>Migration, refugees, and integration</b>	<b>1C: HDB 1.10</b>
Daria Denti	Black Hole Sun. Forced Labour and the Shadow Economy in Italy	
Rachael Kawasaki	Regional-Contextual factors in the determinants of attitudes towards immigrants: a network science approach	

<b>Presenting Author</b>	<b>Title</b>	<b>Room</b>
<b>Session 2A</b>	<b>Spatial analysis of productivity and labour markets 2</b>	<b>2A: HDB 1.06</b>
Sabine D'Costa	The Firm-exit productivity nexus and urban-rural disparities	
Burcu Değerli-Çifçi	Has Okun's Law Changed After COVID-19 Pandemic? A regional analysis and spatial heterogeneity	
Wen-Chung Guo	Spatial Analysis on Digital Evolution with Online/Offline Competition and Free Entry	
<b>Session 2B</b>	<b>Resources</b>	<b>2B: HDB 1.09</b>
Grant Allan	Emissions consequences in a regionally-disaggregated global extraction model (GEM)	
Calvin Jones	Scaling Sustainability? The Future Generations Act and Climate Transformation in Wales	
Genghao Zhang	Does Digital Transition Contribute to Green Transition or Over-consumption? An Empirical Study in the UK	
<b>Session 2D</b>	<b>Regional inequalities in health and wellbeing 1</b>	<b>2D: HDB 1.11</b>
Daria Denti	Equal justice under law? Local justice effectiveness and violent crimes	
Maria Plotnikova	Disability benefit patterns and the health impact of the pandemic	
Aleid Brouwer	If you feel like happiness is the truth: Broad Prosperity and life satisfaction, a principal component analysis.	

<b>Presenting Author</b>	<b>Title</b>	<b>Room</b>
<b>Session 3A</b>	<b>Spatial analysis of productivity and labour markets 3</b>	<b>3A: HDB 1.06</b>
Sabine D'Costa	Re-evaluating the urban wage premium: the changing roles of geographical and job transitions for women and men	
Carolyn Ioramashvili	Labour market impacts of industry concentration: A regional analysis of Great Britain	
<b>Session 3B</b>	<b>New and emerging issues around leveling up 1</b>	<b>3B: HDB 1.09</b>
Charlotte Hoole	Covid-19 recovery planning in city-regions: soft spaces of governance in action	
Philip McCann	Capital Shocks and the UK Regional Divides	
<b>Session 3C</b>	<b>SS1: Political discontent and left behind people and places 1</b>	<b>3C: HDB 1.10</b>
daria denti	The Way You Look at Me. Improving local monitoring of left-behind groups through municipal open data.	
Pedro Fierro	Geographies of Discontent: Measuring and Understanding the Feeling of Abandonment	
Masood Gheasi	Migration and direct democracy: the case of referendums in Switzerland	
<b>Session 3D</b>	<b>Higher education and impact of universities on regional economies 1</b>	<b>3D: HDB 1.11</b>
Maria Abreu	Role of universities in regional graduate entrepreneurship ecosystems: enablers or constrainers of 'missing' graduate entrepreneurs?	
James Davies	Gaps and mismatches: Understanding the creative skills challenge in UK regions	
Ruth Neville	Understanding flows of internationally mobile students into the UK between 2009-2019 using UCAS data	

<b>Presenting Author</b>	<b>Title</b>	<b>Room</b>
<b>Session 4A</b>	<b>Spatial analysis of productivity and labour markets 4</b>	<b>4A: HDB 1.06</b>
Alvertos Konstantinis	Precarious employment and well-being in the U.K: A regional perspective	
John Moffat	Regional Productivity Differences in Great Britain: A Tale of Distributions?	
<b>Session 4B</b>	<b>Brexit</b>	<b>4B: HDB 1.09</b>
Nuo Jin	: Measuring the impact of Brexit on migration to UK: the case of Wales	
Andreas Mastrosavvas	Social Networks and Brexit: Evidence from a Trade Shock	
<b>Session 4C</b>	<b>R&amp;D and Technology</b>	<b>4C: HDB 1.10</b>
Torben Dall Schmidt	Digitalization, Technology Acceptance and Local Milieus: Adapting technologies in German Firms across Different Regional Contexts	
Matthew Lyons	Can R&D policy help rebalance the UK economy?	
<b>Session 4D</b>	<b>Regional inequalities in health and wellbeing 2</b>	<b>4D: HDB 1.11</b>
Xiuxiang Pan	Are there happiness costs of late-life migration? an empirical study on rural-to-urban elderly migrants in China	
Colin Robins	The Anthology of Rural Life; photographic documentations of European rural communities.	
Bart Roelofs	Mapping epidemics: understanding the role of maps in disease outbreaks by comparing Cholera and Covid-19	

<b>Presenting Author</b>	<b>Title</b>	<b>Room</b>
<b>Session 5A</b>	<b>Spatial analysis of productivity and labour markets 5</b>	<b>5A: HDB 1.06</b>
Kim Swales	The system-wide impacts of large-scale, labour augmenting technological change	
Emmanouil Tranos	Internet and firm productivity: a multilevel approach based on experienced broadband speed data	
Yichen Wang	The impact of industry structure on individual's automation risk in China	
<b>Session 5C</b>	<b>New and emerging issues around leveling up 2</b>	<b>5C: HDB 1.10</b>
Arnab Bhattacharjee	NiReMS: A regional model at household level combining spatial econometrics with dynamic microsimulation	
Kevin Connolly	Risk & Reward: A CGE analysis of fiscal devolution	
<b>Session 5D</b>	<b>Urban futures (and sustainable cities) 1</b>	<b>5D: HDB 1.11</b>
David Hearne	How much is a bicycle network worth for the neighborhood? An application to Greater Manchester	
Conor O'Driscoll	Travel Behaviours and Built Environments On The School-Run	
Gainbi Park	Growth and Decline: Unfolding Landscapes of U.S Demographic Changes using a Contextual Approach	

<b>Presenting Author</b>	<b>Title</b>	<b>Room</b>
<b>Session 6A</b>	<b>Economic Geography</b>	<b>6A: HDB 1.06</b>
Arnab Bhattacharjee	NiReMS: A regional model at household level combining spatial econometrics with dynamic microsimulation	
Stuart McIntyre	Regional Output Growth in the UK: Improving Estimates by Incorporating New Data Sources	
Sierdjan Koster	Unpacking Locational Preferences of Entrepreneurs in the Netherlands	
<b>Session 6B</b>	<b>SS1: Political discontent and left behind people and places 2</b>	<b>6B: HDB 1.09</b>
Luise Koeppen	Drinking Alone: Social Capital and long-term economic and demographic decline (GER)	
Vassilis Monastiriotis	The remorse of the places that didn't mean it	
Rachael Sanderson	Where is Tweeting What about London?: Investigating Discontent in Left Behind Places	
<b>Session 6C</b>	<b>Transportation networks and their regional economic impact 2</b>	<b>6C: HDB 1.10</b>
Antonella Ferrara	The impact of the high-speed railway on the TFP of nearby firms	
Muanmas Wichensin	Factors to Promote the Choices of Travel for the Visually Impaired: Bangkok Metropolitan Area	
<b>Session 6D</b>	<b>Urban futures (and sustainable cities) 2</b>	<b>6D: HDB 1.11</b>
Eric Heikkila	A dual typology of informal settlements and their urban contexts	
Clara Peiret-Garcia	Accessibility for whom? Applying a data-driven approach to calculate activity-based accessibility metrics.	
Aviral Marwal	Simulating and Predicting Built-up expansion in West Delhi with an integrated Machine Learning and ABM based Prioritised Growth Model	

<b>Presenting Author</b>	<b>Title</b>	<b>Room</b>
<b>Session 7A</b>	<b>Externalities</b>	<b>7A: HDB 1.06</b>
Tasos Kitsos	Creative Destruction? The relationship between creative industries, housing markets and gentrification	
Pinar Majidova	Historical analysis of spatially concentrated hydrocarbon industry of Az: the role of purposive agency in new path development	
<b>Session 7B</b>	<b>Smart cities: data-driven urban analytics</b>	<b>7B: HDB 1.09</b>
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## Book of Abstracts

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Presenting author	Abstract
<p><b>Maria Abreu</b> ma405@cam.ac.uk <b>Additional-authors</b> Vadim Grinevich, University of Bradford</p>	<p>Role of universities in regional graduate entrepreneurship ecosystems: enablers or constrainers of 'missing' graduate entrepreneurs?</p> <p>We explore how regional entrepreneurship ecosystems enable or constrain the entrepreneurial activities of university graduates, with a focus on 'missing' entrepreneurs with non-mainstream characteristics who are currently underrepresented. We argue that today's University, with its emphasis on equality, diversity, and inclusivity, combined with its social mobility and civic missions, is an important vehicle for enabling this 'missing' entrepreneurship and its associated local and regional economic impacts. Our analysis is based on 15 years of data from the UK's Destinations of Leavers from Higher Education survey (2002-2017), and two waves of the more recent Graduate Outcomes survey (2017-2019), which provide detailed micro data on university graduates. We combine this with university-level data on policies and engagement with external organisations, as well as information on staff characteristics and financial investment in knowledge-exchange activities. Our results indicate that regional entrepreneurship ecosystems centred around universities are critical drivers of entrepreneurship among non-conventional graduate entrepreneurs.</p>

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**Presenting author****Grant Allan**  
grant.j.allan@strath.ac.uk**Abstract**

Emissions consequences in a regionally-disaggregated global extraction model (GEM)

The national hypothetical extraction method (HEM) assumes that the shutdown of an industry leads to goods previously used (in either intermediate or final demand) now replaced by imports. Dietzenbacher et al (2019) note that at a global level such an assumption is implausible and set out the global extraction method (GEM) under which reallocation of demands following extraction leaves global GDP unchanged, but with a different composition across countries. This paper considers the environmental consequences of sectoral extraction under the GEM using the EUREGIO accounts. We find that while global GDP is unchanged by extraction, there are changes in global total emissions under the GEM, and reveal the sectors whose extraction produces the most positive and negative impacts on global emissions.

Presenting author	Abstract
<p data-bbox="204 241 528 271"><b>David Emanuel Andersson</b></p> <p data-bbox="204 277 730 306">davidemanuelandersson@cm.nsysu.edu.tw</p> <p data-bbox="204 313 440 342"><b>Additional-authors</b></p> <p data-bbox="204 349 392 378">Nicholas DeOto</p> <p data-bbox="204 385 355 414">Wil Martens</p> <p data-bbox="204 421 367 450">Oliver F. Shyr</p>	<p data-bbox="759 241 1426 306">How neighbourhood attributes influence transit use: an analysis of the Kaohsiung Metro</p> <p data-bbox="759 349 1501 557">Large, densely populated cities with comprehensive public transport systems tend to have greater per capita transit use. Even though the metro systems of such cities attract greater passenger volumes than other areas, some transit networks experience significant variability in different parts of the same metropolitan area.</p> <p data-bbox="759 564 1513 1267">This study analyses the effects of neighbourhood land use on station-specific ridership using the "5Ds model" of transit-oriented development (TOD). A pedestrian catchment area of 600 metres from a station's centroid, referred to as a "neighbourhood," is used when measuring the effects of the built environment on transit use. The metropolitan area of Kaohsiung (Taiwan) is divided into three concentric rings, and transit stations are assigned to rings based on their distance relative to the city centre. Design-related neighbourhood attributes, specifically the number of intersections and the total land area allocated to pedestrians are significant predictors of station-specific passenger volumes. Intermodal connectivity is important in the core and periphery of the city, but not in the intermediate ring. Relative land use diversity is a significant factor in the intermediate and the peripheral ring, but not in the centre, which is on average more diverse than areas further away from the centre. Relative population density matters on the periphery, but not in the central or intermediate areas, which are densely populated almost everywhere.</p> <p data-bbox="759 1274 1520 1444">Overall, the results show that the 5D approach to TOD is helpful beyond the American context for which it was originally formulated, although in Asian cities the 5Ds tend to be omnipresent in the urban core of cities with comprehensive transit networks.</p>

Presenting author	Abstract
<p><b>Franziska Bay</b> f.bay@rug.nl</p> <p><b>Additional-authors</b> Philibert Weenink</p>	<p>Data maturity and digital skill increase in SMEs – Evidence for a generally applicable model of data maturity</p> <p>Digitization has progressed in companies and many institutions in most countries over the past years. However, despite their typically faster adaptation time, SMEs often still lag behind larger corporations in terms of data maturity and application of digital technologies. During the peak period of the Covid-19 pandemic, plenty of SMEs experienced the urgency to digitize, increase their data maturity and started creating a digital strategy or implemented the first measures. While there are multiple institutions and interventions per country whose task is to support and promote digitization among SMEs, not many of them follow a theory-based approach and for many empirical evaluations are not reported. The aim of this study is to provide evidence for a widely applicable model of data maturity using the Interreg North Sea Region project Futures by Design with its diverse group of SMEs from all sectors as a case study.</p> <p>Within the conceptual framework of data maturity or digital maturity, this study analyzes factors which affect, benefit and hinder the uptake of digital skills and technologies, such as the size of the firm, the regional setting, the institutional context and the level of verbalization of the digital strategy or problem statement. Quantitative and qualitative data was used to evaluate the intervention and relationships between all aforementioned influence factors and the data maturity of the SMEs. The sample encompasses a large variety of SMEs in five European North Sea region countries at different stages in their digitization trajectory. Thus, this case study provides rare valuable insights into the universality of needs at different levels of data maturity as well as an indication of which factors are decisive in successful digital strategizing for SMEs.</p>

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<b>Presenting author</b>	<b>Abstract</b>
<b>Arnab Bhattacharjee</b> a.bhattacharjee@hw.ac.uk	NiReMS: A regional model at household level combining spatial econometrics with dynamic microsimulation
<b>Additional-authors</b> Adrian Pabst Tibor Szendrei Geoffrey Hewings	The heterogeneous spatial and individual impacts of the Great Recession, Brexit and Covid-19 have generated an important challenge for macroeconomic and regional/spatial modellers to consider greater integration of their approaches. Focusing on agent heterogeneity at the NUTS-1 level, we propose NiReMS -- a synthesis of dynamic microsimulation with a spatial regional macroeconomic model. The model gives regional macro projections while allowing for household level inference. To showcase the model, we explore the impact of terminating enhanced Universal Credit (UC) early and show that it led to more households consuming less. Importantly, the proposed framework shows that the impact is not equal across the regions of the UK: low asset households in the North East, Wales, and Northern Ireland were hit particularly hard.

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Presenting author	Abstract
<p><b>Aleid Brouwer</b> a.e.brouwer@rug.nl</p>	<p>If you feel like happiness is the truth: Broad Prosperity and life satisfaction, a principal component analysis.</p>
<p><b>Additional-authors</b> Richard Rijnks &amp; Heike Delfmann</p>	<p>In the Netherlands a new model for wellbeing is being used for policy makers and researchers: the monitor of Broad Prosperity. The Monitor examines well-being not only „Ähere and now,Äô but also the extent to which the pursuit of well-being in the Netherlands impacts on future generations (well-being „Älater,Äô) and on other countries (well-being „Äelsewhere,Äô). The Monitor also presents an analysis of how well-being is distributed over certain groups in the population (CBS, 2021).</p>
	<p>In this monitor, objective measures are combined to give an indication of how well a region is doing in terms of broad prosperity. The monitor uses information from statistics Netherlands. For the province of Groningen in The Netherlands, the monitor is extended by information from a regional survey, where also more subjective measures are added to the data from Statistics Netherlands. As such we also have information on individual life satisfaction of inhabitants of this province.</p>
	<p>Life satisfaction and broad prosperity differ in their exact theoretical implications. First, in the literature on the new economics of happiness, life satisfaction is related to in situ utility. People assess their current wellbeing and make decisions based on this measure. Second, broad prosperity is linked to the wider literatures on social and environmental sustainability, inequality, and social determinants of health. While one is directly linked to individual, current, utility, the other incorporates externalities and expected utilities.</p>
	<p>This paper is a first attempt at explaining life satisfaction and broad prosperity using conventional economics of happiness models and drawing implications based on the metric outcomes for theory. We construct a set of exploratory analyses to assess heterogeneity in outcomes for broad prosperity and life satisfaction, comparing intergroup differences in levels. Next, we use Shapley decomposition models to assess whether broad prosperity and life satisfaction are similarly determined. and determine which factors are most relevant in explaining personal life satisfactions scores. Policy implications around the comparison of these metrics are drawn.</p>

Presenting author	Abstract
<p data-bbox="204 241 411 271"><b>Christian Calvillo</b></p> <p data-bbox="204 277 571 306">christian.calvillo@strath.ac.uk</p> <p data-bbox="204 313 438 342"><b>Additional-authors</b></p> <p data-bbox="204 349 438 378">Dr. Antonios Katris;</p> <p data-bbox="204 385 379 414">Dr. Long Zhou;</p> <p data-bbox="204 421 427 450">Prof. Karen Turner</p>	<p data-bbox="611 241 1481 306">What will the UK low carbon heat transition mean for jobs and skills at a regional level?</p> <p data-bbox="611 349 1513 589">The UK Government and the Scottish Government have put in place ambitious plans to decarbonise heating. Achieving this will require a concerted effort to transition UK homes away from a reliance on gas to heat their homes through the installation of heat pumps, with heating through hydrogen also playing a potential role. The decarbonisation efforts will also involve improving the energy efficiency of older and less well-insulated housing stock.</p> <p data-bbox="611 595 1513 1303">The deployment of these plans will have implications for jobs and skills across the UK, both in terms of creating new jobs with new skills and also preserving and transitioning existing jobs, e.g. installing and maintaining gas boilers. The UK Government’s Heating and Buildings Strategy highlights that the transition could help support the creation of 175,000 new jobs. Drawing on findings from our Computable General Equilibrium (CGE) economic analysis on the electrification of residential heat, we will contribute to understanding on the scale and nature of the jobs and skills implications of transitioning to low carbon heating in the UK, with a particular focus on regional implications. We will use the CGE outputs in terms of labour market changes and other relevant sector and household impacts, and other available secondary data (e.g. ONS data on workforce distribution, census data, heat maps, deprivation maps, etc.) to map jobs and skills impacts across the UK regions. This mapping will also allow us to analyse how the broader economic and political environment, and in particular persistent labour supply constraints, may create competition between multiple Net Zero projects. In addition, to analyse what policy interventions are required to mitigate/address emerging challenges and how should they coordinate/interact with other policy frameworks e.g. broader Net Zero strategy/levelling up agenda.</p>

Presenting author	Abstract
<p><b>Philip Carthy</b> philip.carthy@ucdconnect.ie</p> <p><b>Additional-authors</b> Aisling Reynolds-Feighan, Seán Lyons</p>	<p>Aircraft Noise and Educational Attainment: Evidence from the United States</p> <p>Noise pollution constitutes a significant negative externality of modern transportation systems. Air transportation networks, in particular, generate substantial amounts of environmental noise that have the potential to negatively impact large urban populations who reside in the vicinity of airports. A growing body of evidence suggests that exposure to noise pollution could have consequential impacts on the health and well-being of affected communities. One concerning aspect of this work is the hypothesis that exposure to aircraft noise may impede children's cognitive development and subsequently hinder academic performance at school. However, many existing papers rely on cross-sectional research designs; thus, work remains to be done to establish and disentangle causal mechanisms. If convincingly validated, this hypothesis has important implications for public policy and regional planning, both in terms of airport development and shielding neighbourhoods that may be vulnerable to chronic exposure to aircraft noise.</p> <p>This paper presents novel evidence of the impact of noise pollution generated at major airports across the United States on the academic performance of students who attend schools nearby. By linking data on average academic performance in standardised tests at the school district level from the Stanford Education Data Archive to estimated noise levels arising from airport operations across the United States, we can empirically test the relationship between aircraft noise and local educational attainment. Our identification strategy relies on plausibly exogenous variation in noise generated at airports over time due to the introduction of GPS-optimised aircraft approach procedures which have been hypothesised to have inadvertently increased noise levels experienced below flight paths. This technological development facilitates an investigation of the impacts of noise pollution on local students in an event study framework and allows us to disentangle the effects of noise exposure from that of potentially confounding factors such as air pollution.</p>



Presenting author	Abstract
<b>John Paul Clifford</b> 110720335@umail.ucc.ie	The FDI impact of business and technology parks on local employment
<b>Additional-authors</b> Prof. Justin Doran Dr. Frank Crowley Dr. Declan Jordan	The FDI impact of business and technology parks on local employment
	<p>The purpose of this research is to gain a deeper understanding of the impact of business and technology parks specialising in foreign direct investment on local employment. The results may inform policy makers around the dynamics of state-owned business and technology parks and provide valuable insights which would be relevant from a regional and spatial perspective.</p>
	<p>The development of this state-owned infrastructure is considered a key component in increasing employment, particularly with a regional focus. The role of this investment is critical as the development of large scale infrastructure projects can facilitate key connectivity points in the delivery of goods and services, often between multiple agglomerations.</p>
	<p>The research uses a PSM-DiD methodology focusing on Irish Census data from 1986 to 2016 alongside data on the Irish state agency, the Industrial Development Authority (IDA) business and technology parks.</p>
	<p>This research identifies the dynamics between agglomerations and infrastructure development. With consistent increasing concentrations of people living in urban regions, the demand for the types and placement of infrastructure, is of increasing interest to both citizens and policymakers from a spatial perspective.</p>

Presenting author	Abstract
<p><b>Sabine D'Costa</b> s.dcosta@westminster.ac.uk</p> <p><b>Additional-authors</b> Adelheid Holl, CSIC (Spain) Dalila Ribaudó, Aston University</p>	<p>The Firm-exit productivity nexus and urban-rural disparities</p> <p>Productivity is a critical determinant of firm survival and exit as theory suggests that in an efficient outcome the least productive firms exit the market. In parallel, the urban economics literature has shown that firms in denser locations are more productive than in less dense areas. Most of this literature focuses on cities of different sizes or densities, with a smaller literature exploring rural-urban differences. Finally, the literature has also shown that the local environment affects the probability of firm survival. However, evidence at a granular-geographic level is still lacking and little attention has been given to the urban-rural dimension of the productivity-exit nexus. Yet, there can be important heterogeneity in productivity and exit rates between the urban core, suburban and rural areas: we therefore investigate the possibility that the relationship between firm exit and productivity can be mitigated by firms' local environment.</p> <p>We use a panel of 3.5 million observations covering 600,000 Spanish firms from the SABI database to study the determinants of firm exit at a detailed geographical level in mainland Spain between 2011 and 2019. Our descriptive findings show important urban versus rural differences in firm-level productivity and exit rates. As expected, productivity levels follow the urban hierarchy, highest in core urban areas and lowest in rural areas.</p> <p>Our empirical results indicate that the probability of exit is highest in core urban areas followed by suburban areas, in both manufacturing and services. In manufacturing, this effect increases after controlling for firm age, size, exporter status, capital intensity and industry. Firms in suburban areas are almost twice, and firms in core urban areas nearly three times as likely to exit as comparable firms in rural areas. When including the distance to the productivity frontier, the effect of the urban hierarchy is unchanged and remains significant. Increasing the distance to the frontier by one standard deviation leads to a 78% increase in the probability of exit. In services however, the effect of location is no longer significant when we include firm controls. When we add the distance to the productivity frontier, we find that a one standard deviation increase is associated with a 70% higher probability of exit and firms in the urban core localities are 46% more likely to exit than in rural localities.</p>

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Presenting author	Abstract
<b>Sabine D'Costa</b> s.dcosta@westminster.ac.uk	<p data-bbox="611 241 1517 309">Re-evaluating the urban wage premium: the changing roles of geographical and job transitions for women and men</p> <p data-bbox="611 349 1517 1375">This paper looks at gender as a new, important source of heterogeneity in the urban wage premium. Using a representative panel of nearly 1,250,000 male and female observations in Great Britain from the ASHE/NES survey covering the years 1998-2019, I find that the urban wage premium is 44 % greater for women than for men. I also find that sorting on time-invariant ability into cities is more pronounced for men than for women. Investigating the urban wage premium over time reveals that the gender difference is driven by the pre-financial crisis period. It disappears during the crisis as women's urban wage premium drastically drops, from 2.9% to 1.4%. The overall results also hide important differences in the urban wage premium across city size categories: the urban wage premium for small and big cities entirely disappears over time and only London maintains a wage premium over other labour markets in the post-crisis period. I then investigate the channels that can theoretically explain the gender difference in urban wage premium and its evolution over time. I find no evidence of sharing advantages in cities or of better employer-employee matching in cities, for women or men. 46% of women's static urban wage premium in the pre-2008 period comes from worse occupational matching at the time of an urban to rural job transition: rather than benefiting from moving to cities, women incur a wage penalty due to occupational transitions when they switch to a rural job, which implies that women are particularly constrained in the type of occupation that they have in rural areas. Women also benefited from occupational matching as well as learning within cities. These two advantages disappear during the financial crisis whilst women continue to suffer the wage penalty when moving to rural jobs. I find that men, contrary to women, are able to benefit from the larger choice of employers in cities, although the positive effect on their yearly wage growth is limited to the year in which they move from a rural job. This is maintained over the three time periods.</p>

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**Presenting author****Torben Dall Schmidt**  
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Digitalization, Technology Acceptance and Local Milieus: Adapting technologies in German Firms across Different Regional Contexts

Technological change is not new in societies. A unique combination of crisis events in the form of a combined COVID-19 pandemic and an energy crisis though emphasizes the importance of considering the use of new technologies in firms and the use of digitalization in their operations. The adaptation of technologies would amongst others depend on acceptance and adoption as reviewed in Taherdoost (2018). Firm internal factors are important in using digitalization technologies. In addition the firm size and local milieus matters for abilities of firms to adopt technologies, as for instance pointed out in Kelley and Helper (1999). This is also stressed by broad theories such as regional innovation systems, urbanization driven by creative classes and knowledge spillovers in agglomeration economics.

We consider the intersection between firm size, acceptance and local milieus of firm as measured by rural and urban types of geographies. In doing this, we use the new SOEP-LEE2 dataset (Matiaske et al., 2022) to investigate these intersections. Our starting point is to determine if the use of digitalization technologies varies by firm size, while controlling for human capital inputs as measured by the composition of workers by skill groups. In this, we also address if different skill groups are differently important in using these technologies for different firm sizes. While doing this, we also investigate if these effects are markedly different for entrepreneurs (self-employed). Our next intersection addresses technology acceptance, as we investigate if a critical attitude internally in firms among workers matters differently for larger and smaller firms. On the one hand, larger firms may have more channels of cooperation through e.g. work and staff councils smoothing the process, while smaller firms have a stronger entrepreneurial spirit that may also foster acceptance. While firm internal factors may be important, we finally consider the intersection with local milieus. The use of technologies by firms may generally vary by local milieus from knowledge spillovers in regional innovation systems or a stronger network among creative individuals. This may also moderate the effects of acceptance of technologies in firms.

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Presenting author	Abstract
<p><b>Secil Hulya Danakol</b> s.danakol@aston.ac.uk</p> <p><b>Additional-authors</b> Tomasz Mickiewicz, Tomasz Skica</p>	<p><b>New Firm Births: Agglomeration Effects of Domestic and Foreign Incumbents in the Municipality versus Its Neighbourhood in Poland</b></p> <p>The determinants of domestic and foreign firm births over space have been investigated in the literature, yet we identify two gaps. First, while previous studies examine domestic and foreign firm births in isolation, we quantify the relationship between the two types of births and the ownership-based agglomeration in the same framework. Second, we apply a disaggregated level of spatial mapping to identify the extent to which differences in firm birth rates in the focal municipality are attributable to the agglomeration of domestic and foreign incumbents in the same municipality and the neighbouring municipalities, considering the pattern of spatial decay of these two types of ownership-based agglomeration effects. We argue that the spatial decay pattern of agglomeration effects on firm births is more complex than identified by the literature. Once we consider ownership, the spatial decay holds for the agglomeration effects of domestic incumbent firms, yet it is reversed for foreign incumbents. We test this prediction using Polish municipality-level data, applying the spatial Durbin model with Mundlak adjustment. The empirical model treats domestic and foreign firm births as functions of spatial lags of the agglomeration of both types of incumbent firms and other municipality characteristics. Our results suggest that it is the agglomeration of foreign incumbents located in the neighbouring municipalities, not in their own municipality, that has the strongest positive effect on firm births. The opposite holds for domestic incumbents. Our research also has policy implications. The clear conclusion is that neighbourhood matters, or in the case of foreign incumbents may matter even more than own municipality characteristics. As many municipalities aim to both attract foreign investors and boost domestic entrepreneurship, they should pay close attention to their neighbours. It is evident that new firm founders regardless of the ownership type do not perceive their surroundings as being stand-alone areas but rather as components of an integrated whole. The results suggest that starting a business in a good wider neighbourhood, especially dense with foreign incumbents, seems to provide a cushion against some of the challenges faced during the establishment process. Therefore, neighbouring municipalities have more to gain from developing synergies to increase their investment attractiveness than taking a race-to-the-bottom approach that disadvantages certain municipalities.</p>

Presenting author	Abstract
<p><b>James Davies</b> j.davies.9@bham.ac.uk</p>	<p>Gaps and mismatches: Understanding the creative skills challenge in UK regions</p>
<p><b>Additional-authors</b> Dr Matt Lyons, Dr Anastasios Kitsos</p>	<p>Creative industries are increasingly a part of the success stories in regions of the UK outside London and the South-East. However, growth in regional creative clusters has been stymied by ongoing issues of skills shortages and mismatches. Despite a substantial body of research identifying skills shortages at national level (BFI Skills Review, ScreenSkills), more still needs to be done to understand the nuances of these shortages at the regional and sub-sectoral level, removing a key barrier to growth in regional economies.</p>
	<p>The paper compares two regions, The Cardiff Capital Region (CCR) and the West Midlands Combined Authority (WMCA), focusing on two sub-sectors of screen production TV &amp; Film, and Video game development. The identified sectors are key drivers of growth for their respective regional economies, but are facing challenges to find appropriately skilled workers. Responsibility for addressing these issues is complex, with a mix of industry, education and government at local and national level holding different levers. The research used interviews with stakeholders in both regions across the spectrum of industry, policy and education to evaluate the challenges facing the growth of the regional creative clusters. The research finds that there are both regional and sectoral differences that required nuanced policy interventions, and highlights the importance of a strong regional identity, the benefits derived from a recognition and prioritising of regional creative industries as well as a sense of fragility around creative industries' presence in the UK's regions, and the key roles universities in those regions can play in ensuring the greatest potential for sustainable future growth.</p>

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**Presenting author**

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Simona Iammarino

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**Abstract**

Black Hole Sun. Forced Labour and the Shadow Economy in Italy

Do spatial socioeconomic features influence firms' demand for forced labour also in places where it is illegal and socially unacceptable? We aim at providing an answer to this question through a quantitative estimation of the community-level socioeconomic risk factors associated to forced-labour episodes in Italy. The analysis bridges literature on forced labour with economic geography, acknowledging that both fields identify an influence of the local milieu on firms' behaviours in the labour market. We exploit two novel databases of geo-tagged episodes of forced labour across Italian and British local authorities between 2016 and 2021, which we have merged with administrative data on the socioeconomic outlook of places. Through an exploratory approach, the investigation will assess the relevance and the effect-size of a broad range of spatial features, that forced labour scholars propose as potential triggers for forced-labour demand. The spatial econometric investigation is at small sub-national area level for each country, allowing to account for the observed geographic heterogeneity of forced labour. This work contributes to the knowledge-base on firms' demand for forced labour by adding quantitative evidence on the local level risk factors in the Global North, which is still relatively unexplored. Moreover, it allows to assess whether the spatial dimension provides a complementary information-base for understanding of forced-labour demand.

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**Presenting author**

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**Additional-authors**  
Marco Di Cataldo

**Abstract**

Equal justice under law? Local justice effectiveness and violent crimes

The role of justice effectiveness on the socioeconomic performance of places and quality of life is widely acknowledged. Hence it becomes relevant to assess the impact of policy reforms aimed at improving judicial performance. This paper investigates the effect of an institutional reform aimed at increasing justice effectiveness in Italy. The reform affected only a subset of courts, by consolidating some courts into others based on spatial and demographic elements and leaving the remaining courts unaffected. We exploit this exogenous variation in court geography and a unique sub-regional database for the performance of Italian criminal courts for 2006-2018 to measure the effect of justice effectiveness on reformed courts.



Presenting author	Abstract
<p><b>Daria Denti</b> daria.denti@gssi.it</p> <p><b>Additional-authors</b> Paola Proietti, Alice Siragusa, Irakli Stamos</p>	<p>The Way You Look at Me. Improving local monitoring of left-behind groups through municipal open data.</p> <p>The Sustainable Development Goal (SDG hereafter) framework has been adopted by growing number of cities These cities must address the “Leave No One Behind” (LNOB hereafter) principle, which represents the primary SDG value. The LNOB principle prescribes that sustainable and inclusive development must be met for all peoples and for all segments of society, with particular attention to progress of the furthest behind. A crucial aspect for the LNOB principle is monitoring progress of the furthest behind. The strong focus on monitoring has prompted research on the implementation of LNOB-related indicators. According to this literature, LNOB indicators should account for acknowledged characteristics of deprivation: relativity, multidimensionality, and the substantial differences in deprivation levels among members of each vulnerable group. Currently, this work mainly targets the country level.</p> <p>This limited focus on cities contrasts with the acknowledged importance of cities to progress towards SDGs. Further, if not addressed, this lack of focus could limit support available to cities, as highlighted by a recent surveys targeting municipalities engaged with SDGs, where respondents recognized the need of guidelines and support for improving urban monitoring of the LNOB principle.</p> <p>This paper contributes to fill this gap by advancing a monitoring framework for the localization of the LNOB principle focusing on income vulnerability and work insecurity.</p> <p>Operationally, we introduce indicators that consolidate the existing place-neutral requirements from SDG literature with issues acknowledged by urban studies. Then, through a case-study approach, we apply our proposed indicators to a sample of 5 European cities engaged with SDGs and we do so using data diffused by each considered municipality. Finally, we compare the resulting maps with maps that use the indicators currently adopted by each considered municipality.</p>

Presenting author	Abstract
<p><b>Antonella Ferrara</b> antonella.ferrara@unical.it</p> <p><b>Additional-authors</b> A. Bottasso, M. Conti, S. Robbiano</p>	<p>The impact of the high-speed railway on the TFP of nearby firms</p> <p>Evaluating the causal effect of High-Speed Railway (HSR) is interesting for a variety of reasons. First, important extensions of HSR networks, often mobilizing huge financial resources, have been realized and/or are foreseen in many countries (Koster et al, 2021), while careful ex-post evaluations are missing, especially in the case of the European Union. Second, because, as noted above, the impact that HSR have on peripheral regions is still debated in the academic literature. Third, because the literature (e.g. Heuermann and Schmieder, 2019) tends to consider the evaluation of HSR's extensions particularly interesting given that HSR networks typically move people and not goods; as a result, shipping costs do not change when a new HSR station is opened, while travel times does. In this study, we evaluate the effect of the opening of an HSR station on the TFP evolution of firms located nearby the new station. we find that the opening of the HSR station in Reggio Emilia (in Italy) has had a very small but positive and statistically significant effect on the evolution of the TFP of firms located near the station, with respect to control firms. The result is robust to a large battery of sensitivity checks. Moreover, we conduct a placebo analysis by assuming that the HSR line was positioned near the alternative site of Parma, and in that case, we do not find any positive evolution of TFP for fake-treated firms after the fake-opening of the HSR station. Finally, we find important heterogeneous treatment effects. Indeed, we find that the effect is concentrated in Science-based and specialized supplier industries, with no effect in IT-intensive and supplier-dominated ones.</p>

Presenting author	Abstract
<p><b>Pedro Fierro</b> pedro.fierro@uai.cl</p> <p><b>Additional-authors</b> Ignacio Aravena, Patricio Aroca and Francisco Rowe</p>	<p>Geographies of Discontent: Measuring and Understanding the Feeling of Abandonment</p> <p>Populism and nationalism have been on the rise across the world. They have become a main societal challenge in developed democracies, giving rise to failure feelings of national and local political systems. Sentiments of being left behind, "places that don't matter", "people and places left behind", and lacking opportunities and future prospects have encapsulated this frustration that has been manifested in the ballot box (Goodwin &amp; Heath, 2016; Rodríguez-Pose, 2018, 2020). The 2016 Brexit vote in the UK, the 2016 election of Donald Trump in the US, the 2017 German general elections, and the 2018 Brazilian election have been notable examples of this phenomenon. Furthermore, manifestations against feelings of discontent have also taken more aggressive forms involving violence, such as the 2019 Chilean national social unrest, and the 2021 US Capitol insurrection. These reactions represent important threats to social, economic, and political stability.</p> <p>Prior work has sought to identify the socioeconomic causes underpinning the rising feeling of discontent. Persistent poverty, growing economic inequalities and lack of opportunities have been identified as drivers of the geography of discontent (De Ruyter et al., 2021; Dijkstra et al., 2020). Discontent is often captured through political voting patterns in empirical analysis. Ballot votes however represent one of the multiple manifestations of political discontent. The feeling of abandonment or left-behindness is a much broader attitudinal response that could help us understand not just voting outcomes but also other political actions, such as marches, protests, violent manifestations, and other non-institutional alternatives of participation.</p> <p>To address this gap, we aim to directly measure the sense of abandonment and analyse the key factors underpinning this feeling. We use external political efficacy (EPE), which is a widely used indicator, to measure people's beliefs about the extent of responsiveness of the political system to their needs (Balch, 1974; Converse, 1972). Drawing on three surveys of political public opinion from 4,950 residents from the Chilean region of Valparaiso (Chile), coupled with a range of geocoded data sets, we analyse the individual- and neighbourhood-level factors that are associated with increased individual levels of abandonment using structural equation modelling (SEM).</p> <p>Key findings indicate that long-term territorial socio-economic disadvantage is a key predictor of individual-level discontent reflecting low levels of system responsiveness beliefs, rather than working in a low-paid occupation.</p>

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Daniele Mantegazzi

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**Abstract**

Migration and direct democracy: the case of referendums in Switzerland

In the last decades, migration has been a hot topic at the national, cantonal, and municipal levels in Switzerland (among other countries) and several referendums obtained sufficient consensus in imposing restrictions on migration or banning certain cultural representations (such as ban on minarets of mosques). This study investigates the spatial-temporal dimension of voting patterns in Switzerland on different types of referendums related to migration, and observes their relationship with linguistic, socioeconomic, and local characteristics in a multilevel temporal spatial model. Particular attention is dedicated to voting pattern's variations related to the three Swiss instruments of direct democracy: mandatory referendums, optional referendums, and popular initiatives. The results highlight the existence of significant differences among Swiss municipalities in their voting patterns on referendums related to migration and indicate that these differences are associated with inequalities in local economic welfare, education, age, language, and political ideologies. Moreover, differences in voting behaviour are observed in relationship with the three different instruments of direct democracy, and these differences vary depending on the local socio-demographic and socio-economic characteristics. Overall, this study suggests that the availability and exploitation of different instruments of direct democracy allows giving more voice to more and different people.

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**Presenting author****Wen-Chung Guo**  
guowc@ntu.edu.tw**Abstract**

Spatial Analysis on Digital Evolution with Online/Offline Competition and Free Entry

Online/offline competition between firms has received increased attentions in the literature of Internet economy. This study provides a spatial analysis with a modified circular model to study the digital evolution with online/offline competition. We show that the original offline market structure affects the digital evolution. A more concentrated offline market encourages the entry of the offline firms, that eventually lead to the exit of a part of the offline firms. This finding reveals the diverse patterns across countries of digital evolution such as cashless payment systems. Entry of the online firms benefits the rural consumers, but may hurt some consumers due to the exit of offline firms. Transportation costs plays a role on the pattern of digital evolution. The number of offline firms with free entry may either a monopoly or an oligopoly, depending on the offline market structure, relative online/offline advantage and consumer preference, and the network effects. Several extensions on the two-sided economy, foreign dominant offline firms, and digital taxation are also provided.

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**Presenting author****David Hearne**

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**Additional-authors**Dr Erez Yerushalmi,  
Birmingham City University**Abstract**

How much is a bicycle network worth for the neighborhood? An application to Greater Manchester

In recent years, a number of countries have implemented policies to try and facilitate cycling and other active modes of transport. Despite this, there have been comparatively few attempts to ascertain the value households place on cycle infrastructure. This paper seeks to quantify the impact of proximity to bicycle networks on house prices in a large European city (Greater Manchester) using hedonic and spatial methods. Drawing on a dataset of approximate 255,000 transactions over an 8-year period, we find that a 1km reduction in distance to the nearest cycle network is associated with property values being between 1% and 4% higher. Given the challenges of congestion and pollution, bicycle lanes are a solution that could potentially provide significant amenities to residents but require the appropriation of limited land and investment.

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Cynthia Goytia

**Abstract**

A dual typology of informal settlements and their urban contexts

This paper uses cluster analysis to identify two distinct typologies for the same stratified global sample of 169 cities; one typology is based on the observed characteristics of informal settlements while the second is based on a more general set of variables describing the metropolitan regions in which they are embedded. The observed data enable us to test for any systemic correspondence between these two typologies. Our empirical test is highly robust, and it is on this basis that we set out a preliminary and intriguing dual typology between types of informal settlements throughout the world and the characteristics of their corresponding urban contexts. No locational identifiers (such as country or global region) were used to formulate either set of clusters, yet global regions figure very prominently in the resultant dual typology. Of the six dominant types that emerged from our analysis, one is exclusively populated by cities in China, another is exclusively linked to the global North, while more than half the cities belonging to a third type are located in Africa. The three other types are found more widely throughout the global South.

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Presenting author	Abstract
<b>Charlotte Hoole</b> c.hoole@bham.ac.uk <b>Additional-authors</b> Abigail Taylor, Anne Green	<p data-bbox="611 241 1517 309">Covid-19 recovery planning in city-regions: soft spaces of governance in action</p> <p data-bbox="611 349 1517 1162">This paper provides new conceptual and empirical insights on the emergence and role of soft spaces of governance, in the context of city-region recovery planning. A scholarly debate surrounding the notion of soft spaces exists as a way of understanding the processes at work in relation to the governance of local economic development. In contrast to formal statutory scales of government, soft spaces are considered as being open, informal and voluntary spaces that complement formal structures. They reflect shifts in the organisation of the state and the processes of governing society and the economy from hierarchical and administrative traditions towards more inclusive and collaborative spaces of governance. Utilising the concept of soft spaces, this paper explores the role of collaboration between local partners across policy domains in a crisis situation. As this research finds, soft spaces removed barriers to partnership working, encouraged more innovative ways of working and enabled stakeholders to enhance their understanding about different partners' contributions, potential offers and priorities. This knowledge is particularly important at a time of constrained resources when arguably soft spaces are becoming more important and aligning funding and activities is advantageous. Our research helps us to appreciate how soft spaces of governance operate and to realise what nourishment they need to remain relevant going forward. The analysis draws on 30 interviews with senior local and regional government officials carried out in 2021 in the West Midlands and the North East of England.</p>

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Presenting author	Abstract
<p data-bbox="204 241 464 338"><b>Eduardo Ibarra-Olivo</b> eduardo.ibarra- olivo@henley.ac.uk</p> <p data-bbox="204 349 564 450"><b>Additional-authors</b> Covadonga Meseguer, Sandra Ley</p>	<p data-bbox="611 241 1481 309">High Profile Criminal Attacks and the Political Economy of Foreign Direct Investment in Mexican Municipalities</p> <p data-bbox="611 349 1522 1021">In this paper, we explore how high-profile criminal attacks (HPAs) shape foreign direct investment (FDI) in Mexican municipalities. HPAs are attacks against political officials. Because these attacks signal the attempt of organized criminal groups (OCGs) to take over the social, economic, and political life of their communities; and because the constitution of regimes of criminal governance can result in a stable and secure investment environment, we argue that foreign investors need not be deterred by HPAs. Moreover, HPAs are usually intermittent and unpredictable, and therefore unlikely to shape multinationals' long-term strategies. Using an original dataset on HPAs and exploring their impact on sectoral FDI at a level of subnational analysis never explored before, we find that HPAs do not deter foreign investments in a number of sectors. However, we also find that this effect is moderated by whether the establishment of regimes of criminal governance happens in a climate of OCGs competition and fragmentation or rather, whether it is a monopolistic process. If the former, violence becomes indiscriminate, generalized, and a permanent factor that does negatively affect foreign investments, particularly in the commerce sector. Our research throws new light on the conditions under which organized crime trumps new FDI, contributing to an unsettled debate.</p>

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Presenting author	Abstract
<p><b>Carolin Ioramashvili</b> c.ioramashvili@sussex.ac.uk</p> <p><b>Additional-authors</b> Simona Iammarino Frederick Guy</p>	<p>Labour market impacts of industry concentration: A regional analysis of Great Britain</p> <p>This paper studies the effect of industry concentration and market power on regional labour markets. Increasing market power of dominant firms is of growing concern globally, both from a consumer and worker perspective (Eeckhout, 2021; Philippon, 2019). In particular, this has been linked to a decline in the labour share (Autor et al., 2020; Barkai, 2020). While falling labour shares have been documented globally (Dao et al, 2017; Karabarbounis &amp; Neiman, 2014), the issue has not been studied from a regional perspective.</p> <p>We show that industries that become more dominated by a small number of large firms are also more regionally concentrated. This suggests an important role of these businesses for local economies. Dominant firms are under increasing scrutiny, because their market power allows them to charge a mark-up over marginal cost, creating a wedge between labour productivity and wages. If sales and labour productivity increase due to growing mark-ups, wages remain stagnant. This would imply a growing concentration of wealth in the hands of business owners, and less in the hands of workers. Yet, models of efficiency wages explain why it may be in a firm's interest to share some of the mark-up with workers. Rent sharing would result in higher wages at the firm level, with ambiguous effects on the labour share.</p> <p>We test these hypotheses on a sample of UK businesses drawn from the Annual Respondents Database X (ARDX). Descriptive analysis documents three important stylised facts. First, industry concentration in the UK has increased considerably between 2002 and 2014 on a wide range of indicators. Second, industries where market power is high are also highly regionally clustered. And third, most dominant firms can be found in London and the wider South East region. Regression analysis shows that firms with market power pay higher wages, suggesting that rent sharing is taking place. However, these firms also have lower labour shares, suggesting that only a fraction of rents is shared with workers.</p>

Presenting author	Abstract
<p><b>Nuo Jin</b> JinN3@cardiff.ac.uk</p> <p><b>Additional-authors</b> Max Munday</p>	<p>Measuring the impact of Brexit on migration to UK: the case of Wales</p> <p>“Brexit” has been viewed as one of the most significant socio-economic issues affecting the UK. A number of research papers have examined the impacts of labour migration restrictions and effects on national and regional economic growth. Agreements between the UK and EU mean that recent restrictions will cover migration from the EU to the UK and with this including universal rules of migration requirements between migrants from the EU and the rest of the world, a stricter and longer investigation process, and with EU students now being categorized as non-domestic students. One issue is how far Brexit has resulted in a reduction of migrants from the EU to the UK, leading to a shortage of labour supply, an imbalance of skillset distributions, and higher risks of economic slowdown or recession.</p> <p>The paper focuses on Wales and explores the historical and forecast impacts of Brexit on migration to Wales. Wales is a useful lens through which to examine these issues as it has one of the strongest labour and economic connections with EU countries among the UK regions. The research questions considered include:</p> <ol style="list-style-type: none"> <li>1. How did Brexit impact migration patterns to Wales after the 2016 referendum, and can these impacts be differentiated with respect to other external shocks such as the Covid-19 pandemic (2020-2022) and the war in Ukraine?</li> <li>2. How will Brexit impact and reshape future migration patterns to Wales?</li> <li>3. How do migration patterns show heterogeneity across different industries in Wales, migrants with different levels of skillsets and with different countries of origin?</li> </ol> <p>The paper employs two main research methods. First is a Markov regime-switching model (MSMs) which was first proposed by Hamilton (1989) to measure the impacts of shifting regimes on financial markets. Bekiros et al. (2018) and Mensi et al. (2019) improved MSMs to analyse the impacts of globalisation on immigration. Second the Portes-Forte model which is based on the NiGEM model and first proposed by Portes &amp; Forte (2017) to forecast EU migration to the UK after Brexit. The MSM method is employed to analyse causal effects of Brexit on migration to Wales. The Portes-Forte model is employed to forecast future impacts based on rational estimates.</p> <p>Regarding data sources, the paper makes use of data from the Labour Force Survey (2010-2022) providing historical data on the demographic patterns of migrants from the rest of the world to all regions of the UK including Wales. The NIESR database (2010-2022) includes major macroeconomic data on 189 countries across the world, which is employed in the construction of an improved Portes-Forte model. The WHO database (2019-2022) provides panel data of case numbers of Covid-19 in 212 countries since 2019, helping to solve out the external variable of pandemic in the models.</p> <p>The regional economic development implications resulting from the econometric analysis are explored.</p>

The research which divided all migrants to Wales into four categories: 1) EU migrants earning less than £30,000; 2) EU migrants earning more than £30,000; 3) non-EU migrants earning less than £30,000; 4) non-EU migrants earning more than £30,000. The research has found that Brexit and relevant concerns contributed to 32% of the total reduction of EU migrants in Wales since 2016. In addition, the paper reports initial forecasts of migration trends into Wales over the next five years, considering external factors such as impacts of the Covid-19 pandemic and 2022 Invasion of Ukraine on migration decisions. The analysis was based on an optimized spatial NIGEM model and with updated data from the Labour Force Survey (LFS). Results show that Brexit has causal effects on the reduction of EU migrants in multiple industries in Wales, and migrants belonging to Category 1 and 2 in the manufacturing industry suffered the most from Brexit in Wales. However, the number of EU migrants and non-EU migrants earning more than £30,000 is expected to increase by 17% and 21% respectively in next five years amid the expectation of loosening migration rules and optimistic labour markets in UK. In addition, the Covid-19 pandemic will not have significant impacts on migration decisions to Wales while the 2022 Invasion of Ukraine is estimated to counteract negative impacts of Brexit on EU migration, contributing to a 12% increase in Central and Eastern European (CEE) migrants to Wales in next five years.

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**Presenting author**

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**Abstract**

Scaling Sustainability? The Future Generations Act and Climate Transformation in Wales

Wales is recognised as having one of the most radical legislative framings for sustainable development amongst all regional governments, with a duty for sustainability built into the legislation for devolution, and a later (2015) Act of Welsh Government requiring all public agencies to demonstrate a care for the Wellbeing of Future Generations in all policy development and implementation. Whilst the Act has certainly been instrumental on moving the political dial - embodied, for example, in the cancellation of almost all major regional road schemes or climate grounds - it has been criticised as unwieldy, overly procedural, and often driving compliance rather than transformation. This paper assesses the effectiveness (so far) of the Act, regarding both the 44 bodies directly under its auspices, and in terms of how it is shifting wider sustainability conversations and behaviours in civic and third sector spheres. We examine climate transition actions in geographic communities (Treherbert, a former coal mining village); in a large mutually constituted housing association; and in the regional environmental agency (Natural Resources Wales) to assess whether the requirements, 'ways of working' and goals of the Act – and more importantly its norms and 'permissions' – can be linked with technical tools such as bespoke carbon footprinting to provide both incentive and evidence to spur the climate transition.

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Presenting author	Abstract
<p data-bbox="204 241 491 271"><b>Abdoul Karim Zanhouo</b></p> <p data-bbox="204 277 536 306">abdoul.karim@strath.ac.uk</p> <p data-bbox="204 313 440 342"><b>Additional-authors</b></p> <p data-bbox="204 349 568 412">Karen Turner, Antonios Katris, Christian Calvillo, Julia Race</p>	<p data-bbox="611 241 1485 342">The potential importance of creating capacity to exploit overseas export markets for CO<sub>2</sub> transport and storage services in realising the economic value of Scottish carbon capture and storage</p> <p data-bbox="611 383 1517 1303">Previous research investigating the UK economy impacts of introducing a new Scottish CO<sub>2</sub> Transport and Storage (T&amp;S) industry linked to carbon capture and storage (CCS) has focussed on supply chain and funding requirements in introducing such a new sector to service proximate Scottish industrial emissions via onshore pipelines. However, Scottish plans extend to shipping CO<sub>2</sub> from outside Scotland for storage in North Sea reservoirs, equating to an opportunity to export T&amp;S services. While this involves investing in greater industry capacity, a key policy question is whether utilising a share of Scottish storage capacity through exports could reduce domestic funding requirements in creating and utilising a larger infrastructure-intensive industry capacity. In practice, further developing the industry to service export demand has implications on the capital intensity and the overall value-added generated by the sector. Here, we introduce improved economy-wide structural (input-output) data reflecting how a Scottish T&amp;S sector may emerge from current Oil and Gas sector industry capacity to an economy-wide computable general equilibrium (CGE) model, and extend to simulate emergence of an export base. Our central finding is that exploiting overseas export opportunities is crucial where the policy aim is to generate greater economic activity while reducing domestic requirements. However, the presence of a persisting labour supply constraints introduces competitive wage pressures that dampen expansionary power, displacing production activity and employment, while driving consumer price impacts that reduce real income and public budget gains. Furthermore, the reliance on international marine transportation services means that some of the economy-wide gains associated with the export demand are not retained by the UK economy.</p>

Presenting author	Abstract
<p><b>Rachael Kawasaki</b> kawasaki.kei.52e@st.kyoto-u.ac.jp</p> <p><b>Additional-authors</b> Yuichi Ikeda</p>	<p>Regional-Contextual factors in the determinants of attitudes towards immigrants: a network science approach</p> <p>As immigration becomes a more prominent feature of countries and economies around the world, public attitudes towards immigrants are a pertinent issue for policymakers aiming to create effective immigration and integration policy globally. However, previous research has mainly focused on European and a select group of Anglophone countries, i.e. the United States, Canada, the UK, and New Zealand. As a result, contextual factors – such as level of development, the size of immigrant population, unemployment, etc. – have not been tested in a global, cross-national context. This study analyzes regional differences in the determinants of attitudes towards immigrants in approximately 50 countries using data from Wave 6 of the World Values Survey (WVS). Countries are first separated into regions based on contextual factors, such as macro-economic indicators and migration profile, using principal component analysis and clustering. Using a novel network science approach, signed and weighted bipartite networks of countries and determinants of attitudes for each region are created, which shows both which countries are most similar to one another in their determinants of attitudes and which attitudinal features are correlated. By creating networks of determinants of attitudes, the study is able to investigate the relevancy of different theories of prejudice, namely social identity theory and intergroup conflict theory, by examining the connections between determinants of attitudes on both the community and sub-community level. In this way, this paper aims to redress the literature gap of how attitudes towards immigrants and prejudice form in non-Western contexts and to examine how contextual factors correlate with attitudes towards immigrants.</p>

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**Additional-authors**Max Nathan - University  
College London**Abstract**

Creative Destruction? The relationship between creative industries, housing markets and gentrification

An established theoretical and case study literature discusses how the creative industries, and Creative City policies, may drive neighbourhood gentrification. However, this literature is inconclusive on the size of these links; whether or not creative activity drives neighbourhood change or follows it; the mechanisms at play; and differences across creative activities and workers, notably the role of artists and 'the arts' versus other creative sectors. This paper seeks to clarify these questions by testing the links between creative industries' presence, changes in housing costs and residential gentrification. We focus at the Output Area spatial scale in England and Wales, using rich UK microdata on house prices, rents, creative firms and workers for the 2000s and 2010s. Preliminary results show limited support for the link between creative industries and gentrification but interesting variations by neighbourhood, creative activity and worker type.

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<b>Presenting author</b>	<b>Abstract</b>
<b>Luise Koeppen</b> m.l.c.koeppen@rug.nl	Drinking Alone: Social Capital and long-term economic and demographic decline (GER)
<b>Additional-authors</b> Dimitris Ballas (d.ballas@rug.nl); Arjen Edzes (a.j.e.edzes@rug.nl); Sierdjan Koster (sierdjan.koster@rug.nl)	The recent literature on the determinants of anti-establishment/anti-system vote has analysed the role of individual and geographical determinants, but several questions remain. A prominent hypothesis proposed in the emerging “geography of discontent” literature claims that places that are “left behind” constitute a breeding ground for the rise of populism. We re-examine this hypothesis by analysing the electoral behaviours related to voting for anti-establishment/anti-system in Germany. In this context, the interest of contextual and individual determinants are considered to examine radical right, radical left and populist voting behaviour. Using socio-economic and demographic data at the individual and regional level (NUTS3), we construct a multilevel model to explain the reasons for anti-establishment/anti-system vote in Germany.

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**Presenting author**

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**Additional-authors**

Dimitris Ballas, Paul Elhorst,  
Daniele Mantegazzi

**Abstract**

Precarious employment and well-being in the U.K: A regional perspective

During the past years, especially in the post Covid-19 pandemic era, the interest in precarious employment has increased, not solely as an academic discourse but as a heated political debate. The limited attention paid by regional sciences as a whole and, particularly, by economic geographers on this topic challenges us to examine the possible influence of higher hierarchies like households or regions on the individual precarity status, which is what this paper does. This research, consisting of the first part from a series of documents to follow regarding the Spatio-temporal dimensions of precarity and individual well-being, sets three key objectives. At first, it presents a definition of precarious employment by proposing three pillars: income, contract and subjective precarity. The next step explores how this status is affected, beyond individual characteristics, by regional or household parameters. Secondly, it examines how the precarity status detrimentally affects happiness and how this effect interacts with higher hierarchies. Finally, it questions whether the fluctuations of individual happiness from year to year can be attributed to the transitions between standard employment, precarity and unemployment.

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Philibert Weenink

**Abstract**

Unpacking Locational Preferences of Entrepreneurs in the Netherlands

Entrepreneurs use objective information in their strategic decision making. At the same time, this information is never complete or arguably even fully objective. Perceptions, images and interpretations are then also important considerations in strategic decision making by entrepreneurs. This study takes this idea as its starting point and it explores the spatial patterns of the perceived locational preferences of entrepreneurs in the Netherlands. The study presents results of the latest installment of a survey on the issue that has been running since 1981. The analysis has two main aims.

As a first aim, the study maps and analytically explores the spatial patterns in the locational preferences of Dutch firms. Which regions do they prefer as their preferred location and how has this pattern evolved over time? The economy has drastically changed since 1981. Has this translated into new locational preferences of entrepreneurs? In a next step, the ensuing spatial patterns are unpacked by identifying the underlying factors. In particular, we zoom in on the strength of the neighbourhood effect, which is the preference for the current location. Differences in the strength of this effect are indicative of the satisfaction with the current location and as such important input for local policy makers.

The second aim builds on the idea that regions typically have multiple images that relate to different activities or functions. A region can be perceived as very attractive as a residential area, but not as an entrepreneurial area. And, if these are contrasting images, they may influence one and other. The survey offers the unique opportunity to gauge this multidimensionality of regional images and how they mutually influence each other. Specifically, we explore how images not necessarily connected to the business environment impact on the locational preferences that entrepreneurs have. Though set in the Netherlands, the empirical exploration of how various regional images are interconnected and how they strengthen or undermine each other also translates to other geographical contexts.

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Presenting author	Abstract
<p><b>Matthew Lyons</b> m.lyons@bham.ac.uk</p> <p><b>Additional-authors</b> Huanjia Ma; Raquel Ortega-Argilés</p>	<p>Can R&amp;D policy help rebalance the UK economy?</p> <p>R&amp;D spending is acknowledged as a route to increased growth and productivity for national and regional economies. In the UK, R&amp;D spending is heavily biased towards London and the South East of England, the already most productive regions of the nation. In 2022, the UK Government launched its latest iteration of the national industrial strategy with the Levelling Up White Paper which sought to rebalance the national economy. One of the twelve core “missions” outlined in the white paper is focused on increasing the domestic public Research and Development outside the South East of England by at least 40% by 2030.</p> <p>Combining information from data from different sources (UKRI and ONS), the paper outlines three different redistribution scenarios of R&amp;D spending in the UK based on different assumptions about the distribution of the spending. The paper uses the multi-regional Socio-Economic Impact Model for the UK (SEIM-UK) to evaluate the impact of these three scenarios on UK regions (12 UK NUTS1) in terms of output, GVA, employment in sectoral and occupational detail.</p> <p>Our findings suggest that impact varies significantly across the different UK NUTS-1 regions in different scenarios. We find that scenario 2, which allocates more additional GERD to regions with previously low funding levels, yields the largest effect. On average, output, employment and GVA in regions outside LSE increase by 0.33%, 0.37% and 0.34%, respectively, showing a potentially positive effect on the levelling up of R&amp;D in the country.</p>

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**Presenting author**

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**Abstract**

Historical analysis of spatially concentrated hydrocarbon industry of Az: the role of purposive agency in new path development

In recent years, Azerbaijan has taken major steps towards unlocking its huge untapped renewable energy potential. Starting from 2019, Azerbaijan has attracted largest FDI in renewable energy sector. The projects particularly gathered in coastal, Eastern Azerbaijan. Recently, big hopes have been particularly set on the offshore and onshore wind projects in transitioning from well-established fossil fuel industry. Two recently discussed evolutionary concepts explain the concentration of new projects in this particular space: the windows of locational opportunity concept stresses the locational freedom in the earliest stages of industrial development, whereas path creation emphasizes the role of existing industrial development paths, such as fossil fuel industry, from which new industrial paths, such as wind energy, emerge. This paper aims at analysing the role of purposive agency in development of the new industrial path of renewable energy in the Eastern coastal Azerbaijan, namely Absheron peninsula. To do this , we mainly focus on the role of regional agencies related to the dominating fossil fuel industry in explaining the genesis of the renewable energy industry in Absheron peninsula. The main sources for the empirical parts of this research consist, on the one hand, of primary data collected through in-depth interviews as well as secondary data in the form of annual reports, strategy papers and other statistics and reports.

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Professor Elisabete Silva

**Abstract**

Simulating and Predicting Built-up expansion in West Delhi with an integrated Machine Learning and ABM based Prioritised Growth Model

The expansion of built-up areas is a complex phenomenon shaped by a range of factors that vary across space and time. Previous studies employing ANN-ABM techniques have effectively simulated existing land use patterns but overlooked the impact of futuristic development policies on land use simulation and prediction. To address this, the study proposes an integrated ANN-ABM-based Prioritised Growth Model applied to the West-Delhi region in Delhi, India. The model considers growth patterns based on historical trends as well as those informed by planned interventions. Simulations of land use for 2021 exhibit higher accuracy ( $\kappa$  0.85) with planned interventions compared to those without ( $\kappa$  0.83). The model also predicts land use for 2041 with and without consideration of planned interventions. The resulting change in spatial growth under these two scenarios is visualised through a change map, which identifies areas of gain and loss in the built-up area as growth patterns shift from a business-as-usual scenario to a planned growth scenario. This model offers a useful tool for planners to understand where future growth is expected and how to channel this growth through strategic planning interventions.

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**Presenting author**

**Andreas Mastrosavvas**  
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**Abstract**

Social Networks and Brexit: Evidence from a Trade Shock

Regional exposure to Chinese import competition has often been linked to support for the Leave option in the 2016 UK EU membership referendum. Looking at 143 harmonised ITL3 regions covering England and Wales, and using data on the density of online social ties between them, I show that regional support for leaving the EU was also associated with exposure in socially connected regions. I first delineate 18 commuting zones based on interregional flows over three Census years. For each region, I then construct a measure of own exposure to Chinese import competition and a measure of exposure in a set of social neighbours located outside its commuting zone. Exploiting variation within commuting zones, and using an instrumental variable approach, I find that the two measures have comparable positive effects on the regional share of the Leave vote. In a series of checks, I do not find evidence that the effect of social neighbours' exposure is driven by an economic channel or a relationship between import competition and social ties. I also corroborate the regional results using survey data on vote choice. I interpret these findings as indicative of social spillovers between local labour markets: information flows from social neighbours are a likely channel behind the estimated spillover effects on voting outcomes.

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**Presenting author****Philip McCann**

philip.mccann@manchester.ac.uk

**Additional-authors**Michiel Daams, Paolo Veneri,  
Richard Barkham**Abstract**

Capital Shocks and the UK Regional Divides

This paper exploits signals of capital pricing and availability in UK cities and regions which are obtained from uniquely-detailed data on real estate investments. We identify how places were differently affected by the 2008 global financial crisis and provide insights which offer an alternative explanation of why UK regional economic growth continues to experience spatial divergence. Investment pricing demonstrates that before the crisis capital was allocated efficiently across UK localities, whereas the global financial shock heavily favoured London over all other places as a result of a 'flight to safety'. The asymmetric capital shocks have persistent regional growth implications.



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**Presenting author****Stuart McIntyre**  
s.mcintyre@strath.ac.uk**Abstract**

Regional Output Growth in the UK: Improving Estimates by Incorporating New Data Sources

The goal of this paper is to produce timely nowcasts or flash estimates of regional growth for the UK using time series econometric methods. In earlier work, we developed a regional model which relied mostly on UK variables to improve the nowcasts of regional growth. In this paper, we develop methods for including a wide range of regional indicators into our earlier model. The issue which arises is that many of these regional indicators are short time series which are not available for the full time span of the data. We surmount this problem by creating regional factors to be incorporated into our model. At the beginning of our sample, these regional factors reflect information in only a few regional variables, but as time passes and more variables become available these are included in the factors. There are several ways these regional factors can be calculated and we compare the properties of these and investigate to what extent they improve the regional nowcasts once they are included in the model.

Presenting author	Abstract
<p><b>John Moffat</b> john.moffat@durham.ac.uk Additional-authors</p>	<p><b>Regional Productivity Differences in Great Britain: A Tale of Distributions?</b></p> <p>The United Kingdom economy suffers from a long-standing productivity disadvantage relative to major developed economies such as France, Germany and the United States. This national productivity problem can be viewed as a regional productivity problem because it can be explained by the United Kingdom having comparatively few high-productivity regions: while London was in the first quartile of gross value added per worker amongst (TL2) regions in the G7 in 2019, all other regions (with the exception of the East and South East of England) were in the fourth quartile. There is therefore considerable scope for improving the United Kingdom's national productivity performance by raising productivity in laggard regions.</p> <p>This paper explores whether regional productivity differences in Great Britain are the result of differences in the shape of regional productivity distributions. Specifically, it seeks to identify whether regional productivity gaps between the 'Greater South East' (comprising London, the East and South East of England) and other regions can be explained by lower productivity throughout the distribution or the presence of a higher proportion of low-productivity plants (i.e., thicker tails at the lower end of the distribution) in laggard regions. In the first stage of the analysis, plant-level estimates of labour productivity and total factor productivity are constructed using data from the Office for National Statistics' Annual Business Survey. In the second stage, quantile regression models are estimated to show whether there are significant differences in productivity at different percentiles of the productivity distribution.</p> <p>The results have important implications for the appropriate design of policy since, if productivity differences are primarily due to thicker tails at the bottom of the distribution in low-productivity regions, this implies the need for more targeted support than would be required if productivity differences are evident throughout the distribution.</p>

Presenting author	Abstract
<b>Vassilis Monastiriotis</b> v.monastiriotis@lse.ac.uk	<p data-bbox="611 241 1155 271">The remorse of the places that didn't mean it</p> <p data-bbox="611 315 1517 1303">The two big voting shocks of 2016 (Brexit referendum, USA Presidential elections) and a series of marginally fought national elections in Europe between establishment and anti-establishment parties (in Italy, France, Poland and elsewhere) gave rise to a vast literature that got itself concerned with the rise of populism in Europe and globally. In the geography literature this soon turned into a focus to the specific role of location – the so-called left-behind places – in shaping political discontent. Amidst debates about the "geography of discontent" and the challenge of managing "left-behind places", one important contribution helped frame the debate as a matter of a presumed "revenge of the places that don't matter" (Rodriguez-Pose, 2017). Despite the important analytical value of this, and the convincing empirical evidence that supported it, electoral dynamics at least in Britain and the USA seem to have shifted significantly since then – raising the question as to whether the diagnosis of the "rise of populism" as a secular / semi-permanent event, directly linked to local neglect (the losers from globalisation), was perhaps somewhat premature. In this paper I look at USA country-level electoral data from the 2020 Presidential election and identify the localities (and their geography) that shifted away from Republican vote, withdrawing their support to Donald Trump. Through a mainly descriptive/exploratory analysis (probit regressions and decomposition techniques), I examine the covariates of the shift, seeking to understand the characteristics (and geography) of "the places that regretted it". I examine how the explanations concerning the affection to populism for the "places that don't matter" stand to the post-2020 geography of pro-populist and pro-liberal voting. This involves a double-comparison: between places that "reverted" and places that "reverted and then regretted" (moving from Democrat to Trump and back to Democrat); and between the latter and ones that "never reverted".</p>

Presenting author	Abstract
<p><b>Ruth Neville</b> ruth.neville@liverpool.ac.uk</p> <p><b>Additional-authors</b> Prof. Alex Singleton, Dr. Francisco Rowe</p>	<p>Understanding flows of internationally mobile students into the UK between 2009-2019 using UCAS data</p> <p>The UK is one of the key destinations in the world for internationally mobile students. As a result, it is important to understand more about the flows of internationally mobile students into the UK, and what determines these flows both generally and at the level of the individual origin country. This research uses acceptances data provided by the UK Colleges and Admissions Service (UCAS), and ancillary open data sources such as the World Bank, UNESCO and the CEPII Gravity Database, to consider the determinants of flows from over 150 origin countries. The aim of the research is to both understand how patterns of internationally mobile students into the UK have varied over time, as well as what the key determinants of these flows are. By using a suite of multilevel mixed-effects negative binomial gravity models, we are able to learn more about the key determinants of international student mobility as well as how these determinants vary across different countries in different regions. Whilst this research corroborates previous findings around the importance of established networks and cultural and linguistic connections, it also brings doubt on some commonly held theories in regard to the economic incentives behind international student mobility. By looking at how determinants vary by country, we can build a deeper and more complex picture of international student mobility and consider comprehensively how students from different countries respond to different demand and supply factors at the origin and destination. This research helps to build a firm foundation for future research that will consider how these patterns of mobility are impacted by external shocks such as COVID-19 and Brexit and how these patterns of mobility will be affected in the future.</p>

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**Presenting author****Conor O'Driscoll**

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**Additional-authors**

Dr. Frank Crowley

Prof. Justin Doran

Dr. Nóirín McCarthy

**Abstract**

Travel Behaviours and Built Environments On The School-Run

School-runs are staple trips within global households. Yet, they do receive the same level of policymaking or academic attention as workplace commutes. Despite this, their consistency across households presents opportunities for policymakers to facilitate shifts away from excessive car-use in favour of greater active and public transport use, thereby positively contributing to sustainability efforts. To investigate this, we employ Generalised Structural Equation Modelling to analyse the relationships between individual socio-demographics, built and social environment characteristics of residential and school locations, trip-specific considerations, and the travel mode choices of secondary school students across the Republic of Ireland. We find that landscapes which reduce the time-space geography of regions are associated with significantly increased odds of using active and public transport over cars, effects which are stronger in residential areas, and that increases mode-specific infrastructure (i.e., roads) provision are consistently associated with mode-specific (i.e., cars) use.

Presenting author	Abstract
<p><b>Josh O'Driscoll</b> 116336283@uemail.ucc.ie</p> <p><b>Additional-authors</b> Frank Crowley, Justin Doran, David Meredith and Mary O'Shaughnessy</p>	<p>The impact of motorway off-ramps on population change in Ireland</p> <p>New highways transform the spatial structure of cities and regions by reducing the costs of commuting to employment centres and improving accessibility in peripheral areas. There is substantial evidence that highways induce suburbanisation, reduce population densities in central cities, and increase population levels and economic performance of peripheral areas. Understanding the spatial and economic consequences of large-scale transportation infrastructures is important as access to markets and proximity to workers and jobs are prominent criteria in the location decisions of firms and households, meaning transportation infrastructures are an important determinant of individual welfare and regional disparities.</p> <p>Our rectified dataset, comprised of seven Irish Census of Population from 1986 to 2016 at the Electoral Division (ED) level, covers 3,384 EDs in the Republic of Ireland. Additionally, we use OSi PRIME2 data and Transport Infrastructure Ireland data to identify off-ramps. We use POWSCAR data to examine commuting patterns in the areas which benefit from off-ramps. We contribute to the existing literature in the following ways. First, there has been great interest in the role of accessibility on population changes. The natural experiment provided by Ireland allows us to examine the role of proximity to motorway off-ramps on population change. The Irish case is a particularly interesting study. Most of the motorway in Ireland was developed over the course of the 30-year period, 1986-2016. Secondly, one potential gap in the literature consists of the role of transport infrastructure on commuting to work patterns, particularly cars. Thirdly, most studies on the effects of motorway are at a larger spatial scale, such as cities or NUTS 2/3 data. We operate at a smaller spatial scale, LAU2, to examine the local level effects of motorway construction on population change on the surrounding areas.</p>

Presenting author	Abstract
<p><b>Xiuxiang Pan</b> x.pan@rug.nl</p> <p><b>Additional-authors</b> Daniele Mantegazzi; Sierdjan Koster; Dimitris Ballas</p>	<p>Are there happiness costs of late-life migration? an empirical study on rural-to-urban elderly migrants in China</p> <p>With the aging of society, the issue of aging-related migration has garnered increased attention. However, previous research on the relationship between internal migration and well-being has either assumed a homogeneous migrant population or focused on the young, primarily in the context of economic migration. As a result, the elderly migrant group is understudied. With the rapidly increasing number of elderly migrants and the trend towards family-based migration in China, it is of significant to investigate the impact of late-life migration on the well-being of these elderly migrants.</p> <p>This study aims to contribute to the literature by focusing on the Chinese context and examining the impact of late-life migration on the well-being of rural-to-urban elderly migrants (REM). Using data from the China Family Panel Studies (2010-2020), a representative household survey in China, the study employs a Difference in Difference approach with a staggered data setup and incorporates elements of the Event Studies Approach to analyse the effect of late-life migration on mental health of Chinese rural elderly migrants.</p> <p>The results show that late-life migration has a negative impact on mental well-being of rural-to-urban elderly migrants and that this impact persists and deepens in the years following migration. These findings highlight the need for measures to improve the living experiences of rural-to-urban elderly migrants and their families in urban areas.</p>

Presenting author	Abstract
<p><b>Gainbi Park</b> gainbi.park@newcastle.ac.uk <b>Additional-authors</b> Rachel Franklin, Eric Seymour</p>	<p>Growth and Decline: Unfolding Landscapes of U.S Demographic Changes using a Contextual Approach</p> <p>The United States has experienced a significant change in population size and demographic structure across space for decades. Especially, as the country’s population growth has consistently flatlined in recent decades, population decline has become prevalent in both rural and urban areas, being an imminent demographic challenge to tackle. In this study, we explore the spatial extent of prolonged population shrinkage in the U.S at the county level on a national scale. Adopting a spatio-temporal contextual approach, this study first classifies the whole U.S counties into two groups that manifest either population growth or loss based on their profile between 2010 and 2020. Using this dichotomous profile, this study further investigates the prominent population trajectories that characterize America’s demographic landscapes focusing on population change over the past seven decades (1950-2020). We find that U.S. counties have 8 distinctive pathways in their demographic processes. Each of these trajectories is distinct ranging from emerging localized loss to persistent loss over the study period. However, these patterns are present, not just in population loss, but also in population growth counties, where four distinct growth trajectories are also identified, most having clustered patterns throughout the U.S. Persistent loss dominates the landscape of the Great Plains region, defined by constant population loss over the last seventy years. Most of California and the western states have seen constant growth during the study period, however, there are emerging areas where population is shrinking locally, beginning in the last decade. This study highlights the contextual understanding of depopulation through the examination of regionalized and localized population growth and loss, offering a complete picture of population change in the United States. Keywords: population shrinkage, depopulation, sequence analysis, spatial demography</p>



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**Presenting author****Clara Peiret-Garcia**c.peiret-  
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Rachel Franklin

Alistair Ford

Joe Matthews

**Abstract**

Accessibility for whom? Applying a data-driven approach to calculate activity-based accessibility metrics.

Providing equitable and more sustainable access to basic amenities is key to cutting carbon emissions and increasing social equity in cities. This paper applies a data-driven approach to generate an activity-based accessibility index for British cities. To do so, we employ a two-step approach. Using a Self-Organising Map, we first generate behavioural profiles based on time use survey data. We then use the resulting clusters to determine the weight of the different amenities we use as inputs in our accessibility index. In this extended abstract, we present the preliminary results of our analysis. The outcomes of the first tests of our methodology are not yet completely satisfactory, particularly those regarding the first stage of our proposed methodology. The second-stage proposed methods, however, seem to provide us with interesting insights and sensible outcomes. Overall, the proposed methodology appears to be promising, although further exploration is needed to improve the final results.

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**Presenting author**

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**Abstract**

Disability benefit patterns and the health impact of the pandemic

There has been a large increase in the number of people awarded disability benefits, Personal Independence Payment (PIP) in England and Wales between 2021 and 2022. PIP is aimed to help compensate some of the living costs associated with disability, is not means tested and does not depend on one's working status.

The increase of 48% between 2021 and 2022 has been far from uniform across space, ranging from 18% to 90% for local authorities. As Joyce, Chaudhuri and Waters (2022) note this increase does not seem to be driven by a change in how the benefits are allocated, as the proportion of claims that have been awarded has remained consistent with previous years and remains at 40%. The authors suggest the reason for the increase to be deteriorations in health across all conditions that disability payments are granted for.

The aim of this study is to ascertain if economic factors are associated with the increase in PIP by local authorities. A spatial econometrics model is used to explain the spatial pattern of the increase in PIP claims controlling for health authority areas. The dependent variable is the percentage increase in PIP claims between 2021 and 2022. The explanatory variables are local authority level data on the level of PIP recipients in 2019, industry sectors, occupation, employment status, demographic characteristics from 2021 Census data for local authorities, as well as at risk of poverty rate for UK local authorities computed as part of Horizon 2020 IMAJINE project. Preliminary analysis underscores the difficulty in disentangling the economic and health factors at play. The concern is that poorer areas are at a risk of suffering more from already existing health inequalities and health impacts of the pandemic. The link to the economic determinants is that these same areas have experienced greater economic shock and variable recovery because of their sectoral and occupation composition where greater share of workers could not work from home. These areas are also likely to be harder hit by the cost of living crisis prompting those eligible for disability benefits to apply for them. Persistence in benefits uptake has implication for regional inequality in economic and health outcomes and diverging patterns of growth and development.

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Presenting author	Abstract
<b>Aisling Reynolds-Feighan</b> aisling.reynolds@ucd.ie	<p data-bbox="611 241 1509 304">Airline Schedule Variability in the Covid Era: Analysis of the Impacts of Covid19 on US Airline Schedule Planning and Service Delivery, 2018 – 2022</p> <p data-bbox="611 349 1509 1126">This paper examines scheduled capacity allocation and actual service delivery for the US domestic air transport market over the period 2018 to 2022. Using schedule data provided by airlines to sell passenger seats, and US BTS T-100 ex-post schedule and passenger performance indicators, a service gap measure is proposed to capture the variance between the monthly scheduled capacity offered for sale and the actual service delivered by all US airlines operating jet equipment. The paper covers three periods: (i) the pre-pandemic period 2018-2019 (ii) the Covid19 Pandemic Period 2020-2021 and (ii) the Pandemic Recovery period of 2022. The pre-pandemic period forms the basis for comparative analysis of the Pandemic impact. In the 2018 -2019 period, service redundancy and variability are explored by airline, geographic area and equipment type. We explore in detail the extent of equipment substitution by the three large full service carriers (FSCs) among their sets of contracted feeder carriers, and measure the degree of equipment choice for routes in the brand network. We examine the relationship between load factors and equipment substitution in the pre- and post-pandemic periods by way of analysing the source of the service gap between the scheduled service and actual service. Summary data on airline employment trends, fleet inventory and government-imposed restrictions are examined to develop insights into the drivers of the service gaps. Data tracking flight cancellations are consulted to cross-check the accuracy of the estimated service gap.</p> <p data-bbox="611 1133 1509 1379">The paper provides new insights into airline route and schedule planning processes before, during and after the Covid19 pandemic. The paper provides an assessment of the drivers of air service reliability and vulnerability in the post-pandemic period and highlights some key changes in recent airline operations as the sector recovers from the pandemic. These insights make an important contribution to the emerging literature on the impacts of the pandemic on US aviation.</p> <p data-bbox="611 1386 1509 1554">Data: Data from the Cirium airline schedules databases are combined with the US BTS T-100 domestic US segment data to develop the traffic and performance measures used in the analysis. The data are monthly and cover very detailed information by airline (marketing and operating carriers), airport, route, equipment type.</p>

Presenting author	Abstract
<p><b>Colin Robins</b> colin.robins@plymouth.ac.uk</p> <p><b>Additional-authors</b> Oliver Udy</p>	<p>The Anthology of Rural Life; photographic documentations of European rural communities.</p> <p>The Anthology of Rural Life is a collaboration between Colin Robins and Oliver Udy, both photographers and photographic lecturers based in south west England.</p> <p>The focus of the project are contemporary European rural communities. Through engagement with individuals and social groups the photographers record and reflect elements of shifting European economic, social, and cultural climates within diverse rural contexts. Overarching these considerations are the challenges presented by environmental concerns and the fact that currently we witness a Europe framed between re-emerging nationalisms and the hyper-connectivity made possible by the now familiar patterns of economic globalisation and advancing communicational technologies. The ARL project has evolved an extensive multi-disciplinary approach – the project uses visual research to explore narratives of community within contemporary rural life and has involved the participation of experts on rural economies, regional governance, social scientists as well as writers on art and photography.</p> <p>The Anthology of Rural Life has developed in conjunction with various arts, cultural and educational partners in the UK, Lombardy, central Poland and southwest Finland. Our research network includes: the Department of Life Sciences at the University of Warsaw, the National Museum of Rural Life, Loimaa, Finland, the Museum of Contemporary Photography, Milan, the Museo Etnografico dell'Alta Brianza, the Regional Council of Lombardy, Milan, Arts Council England, GRAIN and Plymouth and Falmouth Universities.</p> <p>Martin Barnes (Senior Curator of Photography , V&amp;A) has recently written of the project:</p> <p>Robins and Udy’s project overlaps with disciplines of photographic anthropology, cultural geography and rural sociology. Their work can be situated more specifically within a distinguished history of comparable photographic projects that combine the visual language of artistic practice with the remit of an investigative survey. They describe what they do as ‘gently mapping’ a place and its inhabitants. The result avoids agrarian romanticism and rural heroism. Rather, it provides an understated, descriptive emphasis on individuals and specific sites...But despite its geographical range and ambition, the project remains fittingly humble, human and intimate – the opposite of the disembodied, encyclopaedic aims of Google Earth. ARL is instead an immersive, tangential, attuned and rewarding exercise in slow looking.</p>

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Presenting author	Abstract
<b>Bart Roelofs</b> b.j.roelofs@rug.nl	<p data-bbox="611 241 1522 271">Spatio-Temporal trends of dengue infections in Curaçao: A 21-year analysis.</p> <p data-bbox="611 315 1522 1303">Dengue viruses are a major cause of disease around the world, with 100-400 million infections annually and approximately half of the world population at risk at the moment, according to the WHO. In order to effectively prevent outbreaks in the future, the spatial-temporal patterns of dengue virus spread must be better understood. Investigating spatio-temporal patterns can help improve targeted dengue surveillance and control, which can assist in effective outbreak management in regions suffering from dengue. Dengue is endemic to Curaçao, and frequent outbreaks of dengue occurred over the past 25 years. To investigate the spatio-temporal trends of dengue outbreaks on Curaçao, this study utilizes a broad interdisciplinary and multi-method approach. Demographic, atmospheric, climatic and geographical factors were investigated with the aim of gaining insights on the spatio-temporal dynamics of this vector borne disease. Data on more than 6500 cases of dengue infections in Curaçao between the years 1995 and 2016 were used. Temporal and spatial statistics were applied. The Moran's I index identified the presence of spatial autocorrelation for incident locations, with Moran's statistic of 0.06 (<math>p &lt; 0.01</math>) for the total study period. The majority of cases were recorded in highly populated areas and a relationship was observed between population density and dengue cases. Temporal analysis established that cases mostly occurred from October to January, during the rainy season. Additionally, lower average temperatures, higher precipitation and a lower sea surface temperature appear to be related with an increase in dengue cases. This effect has a direct link to La Niña episodes, which is the cooling phase of El Niño Southern Oscillation. The results can improve dengue outbreak management on Curaçao, by identifying hotspots through space and seasonal and yearly cycles over time.</p>

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Presenting author	Abstract
<p><b>Rachael Sanderson</b> r.sanderson4@newcastle.ac.uk</p>	<p>Where is Tweeting What about London?: Investigating Discontent in Left Behind Places</p>
<p><b>Additional-authors</b> Rachel Franklin, Joe Matthews, Danny MacKinnon</p>	<p>The “levelling up” agenda set out by the UK government was designed to tackle entrenched regional patterns of social inequality, which have been associated with “left behind places”. These places are united through discontent resulting from being ‘left behind’ in regional development, experiencing stagnation whilst other, often metropolitan, areas experience rapid growth. This discontent is often contextualised as being the post-industrial towns against the “superstar cities” (Kemeny and Storper, 2020) or “metropolitan elite” (Jennings and Stoker, 2016). This divide is experienced internationally, with the favouritism of elite areas argued to contribute to this political discontent, and dissatisfaction targeted towards the capital city has been observed in survey data (Rickardsson et al., 2021).</p> <p>Using London as a case study due to its positioning as the richest region in Europe despite the UK being a spatially unequal country (UK2070, 2020), this study will use social media data to evaluate this discontent. Social media data has been suggested as a barometer for public opinion, particularly with regards to politics associated with geographies of discontent and the Brexit vote (del Gobbo et al, 2021). This study will analyse perspectives of London from outside London to evaluate how the data source can be used to understand these geographies of discontent, and identify populations (and so potential causes) for why groups and places feel “left behind”.</p>

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Presenting author	Abstract
<b>Kim Swales</b> j.k.swales@strath.ac.uk <b>Additional-authors</b> Andrew Ross Peter McGregor	<p>The system-wide impacts of large-scale, labour augmenting technological change</p> <p>Abstract: The employment impact of future technological change is much debated. Some commentators predict devastating job losses, while others are more sanguine, claiming that technological change raises living standards without reducing total employment. We employ a combination of partial equilibrium analysis and dynamic multi-sectoral computable general equilibrium (CGE) simulation to assess the system-wide implications of skill-biased, labour-augmenting technological change. The numerical CGE results encompass, to a degree, both the pessimistic and optimistic perspectives. Labour-augmenting technological change typically stimulates GDP growth but, whilst having negative short- and medium-run impacts on employment and wages, it produces overall long-run employment benefits. This implies that, at least in the short run, there may be pressure on the Government to counteract negative labour market effects. Policy should focus on the skill-group whose efficiency remains unchanged. Our simulation results emphasise that the industrial structure, and the openness of the economy to migration and trade are crucial in absorbing the system-wide impacts of technological change. The simulations use national data but the emphasis on migration and export sensitivity make the discussion around the results relevant for regional analysis.</p>

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Presenting author	Abstract
<p data-bbox="204 241 536 271"><b>Sai Durga Malleswar Thota</b></p> <p data-bbox="204 277 488 306">saidm@dc.tohoku.ac.jp</p> <p data-bbox="204 313 437 342"><b>Additional-authors</b></p> <p data-bbox="204 349 360 378">Yuzuru Isoda</p>	<p data-bbox="611 241 1442 271">A New Way of Quantifying Settlement Hierarchies: Fractal Dimension</p> <p data-bbox="611 313 1513 1303">Settlement patterns provide crucial insights into local problems like underdevelopment due to various types of spatial distribution of the population, especially in rural regions. This growing necessity increased the demand for the quantification of settlement patterns. Settlement patterns are complex spatial objects which cannot be quantified using conventional mathematical models. The concept of Fractals was extensively researched and used to understand complex geographical phenomena like urban growth, settlement agglomeration, etc. In this study, we proposed a 3D box-counting method to estimate the fractal dimension of the gridded population dataset without any preprocessing. The key objective of this study was to achieve proper quantification to represent the pattern of settlement hierarchies of any region using the proposed fractal dimension (FD), regardless of urban or rural. We hypothesized the settlement hierarchies as an imaginary self-similar structure and estimated the 3D fractal dimension of the gridded population dataset. We applied the differential box-counting method to estimate FD, and scaling is done using least linear squares. We estimated FD for two study areas, the USA and India. The entire dataset of each country was split into grid cells of 100 km×100 km to estimate local FD. Random cases were picked from the USA and India to explain the significance of the FD value. Results agree with the hypothesis and show that FD varies systematically with the visual impression of population clusters visible on the map. FD estimated in this study is able to distinguish the settlements with organized hierarchy from other types of settlement patterns even though they have a similar population count. Other findings include the relation between population count and FD, which is not perfectly linear. However, upon the classification of research units into four quantiles, the change in FD value explained the clustering behavior of the population.</p>



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<b>Presenting author</b>	<b>Abstract</b>
<b>Emmanouil Tranos</b> e.tranos@bristol.ac.uk <b>Additional-authors</b> Tasos Kitsos, Levi Wolf	<p data-bbox="598 235 1546 313">Internet and firm productivity: a multilevel approach based on experienced broadband speed data</p> <p data-bbox="598 347 1546 952">The discussion about the productivity gains from digital technologies is almost as old as digital technologies themselves. From early futuristic approaches to the various forms of the productivity paradox, there are still open questions regarding if and how the internet can lead to positive economic effects. The usual caveat to unpack this relationship is data about internet usage that is detailed enough to be linked both to economic outputs and places. We develop a multilevel framework and combine firm-level microdata with novel internet speed microdata illustrating how connectivity has been experienced by end-users. We observe firms, their productivity, and other firm characteristics and estimate the effects of broadband speeds after accounting for spatial effects and platial characteristics. Our results indicate that it is differences in the top (90th percentile) internet speeds that are associated with higher firm productivity rather than variation in the median. These results vary by sector and depict a clear urban benefit. They have significant policy implications, highlighting the material impact of rollout decisions and presenting policymakers with dilemmas regarding efficiency vs. equity.</p>

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<b>Presenting author</b>	<b>Abstract</b>
<b>Yichen Wang</b> 117101319@uemail.ucc.ie <b>Additional-authors</b> Dr. Frank Crowley, Prof Justin Doran and Dr. Mari O' Connor	<p>The impact of industry structure on individual's automation risk in China</p> <p>In this paper, we test the industry structure that is expected to have a strong impact on individual automation risk in China. The hypothesis of interest is that differences in Chinese industrial structure are a factor of variations in individual automation risk across different provinces. We examine the relationship between regional vulnerability to job automation, specialization, diversity and population density using data from 2010 to 2018 by CFPS (China Family Panel Study) and Frey and Osborne's (2013) work, then our approach merged the individual automation risk to match the provincial industry structure data from Chinese statistic yearbook (2010-2018) to obtain the measure of impact and to test what characteristics of regions cause the greater distribution to individuals automation risk.</p>

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Presenting author	Abstract
<p data-bbox="204 241 472 271"><b>Muanmas Wichiensin</b></p> <p data-bbox="204 277 440 306">fengmms@ku.ac.th</p> <p data-bbox="204 313 440 342"><b>Additional-authors</b></p> <p data-bbox="204 349 421 378">Sawitree Sripayak</p>	<p data-bbox="611 241 1522 306">Factors to Promote the Choices of Travel for the Visually Impaired: Bangkok Metropolitan Area</p> <p data-bbox="611 349 1522 1124">The purpose of this research was to determine the factors influencing the decision making on how to travel to the school or workplace. The factors in each of the travel alternatives were examined with the binary logit model. The choices considered were five modes: private cars, taxis, buses, vans and metros. The results showed that factors that significantly affect the personal car model are: the time spent for waiting for a car, the visually impaired who seeks travel comfort, age and fuel prices. The total accuracy of the model was 89.8%. The factors that significantly affected the taxi model were the fare, the home province and distance traveled. The total accuracy of the model was 81.6%. Factors that significantly affected the bus model were the fare and the education levels, with a total accuracy of 84%. Significant factors affecting the public van model were home province and distance traveled, with a total accuracy of 90%. Factors that significantly affected the metro model were current factors, career and education level. In addition, with regard to visually impaired people who wanted to travel faster, the total accuracy of the model accounted for 97.5%. From the opinion polls surveyed, the most significant factor found in most decision-making travel patterns were vehicle safety, passenger density, fuel price or fare, help offered by staff and the convenience of travel, respectively. If a relevant agency wants to promote the travel of the visually impaired, all the options should be considered and one should also focus on their needs in order to help them travel efficiently.</p>

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Presenting author	Abstract
<b>Genghao Zhang</b> us22386@bristol.ac.uk	Does Digital Transition Contribute to Green Transition or Over-consumption? An Empirical Study in the UK  Energy poverty in less developed areas leads to increasing inequality issues during the era of climate change. Scholars discuss whether the adoption of ICT and industry 4.0 technologies ameliorate the situation of increasing greenhouse gas emissions (GHG), while governments introduce a development strategy of twin transitions. However, limited research investigates the spatiality of how digital transition (DT) affect green transition (GT) directly and indirectly in industrial and commercial sectors by using comprehensive index systems. Filling in this gap, my research adopts OLS, ordinal logistic and multinomial regression methods to examine how digital capacities affect clean energy (CE) consumption and industrial-commercial GHG emissions per person (PP) across 374 local authorities in the UK during 2010-2019. Data such as energy consumption and GHG emissions stem from the Office of National Statistics. Results found that ICT sectors accounting for a higher proportion of gross value added (GVA) increases industrial GHG PP significantly and, indirectly, the higher GVA of ICT contributes to commercial GHG PP by improving GDP per capita significantly. What's more, urban areas conducting service activities locally with higher income per capita take advantage of pollution in rural areas specialized in production sectors. In sum, developed areas generate much revenue, but environmental pollution is shared by every individual. Aiming for reducing this spatial inequality, my research provides various suggestions for four types of local authorities.

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## **Minutes AGM 2022**

### **Minutes**

No comments

### **Chairs report**

Results : We had 5 RSAI-BIS themed sessions at Regions in Recovery festival (RSA), well attended

Doctoral colloquium: In our second edition of the doctoral colloquium we had 43 papers presented across a wide geographic and conceptual scope.

### **Financial report**

- Perhaps do more with membership academy of social sciences
- Small loss: rollover of the conference, and small increases in the contract for the conference. We were late with the early bird fee meaning most people made use of this. Next year earlier

No comments on the accounts

### **Spatial economic analysis**

IF gone up

There was a Special Issue international women's day with publications by female scholars

We should consider expanding the scope of the journal more in the direction of data science and input-output models

Paul Elhorst's term comes to an end. New editor: should be probably a BIS member (GC).

### **Committee election**

12 members

Tasos, Richard, Maria, Stuart (Officers)

Peter Batey, Maria Plotnikova, Grant Allen, Matt Lyons, Ozge Oner

Rachel Franklin, Emmanouil Tranos, Daragh O'Leary

GC proposed, AN seconded

### **Any other business**

Discussion on widening the scope and appeal of the annual meeting:

PB: World congress, each section organised session. Will we organize a session and get more people focused on our section

GC: Open up possibility of co-hosting with ERSA.

PB: ERSA is a bit difficult because they rely on in-person for a conference.

MA: Maybe organise a summer school?

**Next meeting: Next year in Newcastle**



# Regional Science Association International

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## British and Irish Section

### **Agenda AGM 2023**

Newcastle-upon-Tyne, July 4, 2023

#### **Agenda**

- 1) Minutes of the AGM 2022
- 2) Chair's Report
- 3) Treasurer's Report
- 4) Spatial Economic Analysis Journal Report
- 5) Election of the Committee 2023-2024
- 6) Election of the Chair 2023-2024
- 7) AOB

Date for next meeting: TBA

**Nominations for the committee will close at 4pm Tuesday July 4<sup>th</sup>.**