XIth World Conference of the Spatial Econometrics Association

Singapore, June 13-15, 2017

Organized by

Singapore Management University

School of Economics

Welcome and Highlights

It gives us a great pleasure to welcome you to Singapore, the *Lion City*, the *Garden City* or the *Little Red Dot*, for the 11th World Conference of the Spatial Econometrics Association, the SEA2017! The SEA2017 has the objective to bring together econometricians, statisticians, economists, regional scientists and geographers to present and discuss their recent achievements in spatial econometric theories and applications, in connection with the analysis of externalities, spillovers, interactions, peer effects, network effects, etc., and more importantly to promote spatial economic activities in Asia.

We are extremely proud to be able to present nine distinguished speakers (3 keynotes and 6 invited), young researcher paper competition, a two-day short course after the conference, and a publishing opportunity, which constitute important highlights of the conference:

- **Keynote speakers:** Peter Robinson (LSE, UK), Jushan Bai (Columbia University, US), and Lung-Fei Lee (The Ohio State University, US)

- **Invited Speakers:** Anil Bera (University of Illinois at Urbana-Champaign, US), Badi Baltagi (Syracuse University, US), Ingmar Prucha (University of Maryland, US), Giuseppe Abia (Catholic U. of the Sacred Heart, Rome, Italy), J. Paul Elhorst (University of Groningen, The Netherlands), and Jesus Mur (University of Zaragoza, Spain).
- **Young researcher paper competition** sponsored by the Spatial Econometrics Association.
- **A two-day short course** on spatial econometrics and applications following the conference (June 16-17), by Giuseppe Arbia, Anil Bera, Badi Baltagi, and Ingmar Prucha

- **Publishing opportunity** in a special issue of **Regional Science and Urban Economics**, subject to the regular refereeing process.

The SEA2017 has been generously sponsored by Singapore Management University (SMU). It is organized by the School of Economics, SMU, through the Local Organizing Committee, with superb staff support, in particular, from Juniper NG Xue Ying.

We hope that the three-day conference will be fruitful for you, and that beside the academic activities you could also have a chance to experience the mixed culture, and the mixed cuisines in Singapore. We wish you an enjoyable stay in Singapore!

The Local Organizing Committee of SEA2017
The XI World Conference of the Spatial Econometrics Association

Zhenlin Yang (Chair), Singapore Management University
Jing Li, Singapore Management University
Shew Fan Liu, Singapore Management University
Qu Feng, Nanyang Technological University, Singapore
Wen-Chi Liao, National University of Singapore

School of Economics
Singapore Management University
90 Stamford Road, Singapore 178903
Sea2017@smu.edu.sg
https://economics.smu.edu.sg/sea2017

Committees

Scientific Committee:

Zhenlin YANG (Chair), Singapore Management University
Luc Anselin, University of Chicago
Giuseppe Arbia, Catholic University of the Sacred Heart, Rome, Italy
Badi Baltagi, Syracuse University, USA
Anil Bera, University of Illinois, Urbana-Champaign, USA
Roger Bivand, Norweigian School of Economics, Norway
Nicolas Debarsy, University of Orleans, France
Paul Elhorst, University of Groningen, Netherlands
Julie Le Gallo, Agrosup Dijon, France
James LeSage, Texas State University
Lung-Fei LEE, Ohio State University
Jesus Mur, Universidad de Zaragoza, Spain
Alain Pirotte, University Panthéon-Assas Paris II, France
Ingmar Prucha, University of Maryland, USA
Peter Robinson, London School of Economics
Jihai YU, Peking University, China

Organizing Committee

Zhenlin YANG (Chair), Singapore Management University, zlyang@smu.edu.sg
Jing LI, Singapore Management University, lijing@smu.edu.sg
Shew Fan LIU, Singapore Management University, sfliu@smu.edu.sg
Qu FENG, Nanyang Technological University, Singapore, qfeng@ntu.edu.sg
Wen-Chi LIAO, National University of Singapore, wliao@nus.edu.sg

Jury for Young Researcher Paper Competition

The Spatial Econometrics Association sponsors a young researcher paper competition with a first prize of US $500 and two second prizes of US $300 each. A paper is eligible for the competition if the author is currently a graduate student or his/her graduation date was after Jan 1, 2015. In the case of a co-authored paper the eligibility criterion pertains to all authors.

The jury for the prize consists of the members of the SEA Board of Directors who are present at the conference. The jury chair, Giuseppe Arbia, will announce the prize winners and present the awards during the conference dinner on 14th June.

The jury comprises:
Giuseppe Arbia (Chair), Catholic Univ. of the Sacred Heart, Rome, Italy
Badi Baltagi, Syracuse University, US
Ingmar Prucha, University of Maryland, US
Peter Robinson, LSE, UK

Conference Venue

Singapore Management University (SMU) is located in almost the center of the city, directly connected to the busiest and the most popular shopping and eating area: the **Orchard Road**. All the academic activities will take place in the **Administration Building** of SMU (see the map below marked as SEA Conference):

- **Keynote Speeches:** Mochtar Riady Auditorium (5th floor)
- **Invited Talks:** Executive Seminar Room 4.1
- **Parallel Sessions:** Executive Seminar Rooms 4.1, 4.2, and 5.1

MAP LEGEND

1 Administration Building — SEA Conference
2 Lee Kong Chian School of Business
3 School of Accountancy
4 Li Ka Shing Library, The SMU Shop (TSS)
5 School of Information Systems
6 School of Economics, School of Social Sciences — SEA Short Course
7 SMU Labs
8 School of Law, Kwa Geok Choo Law Library

Taxi Stand
Bus Stop
Drop Off
P SMU Car Park
P Car Park
G de Suantio Gallery
Food & Retail Outlets at Basement Concourse

Information

Registration/Information Desk

A registration/information desk will be set up in the open space outside of the Mochtar Riady Auditorium on the 5th floor of the Administration Building. It will open throughout the day:

8:00-18:00 Tuesday, 13 June
8:30-18:00 Wednesday, 14 June
8:30-18:00 Thursday, 15 June.

Internet Access (WLAN)

Wireless internet access will be available for the conference participants. To access:

1. Eduroam	Choose for '**eduroam**' from the available wireless networks. Users (researchers, teachers, students, staff) from a participating institution can access the Internet from another participating institution.
2. SMU_Visitor	At the Registration/Information Desk, ask for 'self-help guide, choose '**SMU_Visitor**' from the available wireless networks, and then register. Username and Password will be given via SMS.

Alternatively, you may request for Wi-Fi Username and Password at the Registration/Information Desk when registering for conference. |

Coffee Breaks/Lunch Breaks

Morning and afternoon coffee breaks and lunches for the three-day conferences will be served on the open space of the 5th floor of the Administration Building.

Reception Dinner and Conference Dinner

The reception dinner will be on Tuesday 19:00-22:00, at the Lei Garden inside the Chijmes (#01-24, 30 Victoria St), which is a 5min walk from the conference building. Additional tickets for spouse/guests can be purchased upon arrival (cost: S$70).

The conference dinner will be on Wednesday 19:00-22:30, at the Carlton Hotel (Level 4, Esplanade Room), which is just opposite of the conference building. Additional tickets for spouse/guests can be purchased upon arrival (cost S$100), subject to availability.

Transportation in Singapore

The easiest way to go from the airport to your hotel is by taxi. It costs about S$20-$30, and takes about 20 min to reach the hotel nearby the conference venue. Other forms of transport to the City from the airport can be found here: http://www.changiairport.com/en/transport/public-transport.html

To go to other places in Singapore from your hotel, public transportations, such as bus and MRT (mass rapid transit), are convenient. The nearest MRT stations to the conference location are Bras

Basah Station (Yellow/Circle Line) and Dhoby Ghaut Station (Red/North-South Line). Both lines are conveniently connected to all other MRT lines and famous tourist attractions in Singapore and the Changi Airport. The link https://www.transitlink.com.sg/images/eguide/mrt_sys_map.htm contains the latest MRT map.

If you wish to travel in Singapore we recommend that you to purchase an EZ-Link card from an MRT station or a 7-Eleven Store which comes with stored credit that can be used for future rides on both bus and train (MRT). Each ride using the card costs S$0.70-S$2. Single journey ticket for train is available from the MRT station, and single journey by bus can be paid (by coin) on bus to the driver.

You could also take taxi to get around in Singapore, which is not expensive relative to the other countries. Dedicated taxi companies such as Comfort and Delgro, Trans-Cab, etc., can be flagged down almost anywhere in Singapore including your hotel lobby. Private companies such as Grab and Uber are becoming quite popular in Singapore due to cheaper fares and convenience. If you wish to use these services, you may download the respective apps to your mobile device. More information can be found here: https://www.grab.com/sg. The taxi stands and drop off points near the conference venue can be found in page 4.

Tourist Attractions in Singapore

SMU is a conveniently located city campus with many surrounding tourist attractions that can be reached within a few minutes. Some nearby attractions include:

- **Marina Bay Sands** and the **Gardens by the Bay** (directly accessible via Circle line)
- **Singapore Flyer** and the **Esplanade Theatre**. (Alight from Esplanade station in Circle line).
- **National Museum**, **Singapore Art Museum** and the **Peranakan Museum** are all located within walking distance from the conference location.
- **China town** and **Little India** are famous for the unique cultural experience and cuisine. Both locations are along the Purple/North-East line.
- **Universal Studios**, **Sentosa Island** and **Resorts World Sentosa** with its many other attractions can be conveniently reached using the monorail located inside the **Vivo City Mall** which is the final stop of the Purple/North-East Line (Harbour Front Station).
- Singapore has one of the best **zoos** in the world and is highly recommend. It can be reached by public transport, however, due to its remote location taking a taxi will be the best option. The **River Safari** as well as the **Night Safari** are all located in the same vicinity.
- The Singapore hop-on-hop-off bus is a popular choice among tourists which gives a comprehensive coverage of the key attractions as well as information regarding historical and present importance of various locations. The tickets can be purchased online and the bus loop intercepts the bus station in front of Rendezvous Hotel (near School of Economics).
- **Orchard road** (shopping street) – two stations away from Dhoby Ghaut along the Red Line
- **Singapore Botanic Gardens**, was recently classified as a World Heritage Site and can be reached via the Downtown/Blue Line or the Circle Line. The **National Orchid Garden** located within, exhibits a wide array or hybrid orchids.
- **Clark Quay** area offers a vibrant nightlife and is popular for its entertainment clubs and local cuisine. It is located along the Purple/North-East Line.

Eateries and Restaurants

Singapore is a multi-cultural society, and associated with are the different types of cuisines. For economic and quick food, there are food courts and popular diners around the campus:

- **Koufu** located in basement 1 (concourse) of Li Ka Shing Library
- **Food Republic** located near School of Economics
- **Swissbake**, Level 1, School of Accountancy

- **Coffee Club and 1983 Café**, Level 1, Li Ka Shing Library
- **Pastamania**, concourse, next to Koufu
- **Subway**, Level 1, School of Information Systems
- **Tea Party**, Level 1, School of Economics

For more formal meals (lunch/dinner), there are many good restaurants around the campus:

- **True Blue:** (Local Cuisine, Peranakan Food): 47/49 Armenian Street, Singapore 179937 Armenian St, Singapore 179937
- **Lokkee** (Chinese Cuisine): 68 Orchard Road, #03-01, Plaza Singapura, 238839
- **Nanjing Impressions** (Chinese Cuisine): 68 Orchard Rd, #04-46-51, Plaza Singapura, 238839
- **Red House** (Chinese Cuisine): 68 Prinsep St, Singapore 188661
- **Gyu-Kaku** (Japanese Cuisine): 30 Victoria St, #01-01/#01-03, Convent of Holy Infant Jesus Chapel and Caldwell House (**Chijmes**), Singapore 187996.
- **Flutes** (French Cuisine): 93 Stamford Road, The National Museum of Singapore, 178897
- **Trattoria Lafiandra** (Italian Cuisine**):** 71 Bras Basah Rd, Singapore 189555

The Chijmes, a historic building complex (3min walk from the conference site), also houses many other restaurants of different types of cuisines.

Guidelines for Presentation

Keynote Speeches

The SEA2017 is pleased to present **Jushan Bai**, **Peter Robinson**, and **Lung-Fei Lee** as keynote speakers. The time allocation for a keynote speech is one hour (50 minutes for presentation and 10 minutes for general discussion).

Invited Talks

The SEA2017 is also pleased to present **Anil Bera**, **Ingmar Prucha**, **Giuseppe Arbia**, **Badi Baltagi**, **J. Paul Elhorst**, and **Jesus Mur** as invited speakers. The time allocation for each invited talk is 45 minutes (about 38 minutes for presentation and 7 minutes for general question).

Parallel Sessions

All presenters in the parallel sessions should arrive in advance and make sure the pdf file for his/her presentation and discussion installed. Each presenter is allocated with 30 minutes, with 20 minutes for presentation, 5 minutes for discussion and 5 minutes for general discussion. Please respect the time limit for presenting and for discussion. The chairs are advised to enforce the time constraints.

Session chairs have been assigned in the program. The chair has to ensure that a laptop is functioning properly and that time constraints are met. He or she should welcome and introduce the participants and moderate the open discussion. If the session's chair is absent, the last presenter listed should take the role of the chair.

Every presenter is discussant of the previous paper as indicated in the program. Accordingly, the second speaker is discussant of the first paper; the third speaker is discussant of the second paper, and so forth. The first speaker is discussant of the last paper.

Summary of Program

Monday 12th: Registration and Icebreaking 18:00-19:30		
Tuesday 13th	**Wednesday 14th**	**Thursday 15th**
Registration 8:00-8:30		
Opening 8:30-9:00	Registration 8:30-9:00	Registration 8:30-9:00
Keynote I: J Bai 9:00-10:00	**Keynote II:** P Robinson 9:00-10:00	**Keynote III:** L F Lee 9:00-10:00
Coffee Break 10:00-10:30	Coffee Break 10:00-10:30	Coffee Break 10:00-10:30
Parallel Sessions 1 10:30-12:30	**Parallel Sessions 4** 10:30-12:30	**Parallel Sessions 7** 10.30-12.30
Lunch: 12:30-14:00	Lunch: 12:30-14:00	Lunch: 12:30-14:00
Parallel Sessions 2 14:00-16:00	**Parallel Sessions 5** 14.00-16.00	**Parallel Sessions 8** 14.00-16.00
Coffee Break 16:00-16:30	Coffee Break 16:00-16:30	Coffee Break 16:00-16:30
Invited I: Bera, Prucha & **Parallel Sessions 3** 16:30-18:00	**Invited II:** Arbia, Baltagi & **Parallel Sessions 6** 16:30-18:00	**Invited III:** Elhorst, Mur & **Parallel Sessions 9** 16:30-18:00
		Farewell: 18:00
Reception Dinner 19:00-22:00	**Conference Dinner** 19:00:22:30	

SCIENTIFIC PROGRAM

Tuesday 12 June

18:00-19:30 Registration and Icebreaking (U-Lounge, Level 6, Admin Building)

Tuesday 13 June

8:00 – 18:00 Registration (Outside the Mochtar Riady Auditorium)
The registration desk will be open all day, starting from half an hour before the program commences to the end of the last session. Feel free to approach the local organizers with all your questions and queries.

8:30 – 9:00 Opening (Mochtar Riady Auditorium)

Welcome: Zhenlin Yang, Chair of the Local Organizing Committee

Commemorating Florax and Ertur & SEA Meeting–Approval of Budget: Giuseppe Arbia, Chairman of the Spatial Econometric Association

9:00 – 10:00 Keynote Speech I (Mochtar Riady Auditorium)

Jushan Bai, Columbia University, US
Inferences in Panel Data with Interactive Effects Using Large Covariance Matrices (with Yuan Liao, Rutgers University, US)

Chair: Badi Baltagi, Syracuse University, US

10:00 – 10:30 Coffee Break (5th Floor, Admin Building)

10:30 – 12:30 Parallel Sessions 1

Session 1.1: Spatial Regression I, *Seminar Room 4.1*

Chair: Daisuke Murakami, National Institute for Environmental Studies, Japan

Guohui Wu 7, SAS Institute Inc.
Variational Bayesian Inference for Spatial Autoregressive Models: A Fast and Scalable Solution to Big Data Problems.
Discussant: Luis Silveira Santos

Luis Silveira Santos 13, ISEG–ULisboa and CEMAPRE, Portugal
The Inversion of the Spatial Lag Operator in Nonlinear Models: Fast Computation and a Closed Formula Approximation (with Isabel Proença, ISEG–ULisboa and CEMAPRE, Portugal).
Discussant: Daisuke Murakami

Daisuke Murakami 18, National Institute for Environmental Studies, Japan
Spatially Varying Coefficient Model for Large Dataset: A Rank Reduction Approach (with Yoshiki Yamagata, National Institute for Environmental Studies, Japan, and Daniel A. Griffith, The University of Texas, Dallas, US).
Discussant: Guohui Wu

Session 1.2: Estimating and Testing Spatial Models, *Seminar Room 4.2*

Chair: Kai Yang, Shanghai University of Finance and Economics, China

Kai Yang 30, Shanghai University of Finance and Economics, China
Identification and Estimation of the Multivariate Nonlinear Spatial Autoregressive Models (with Lung-Fei Lee, The Ohio State University, US)
Discussant: Qianting Ye

Qianting Ye 74, South China University of Technology, China
Proposing use of Locally Spatial Autoregressive Error Model with a Hierarchical Data Structure (with Stewart Fotheringham, Arizona State University, US, and Zhihe Long, South China University of Technology, China)
Discussant: Xu Yuhong

Xu Yuhong 93, Singapore Management University
Specification Tests for Unobserved Heterogeneity in Spatial Panel Data Models (with Zhenlin Yang, Singapore Management University).
Discussant: Yu Bai

Yu Bai 26, Bocconi University, Milan, Italy
A Monte Carlo Comparison of GMM and QMLE Estimators for Short Dynamic Panel Data Models with Spatial Errors (with Shaofu Zhou and Zhaoyuan Fan, Huazhong University of Science & Technology, Wuhan, China)
Discussant: Kai Yang

Session 1.3: Firm Productivity and Agglomeration, *Seminar Room 5.1*

Chair: Michaela Kesina, ETH Zurich, Switzerland

Er-rbib Rim 17, University of Tsukuba, Japan
Measuring Industrial Agglomeration and Coagglomeration: An Exploratory Spatial Analysis Approach Applied to Japan (with Tsutsumi Morito, University of Tsukuba, Japan).
Discussant: Jianhuan Xu

Jianhuan Xu 61, Singapore Management University
Why Do Businesses Grow Faster in Urban Areas than in Rural Areas (with Jungho Lee, Singapore Management University).
Discussant: Michaela Kesina

Michaela Kesina 80, ETH Zurich, Switzerland
Contagious Exporting and Foreign Ownership: Evidence from Firms in Shanghai (with Badi Baltagi, Syracuse University, US, and Peter Egger, ETH Zurich, CEPR, CESifo, GEP, Switzerland).
Discussant: Er-ribib Rim

12:30 – 14:00 Lunch (5th Floor, Admin Building**)**

14:00 – 16:00 Parallel Sessions 2

Session 2.1: Spatial Panel Model I, *Seminar Room 4.1*

Chair: Qu Feng, Nanyang Technological University, Singapore

Wei Shi 64, Jinan University, China
The Effects of Gun Control on Crimes: A Spatial Interactive Fixed-Effects Approach
(with Lung-Fei Lee, The Ohio State University, US).
Discussant: Wenxin Huang

Wenxin Huang 92, Singapore Management University
Grouped Nonstationary Panel Model with Cross-sectional Dependence–Multiple Regimes of Economies Convergence (with Peter C.B. Phillips, Yale University, US; University of Auckland, New Zealand; University of Southampton, UK; Singapore Management University, and Liangjun Su, Singapore Management University).
Discussant: Xiaoyi Han

Xiaoyi Han 11, Xiamen University, China
Bayesian Analysis of A Spatial Dynamic Panel Data Model with Dynamic Network Formation (with Chih-sheng Hsieh, the Chinese University of Hong Kong, China, and Stanley I. M. Ko, University of Macau, China).
Discussant: Qu Feng

Qu Feng 29, Nanyang Technological University, Singapore
Structural Changes in Heterogeneous Panels with Endogenous Regressors
Discussant: Wei Shi

Session 2.2: Financial Economics, *Seminar Room 4.2*

Chair: Kelley Pace, Louisiana State University, US

Kelley Pace 25, Louisiana State University, US
Mortgage default decisions in the presence of non-normal, spatially dependent disturbances (with Raffaella Calabrese, University of Edinburgh, UK, and Meagan McCollum, Zicklin School of Business, Baruch College, US).
Discussant: Huajie Liang

Huajie Liang 75, South China University of Technology, China
The change of tunneling: Supervision of expropriation in financial crisis (with Qianting Ye and Renceng Wang, South China University of Technology, China).
Discussant: Jingshu Luo

Jingshu Luo 54, Temple University, US
Strategic interaction, relative performance evaluation and CEO compensation: evidence from the U.S. property casualty insurance industry.
Discussant: Kelly Pace

Session 2.3: Natural Disaster, *Seminar Room 5.1*

Chair: Eric Strobl, Universite Aix-Marseille, France

Eric Strobl 32, Universite Aix-Marseille, France
Spatial Correlation of Hurricane Damage and Cross-Country Insurance in the Caribbean (with Andreas Heinen, Universite Cergy-Pontoise, France).
Discussant: Voravee Saengavut

Voravee Saengavut 37, Khon Kaen University, Thailand
Spatial Distribution of Willingness to Pay for Mitigating Flood Damages; the Evidence of the Northeastern Thailand (with Watinee Thavorntam, Chiang Mai University, Thailand).
Discussant: Reinhard Weisser

Reinhard Weisser 9, Leibniz Universität Hannover, GermanyMatsuda
Only a matter of perception? The impact of local shocks on economic well-being (with Wiebke Stein, Leibniz Universität Hannover, Germany).
Discussant: Eric Strobl

16:00 – 16:30 Coffee Break (5th Floor, Admin Building)

16:30 – 18:00 Invited Talks 1 & Parallel Session 3

<u>**Invited Talks 1**</u>, *Seminar Room 4.1*

Chair: Paul Elhorst, University of Groningen, The Netherlands.

Anil Bera, University of Illinois at Urbana-Champaign, US
Testing/Tasting Spatial Models with a review of the current literature.

Ingmar Prucha, University of Maryland, US
A Robust Test for Network Generated Dependence (with Xiaodong Liu, University of Colorado Boulder, US).

<u>**Parallel Session 3: Population and Demographics**</u>, *Seminar Room 4.2*

Chair: Suddhasil Siddhanta, Gokhale Institute of Politics and Economics, India

Arash Nayebyazdi 46, Mellat Bank, Iran
The Impact of Population Age Structure on Economic Development of Iran's Provinces (with Amir Hossein Ghaffari Nejad, Mellat Bank, Iran).
Discussant: Xindi Mou

Xindi Mou 78, University of Chinese Academy of Sciences, China
Regional Differences in the Impact of Population Aging on Urban Housing Demand: The Case of China (with Jichang Dong, Linlin Zhu, and Xiuting Li, University of Chinese Academy of Sciences, China).
Discussant: Suddhasil Siddhanta

Suddhasil Siddhanta 91, Gokhale Institute of Politics and Economics, India
Let the Map Speak: Use of Mapping Technique for Policy Analysis (with Debasish Nandy, Gokhale, Institute of Politics and Economics, India).
Discussant: Arash Nayebyazdi

19:00 – 22:00 Reception Dinner (Lei Garden in Chijmes, #01-24, 30 Victoria St**)**

Wednesday 14 June

8:30 – 18:00 Registration (Outside Auditorium)
The registration desk will be open all day, starting from half an hour before the program commences to the end of last session. Feel free to approach the local organizers with all your questions and queries.

9:00 – 10:00 Keynote Speech II (Auditorium)

Peter Robinson, London School of Economics, UK
Inference on Trending Panel Data (with Carlos Velasco, Universidad Carlos III de Madrid, Spain)

Chair: Ingmar Prucha, University of Maryland, USA

10:00 – 10:30 Coffee Break (5th Floor, Admin Building)

10:30 – 12:30 Parallel Sessions 4

Session 4.1: Spatial Panel Model II, *Seminar Room 4.1*

Chair: Alain Pirotte, University Paris II Panthéon-Assas, France

Karen Miranda 73, Rovira i Virgili University, Spain
Growth with Unobserved Technological Interdependences: The Spatial Durbin Dynamic Panel Model with Correlated Random Effects (with Martinez O. and Manjon-Antolin M., Rovira i Virgili University, Spain).
Discussant: Liyao Li

Liyao Li 86, Singapore Management University
M-Estimation and Inference for Spatial Dynamic Panel Data Models with Correlated Random Effects (with Zhenlin Yang, Singapore Management University).
Discussant: Yao-Yu Chih

Yao-Yu Chih 71, Texas State University, US
A Matrix Exponential Spatial Panel Model with Heterogeneous Coefficients (with James LeSage, Texas State University, US).
Discussant: Alain Pirotte

Alain Pirotte 33, CRED, University Paris II Panthéon-Assas, France
A Multi-Dimensional Spatial Lag Panel Data Model with Spatial Moving Average Nested Random Effects Errors (with Bernard Fingleton, University of Cambridge, UK, and Julie Le Gallo, University Bourgogne Franche-Comté, France).
Discussant: Karen Miranda

Session 4.2: Urban Infrastructure and Housing, *Seminar Room 4.2*

Chair: Wen-Chi Liao, National University of Singapore

Zheng Chang 87, City University of Hong Kong, China
Land Leasehold, Transportation Infrastructure, and Residential Suburbanization: Evidence from Shanghai, China (With Jin Murakami, City University of Hong Kong, China). **Discussant**: Arfat Ahmad Sofi

Arfat Ahmad Sofi 57, Indian Institute of Technology Madras, India
Do Indian States Mimic, Compete or Interact in Local Public Spending? A Spatial Econometric Analysis (with Subash S., Indian Institute of Technology Madras, India).
Discussant: Wen-Chi Liao

Wen-Chi Liao 49, National University of Singapore
The Butterfly Effect of Transport Network Connectivity: A New Perspective of Housing Studies and Its Welfare Implication (with Kecen Jing, National University of Singapore).
Discussant: Zheng Chang

Session 4.3: Spatial Approach to Healthcare Studies, *Seminar Room 5.1*

Chair: Kiyoyasu Tanaka, Institute of Developing Economies, Japan

Mizanur Rahman Sarker 19, Hitotsubashi University, Japan
A Spatial Panel Modeling in Health Environment: Evidence from the Use of Improved Sanitation and Drinking Water Sources (with Hidetoshi Yamashita, Hitotsubashi University, Japan).
Discussant: I Gede Nyoman Mindra Jaya

I Gede Nyoman Mindra Jaya 60, University of Padjadjaran, Indonesia
Forecasting Relative Risk of Dengue Fever Disease in Bandung by Means Integrated Nested Laplace Approximation (INLA) (with Henk Folmer, Northwest Agriculture and Forestry University, China, and Yudhie Andriyana, Zulhnif, and Bertho Tantular, University of Padjadjaran, Indonesia).
Discussant: Felipa Sampayo

Felipa Sampayo 62, Instituto Universitario de Lisboa, Portugal
Heterogeneity and Spatial Dependence on Healthcare Accessibility: Evidence from Texas Counties. **Discussant**: Kiyoyasu Tanaka

Kiyoyasu Tanaka 47, Institute of Developing Economies, Japan
Agglomeration Economies in the Formal and Informal Sectors: A Bayesian Spatial Approach (with Yoshihiro Hashiguchi, Institute of Developing Economies, Japan).
Discussant: Mizanur Rahman Sarker

12:30 – 14:00 Lunch (5th Floor, Admin Building)

14:00 – 16:00 Parallel Sessions 5

Session 5.1: Inference and Bootstrap in Spatial Models, *Seminar Room 4.1*

Chair: Zhenlin Yang, Singapore Management University

J. Paul Elhorst 95, University of Groningen, The Netherlands
Testing for common factors and cross-sectional dependence among individual housing prices (with Nicolás Durán, University of Groningen, The Netherlands)
Discussant: Qian Guo

Qian Guo 15, University of London, UK
Obtaining Spatial Data Through Attribute Sampling – A New Method to Identify Rare Events When There is No Data (with Jing Chen, Cardiff University, UK).
Discussant: Zhenlin Yang

Zhenlin Yang 88, Singapore Management University
Bootstrap LM Tests for Higher Order Spatial Effects in Spatial Linear Regression Models.
Discussant: J. Paul Elhorst

Session 5.2: Regional Growth and Development, *Seminar Room 4.2*

Chair: Alfredo Cartone, University of Chieti-Pescara, Italy

Shuai Shi 4, University of Reading, UK
The Simultaneous Resonation of Spatial Proximity and Network Farness in Regional Growth Model: Take Mid-Yangtze River Region as an Example.
Discussant: Xiaoyi Han

Xiaoyi Han 31, Xiamen University, China
Does Regional Competition Promote Growth in China? An Empirical Study of Financial Access (with Yanli Zhu, Hohai University, China, and Cheryl Long, Xiamen University, China).
Discussant: Alfredo Cartone

Alfredo Cartone 81, University of Chieti-Pescara, Italy
Regional Economic Convergence in European Regions: A Spatial Quantile Regression Approach (with *Paolo Postiglione,* University of Chieti-Pescara, Italy).
Discussant: Shuai Shi

Session 5.3: Applied Economics, *Seminar Room 5.1*

Chair: Jing Li, Singapore Management University

Cheng Keat Tang 8, London School of Economics, UK
Do Speed Cameras Save Lives?
Discussant: Eric Fesselmeyer

Eric Fesselmeyer 52, National University of Singapore
The Effect of Density on Residential Prices in Singapore (with Kiat Ying Seah and Jonathan Kwok, National University of Singapore).
Discussant: Laura Guiying Wu

Qu Feng 50, Nanyang Technological University
Estimating Productivity of Public Infrastructure Investment (with Laura Guiying Wu and Zhifeng Wang, Nanyang Technological University).
Discussant: Jing Li

Jing Li 85, Singapore Management University
Housing Upgrading in Urban Redevelopment.
Discussant: Cheng Keat Tang

16:00 – 16:30 Coffee Break (5th Floor, Admin Building)

16:30 – 18:00 Invited Talks 2 & Parallel Session 6

Invited Talks 2, *Seminar Room 4.1*

Chair: Jesus Mur, University of Zaragoza, Spain

Giuseppe Arbia, Catholic Univ. of the Sacred Heart, Rome, Italy
Locational Errors and Missing Data in Spatial Microeconometric Modelling: Problems and Solutions.

Badi Baltagi, Syracuse University, US
A Time-Space Dynamic Panel Data Model with Spatial Moving Average Errors (with Bernard Fingleton, University of Cambridge, UK, and Alain Pirotte, University Paris II Panthéon-Assas, France).

Parallel Session 6: Industrial Spatial Dependence, *Seminar Room 4.2*

Chair: Andres Artal Tur, Technical University of Cartagena, Spain

Keisuke Takano 38, University of Tsukuba, Japan
Spatial Analysis of Inter-prefectural Industrial Relocation Flows: Evidence from Japan (with Morito Tsutsumi, University of Tsukuba, Japan).
Discussant: Andres Artal Tur

Andres Artal-Tur 16, Technical University of Cartagena, Spain
Accounting For Spatial Dependence in Tourist Expenditure Functions (with Luisa Alamá-Sabater, University Jaume I, Spain).
Discussant: Keisuke Takano

19:00 – 22:30 Conference Dinner (Carlton Hotel, Level 4, Esplanade Room**)**

Thursday 15 June

8:30 – 18:00   Registration (Outside the Auditorium)
The registration desk will be open all day, starting from half an hour before the program commences to the end of last session. Feel free to approach the local organizers with all your questions and queries.

9:00 – 10:00   Keynote Speech III (Auditorium)

Lung-Fei Lee, The Ohio State University, US
Some Studies on SAR Models with Endogenous Spatial Weights

Chair: Anil Bera, University of Illinois at Urbana-Champaign, US

10:00 – 10:30 Coffee Break (5th Floor, Admin Building)

10:30 – 12:30 Parallel Sessions 7

Session 7.1: Spatial Regression II, *Seminar Room 4.1*

Chair: Fei Jin, Shanghai University of Finance and Economics, China

Xi Qu 3, Shanghai Jiao Tong Univeristy, China
Estimation of an Endogenous SAR Model with Spatial Weights Constructed by Bilateral Variables (with Lung-Fei Lee, The Ohio State University, US).
Discussant: Giuseppe Arbia

Giuseppe Arbia 94, Catholic Univ. of the Sacred Heart, Rome, Italy
Estimation of spatial econometric linear models with large datasets: How big can be spatial Big Data ? (with Antonietta Mira and Chiara Ghiringhelli)
Discussant: Fei Jin

Fei Jin 22, Shanghai University of Finance and Economics, China
GEL Estimation of Spatial Autoregressive Models with Endogenous Spatial Weights (with Lung-Fei Lee, The Ohio State University, US).
Discussant: Xi Qu

Session 7.2: Real Estate Markets, *Seminar Room 4.2*

Chair: Sofia Franco, Universidade Nova de Lisboa, Portugal

Dishant Shahi 72, Delhi Technological University, India
Real Estate Rigidities (with Aradhya Shandilya and Nand Kumar, Delhi Technological University, India).
Discussant: Nicolas Duran

Nicolas Duran 21, University of Groningen, The Netherlands
The Effect of Small Earthquakes on Housing Prices in the North of the Netherlands: A Spatio-temporal-similarity Approach (with J. Paul Elhorst, University of Groningen, The Netherlands).
Discussant: Sofia Franco

Sofia Franco 6, Universidade Nova de Lisboa, Portugal
The Determinants of Non-residential Real Estate Values with Special Reference to Local Amenities (with W. Bowman Cutter, Pomona College, US).
Discussant: Naqun Huang

Naqun Huang 76, Singapore Management University
Home-purchase Restriction, Property Tax and Housing Price in Singapore: A Spatial Dynamic Panel Data Approach
Discussant: Dishant Shahi

Session 7.3: Environment, *Seminar Room 5.1*

Chair: Yanying Chen, Singapore Management University

Yanying Chen 12, Singapore Management University
Dengue Outbreaks and Households' Electricity Consumption Behaviour: Evidence from Singapore (with Yi Jin Tan, Singapore Management University)
Discussant: I Gede Nyoman Mindra Jaya

I Gede Nyoman Mindra Jaya 51, *University of Padjadjaran, Indonesia*
Forecasting Multiple Infectious Diseases by Mean Bayesian Spatiotemporal Shared Component Model (with Henk Folmer, Northwest Agriculture and Forestry University, China, and Budi Nurani Ruchjana, *University of Padjadjaran, Indonesia*).
Discussant: Yan Cen

Yan Cen 36, Northeast Normal University, China
City Size and Local Air Quality: Evidence from Chinese Cities (with Matthew A Cole and Robert J R Elliott, University of Birmingham, UK).
Discussant: Yanying Chen

12:30 – 14:00 Lunch (5th Floor, Admin Building**)**

14:00 – 16:00 Parallel Sessions 8

Session 8.1: Social Interaction and Network, *Seminar Room 4.1*

Chair: Chih-Sheng Hsieh, Chinese University of Hong Kong, China

Chao Yang 24, Shanghai University of Finance and Economics, China
Social Interactions under Incomplete Information with Heterogeneous Expectations and Multiple Equilibria.
Discussant: Stanley Iat-Meng Ko

Stanley Iat-Meng Ko 35, University of Macau, China
A Nonparametric Bayesian Latent Attribute Model for Social Network Formation and Interactions (with Chih-Sheng Hsieh, Chinese University of Hong Kong).
Discussant: Hon Ho Kwok

Hon Ho Kwok 90, The University of Hong Kong, China
Network Identification Methods Based on Change of Basis.
Discussant: Chih-Sheng Hsieh

Chih-Sheng Hsieh 10, Chinese University of Hong Kong, China
Social Interactions Model with Altruistic Preference (with Xu Lin, Wayne State University, US).
Discussant: Chao Yang

Session 8.2: Spatial Approach Applications, *Seminar Room 4.2*

Chair: Takaki Sato, Tohoku University, Japan

Takaki Sato 55, Tohoku University, Japan
Spatial Autoregressive Conditional Heteroscedasticity Models and Their Applications to Land Price Data in Tokyo (with Yasumasa Matsuda, Tohoku University, Japan)
Discussant: Kelley Pace

Kelley Pace 84, Louisiana State University, US
Ignoring Fat Tails and the Spatial Dependence in the Disturbances Makes Black Swans Appear Grey (with Raffaella Calabrese, University of Edinburgh, UK)
Discussant: Dieter Wang

Dieter Wang 56, Vrije Universiteit Amsterdam, Tinbergen Institute and De Nederlandsche Bank, The Netherland
Estimating Dynamic Spillover Effects with Spatial State-Space Models
Discussant: Takaki Sato

Session 8.3: Ripple Effect in Housing Markets, *Seminar Room 5.1*

Chair: Beulah Chelva, University of Leeds, UK

Beulah Chelva 69, University of Leeds, UK
A Spatio-Temporal Analysis of the English Housing Market
Discussant: **Idaliya Grigoryeva**

Idaliya Grigoryeva 70, University of British Columbia, Canada
Going Through the 'Roof': Ripple Effect on the Vancouver Housing Market
Discussant: Linlin Zhu

Linlin Zhu 77, University of Chinese Academy of Sciences, China
The Diffusion Effect of Urban Real Estate Prices in China Based on the Spatial-temporal Model (with Jichang Dong, Chenchen Wang, Bing Wang, and Xiuting Li, University of Chinese Academy of Sciences, China).
Discussant: Juncong Guo

Juncong Guo 59, Shanghai Jiao Tong University, China
Spatial Interactive Effects in Housing Prices of Shanghai and Beijing (with Xi Qu, Shanghai Jiao Tong University, China).
Discussant: Beulah Chelva

16:00 – 16:30 Coffee Break (5th Floor, Admin Building)

16:30 – 18:00 Invited Talks 3 & Parallel Session 9

<u>**Invited Talks 3**</u>, *Seminar Room 4.1*

Chair: Giuseppe Arbia, Catholic Univ. of the Sacred Heart, Rome, Italy.

Paul Elhorst, University of Groningen, The Netherlands.
Modeling Cross-Sectional Dependence: Where Spatial Econometrics and Global VAR Models Meet (with Marco Gross and Eugen Tereanu, European Central Bank, Germany).

Jesus Mur, University of Zaragoza, Spain.
Choosing a Weighting Matrix. A New Approach Based on Entropy (with Marcos Herrera, University of Salta, Argentina, and Manuel Ruiz, University of Cartagena, Spain).

<u>**Parallel Session 9: Labor Economics**</u>, *Seminar Room 4.2*

Chair: Reinhold Kosfeld, University of Kassel, Germany

Reinhold Kosfeld 2, University of Kassel, Germany
On the Existence of an East German Wage Curve – A Spatial Panel Analysis East German Labour Market Regions (with Christian Dreger, German Institute of Economic Research, German).
Discussant: Mizuki Kawabata

Mizuki Kawabata 14, Keio University, Japan
Intra-Metropolitan Disparities in Female Labor Force Participation and Commute Times (with Yukiko Abe, Hokkaido University).
Discussant: M. Shahadat Hossain Sarker

M. Shahadat Hossain Sarker 28**,** Bangladesh Rural Development Board, Bangladesh
Regional Level Spatial Modeling of Child Labor in South Asia: Evidence from Bangladesh (M. Mizanur Rahman Sarker, Sher-e-Bangla Agricultural University, Bangladesh).
Discussant: Reinhold Kosfeld

18:00 Farewell

LIST OF PARTICIPANTS

Last Name	First Name	Organization	Email
Arbia	Giuseppe	Catholic Univ. of the Sacred Heart, Rome, Italy	giuseppearbia13@gmail.com
Artal-Tur	Andres	Technical University of Cartagena, Spain	Andres.artal@upct.es
Bai	Jushan	Columbia University, US	jb3064@columbia.edu
Bai	Yu	Bocconi University, Milan, Itali	yu.bai@phd.unibocconi.it
Baltagi	Badi	Syracuse University, US	bbaltagi@maxwell.syr.edu
Bera	Anil	Univ. of Illinois at Urbana-Champaign, US	abera@illinois.edu
Cartone	Alfredo	University of Chieti-Pescara, Italy	alfredo.cartone@unich.it
Cen	Yan	Northeast Normal University, China	cenyan0304@live.cn
Chang	Zheng	City University of Hong Kong, China	zchang0413@gmail.com
Chelva	Beulah	Leeds University Business School, UK	B.Chelva@leeds.ac.uk
Chen	Yanying	Singapore Management University, Singapore	yy.chen.2013@phdecons.smu.edu.sg
Chih	Yao-Yu	Texas State University, US	y_c66@txstate.edu
Duran	Nicolas	University of Groningen, The Netherland	n.duran@rug.nl
Elhorst	Paul	University of Groningen, The Netherland	j.p.elhorst@rug.nl
Feng	Qu	Nanyang Technological University, Singapore	qfeng@ntu.edu.sg
Fesselmeyer	Eric	National University of Singapore, Singapore	ecsef@nus.edu.sg
Franco	Sofia	Nova School of Business & Econ., Portugal	sfranco@novasbe.pt
Grigoryeva	Idaliya	University of British Columbia, Canada	idaliya.gri@gmail.com
Guo	Juncong	Shanghai Jiao Tong University, China	juncongguo@foxmail.com
Guo	Qian	University of London, UK	q.guo@bbk.ac.uk
Han	Xiaoyi	Xiamen University, China	han.293@osu.edu
Hsieh	Chih-Sheng	Chinese University of Hong Kong, China	cshsieh@cuhk.edu.hk
Huang	Naqun	Singapore Management University, Singapore	g
Huang	Wenxin	Singapore Management University, Singapore	wx.huang.2013@phdecons.smu.edu.sg
Jaya	Mindra	University Padjadjaran, Indonesia	mindra@unpad.ac.id
Jin	Fei	Shanghai University of Fin. and Econ., China	jin.fei@sufe.edu.cn
Kawabata	Mizuki	Keio University, Japan	mizuki@econ.keio.ac.jp
Kesina	Michaela	ETH Zurich, Switzerland	kesina@kof.ethz.ch
Ko	Stanley Iat Meng	University of Macau, China	stanley.imko@gmail.com
Kosfeld	Reinhold	University of Kassel, Germany	rkosfeld@uni-kassel.de
Kustini	Lim-Wavde	Singapore Management University, Singapore	kustini.2012@phdis.smu.edu.sg
Kwok	Hon Ho	The University of Hong Kong, China	kwokhh@hku.hk
Lee	Lung-Fei	The Ohio State University	lee.1777@osu.edu
Li	Jing	Singapore Management University, Singapore	lijing@smu.edu.sg
Li	Liyao	Singapore Management University, Singapore	liyao.li.2015@smu.edu.sg
Li	Xiuting	University of Chinese Academy of Sci., China	lixiuting@ucas.ac.cn
Liang	Huajie	South China Univ. of Technology, China	huajie_liang@163.com
Liao	Wen-Chi	National University of Singapore, China	wliao@nus.edu.sg
Liu	Shew Fan	Singapore Management University, Singapore	sfliu@smu.edu.sg
Luo	Jingshu	Temple University, US	jingshu.luo@temple.edu
Gualdrón	Karen	Universitat Rovira i Virgili, Spain	karenalejandra.miranda@urv.cat
Matsuda	Yasumasa	Tohoku University, Japan	matsuda@econ.tohoku.ac.jp
Mou	Xindi	University of Chinese Academy of Sci., China	muxindi0819@163.com
Mur	Jesus	University of Zaragoza, Spain	jmur@unizar.es
Murakami	Daisuke	National Institute for Env. Studies, Japan	murakami_daisuke_t@yahoo.co.jp
Nayebyazdi	Arash	Mellat Bank, Iran	a.nayebyazdi@bankmellat.ir
Pace	Kelly	Louisiana State University, US	kelley@spatial.us

Pirotte	Alain	France	alain.pirotte@u-paris2.fr
Prucha	Ingmar	University of Maryland, US	Prucha@econ.umd.edu
Qu	Xi	Shanghai Jiao Tong University, China	xiqu@sjtu.edu.cn
Rim	Er-rbib	University of Tsukuba, Japan	rim.errbib@gmail.com
Robinson	Peter	London School of Economics, UK	P.M.Robinson@lse.ac.uk
Saengavut	Voravee	Khon Kaen University, Thailand	cvorav@kku.ac.th
Sampayo	Felipa	Instituto University de Lisboa, Portugal	Filipa.Sampayo@iscte.pt
Santos	Luis Silveira	ISEG–ULisboa and CEMAPRE, Portugal	lsantos@iseg.utl.pt
Sarker	M. Shahadat Hossain	Bangladesh Rural Development Board	shahadat010183@gmail.com
Sarker	Mizanur Rahman	Hitotsubashi University, Japan	mrs_bd@yahoo.com
Sato	Takaki	Tohoku University, Japan	takaki.sato.s4@dc.tohoku.ac.jp
Shahi	Dishant	Delhi Technological University, India	dishantshahi@yahoo.in
Shandilya	Aradhya	Delhi Technological University, India	aradhya.shandilya@gmail.com
Shi	Shuai	University of Reading, UK	s.shi@pgr.reading.ac.uk
Shi	Wei	Jinan University, China	shiweiemail@gmail.com
Siddhanta	Suddhasil	Gokhale Inst. of Politics and Econ, India	suddhasil@gipe.ac.in
Sofi	Arfat Ahmad	Indian Institute of Tech. Madras, India	hs16ipf01@smail.iitm.ac.in
Strobl	Eric	Universite Aix-Marseille, France	eastrobl13@gmail.com
Takano	Keisuke	University of Tsukuba, Japan	s1620472@sk.tsukuba.ac.jp
Tan	Yi Jin	Singapore Management University, Singapore	yijin.tan.2013@phdecons.smu.edu.sg
Tanaka	Kiyoyasu	Institue of Developing Economies, Japan	kiyoyasutanaka@gmail.com
Tang	Cheng Keat	London School of Economics, UK	c.k.tang@lse.ac.uk
Tu	Menger	Shanghai University, China	tme18tc@gmail.com
Wang	Dieter	Vrije University Amsterdam, The Netherland	d.wang@vu.nl
Weisser	Reinhard	Leibniz Universität Hannover, Germany	weisser@aoek.uni-hannover.de
Wu	Guohui	SAS Institute Inc., US	Guohui.Wu@sas.com
Xu	Jianhuan	Singapore Management University, Singapore	jhxu@smu.edu.sg
Xu	Yuhong	Singapore Management University, Singapore	yuhong.xu.2015@phdecons.smu.edu.sg
Yang	Chao	Shanghai University of Fin. and Econ., China	yang.chao@mail.shufe.edu.cn
Yang	Kai	Shanghai University of Fin. and Econ., China	yang.kai@mail.shufe.edu.cn
Yang	Zhenlin	Singapore Management University, Singapore	zlyang@smu.edu.sg
Ye	Qianting	South China Univ. of Technology, China	cynthia_yip@163.com
Zhu	Linlin	Univ. of Chinese Acad. of Sci., China	zhulinlin_0507@sina.com