

14<sup>th</sup> European Workshop on Efficiency and Productivity Analysis

# **CONFERENCE PROGRAM**



15 – 18 June 2015 Helsinki, Finland

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# **WELCOME TO HELSINKI (AGAIN)**

# Dear Colleague,

We would like to take this opportunity to warmly welcome you to the 14th European Workshop on Efficiency and Productivity Analysis – XIV EWEPA 2015. Over the years the 'workshop' has grown to a four-day conference with over 200 presentations and participants from all over the world. Still, the EWEPA conferences maintain casual atmosphere of a workshop that offers opportunities to discuss, debate, and exchange ideas.

In the previous conference in 2013 we introduced several practical ideas to the EWEPA conference, including software tutorials, special sessions intended for practitioners and the industry, three different types of parallel sessions - "Discuss", "Express", and "Explain" – and last but not least, Aalto "That's Interesting!" paper competition. This year we have focused on further development of innovations that worked well last time.

In this year's EWEPA conference we want to draw attention to fresh new ideas. The first plenary session on Tue 16 features two up-and-coming researchers, Chris Parmeter and Andy Johnson, who present their recent works on nonparametric smoothing and shape constraints. This theme is important for building further bridges between different approaches in our field. Econometrician Parmeter and industrial engineer Johnson approach the theme from different perspectives, and hence it is interesting to see whether and to what extend they can agree or disagree on the issues. In the second plenary session on Wed 17, the three finalists of Aalto "That's Interesting!" paper competition - Daniela Puggioni, Thomas Triebs, and Russel Cooper - present their works. Selecting plenary speakers through a competition is one way to encourage and celebrate to new ideas.

The social events are extremely important for networking and informal exchange of ideas. After the young researcher's pre-conference workshop and software tutorials on Mon 15, we host an informal get-together at Aalto University School of Business. On Tue 16, the City of Helsinki sponsors a reception at the City Hall where all conference participants are welcome to join for some snacks and wine. The Conference Dinner with a three course meal and a nice sea-side view to the city will take place on Wed 17. The conference ends on Thu 18 with a farewell coffee.

We wish you a fascinating and productive conference experience in Helsinki!







Antti Saastamoinen, Event Chair



Abolfazl Keshvari, Program Chair

#### **COMMITTEES**

# **Organizing Committee**

Timo Kuosmanen (General Chair), Aalto University School of Business, Finland Antti Saastamoinen, (Event Chair) Aalto University School of Business, Finland Abolfazl Keshvari, (Program Chair) Aalto University School of Business, Finland

#### **Scientific Committee**

#### **Ex Officio Members:**

- Timo Kuosmanen, Aalto University School of Business, Helsinki, Finland Representative of the current organisers of EWEPA
- Cinzia Daraio, Sapienza University of Rome, Italy Representative of the organisers of EWEPA XI and XII
- Kristiaan Kerstens, IESEG School of Management, France Representative of the organisers of EWEPA IX and X
- Meryem Duygun Fethi, University of Leicester, UK
   Representative of the Euro Working Group Efficiency and Productivity Analysis
- Tsu-Tan Fu, Soochow University, Taiwan
   Coordinator from the Asia-Pacific Productivity Conference scientific committee
- C. A. Knox Lovell, University of Georgia, USA and University of Queensland, Australia Coordinator from the North American Productivity Workshop scientific committee
- Robin Sickles, Rice University, USA
   Former Editor-in-chief of the Journal of Productivity Analysis

# Other Members (elected by the ex officio members):

- Alfons Oude Lansink, Wageningen University, Netherlands
- Victor Podinovski, Loughborough University, UK
- Maria Conceição A. Silva Portela, Universidade Católica Portuguesa, Portugal
- Léopold Simar, Catholic University of Louvain-la-Neuve, Belgium
- Angelo Zago, University of Verona, Italy

# **SPONSORS**

Funding and I support for EWEPA"15 from the following organizations is gratefully acknowledged:



Liikesivistysrahasto - The Foundation for Economic Education



**HSE Foundation** 



Yrjö Jahnsson Foundation



City of Helsinki



**Aalto University School of Business** 

#### **CONFERENCE VENUES**

# Main conference – Scandic Grand Marina Congress Center

Scandic Marina Congress Center is a unique congress venue located right in the heart of Helsinki - next to waterfront and Kauppatori (Market Square). The trademark seaside view of Helsinki is right next to the conference center. Many of the famous sights and locations, such as the Helsinki Cathedral and the Uspenski Cathedral are right next to the venue. The area of Katajanokka, where venue is located, is filled with historic buildings. The special feature of the location is that cruise ships to Stockholm and Tallinn depart right next to the conference venue.

The conference venue offers 11 meeting rooms with exceptionally flexible solutions for all types of events. The facilities are ideal for hosting conferences, congresses, exhibitions and banquets for up to 2,500 people. The meeting rooms vary from modern and spacious halls to a private dining room with seaside view. The conference venue has approximately 500 events annually.



# YR workshop – Aalto University School of Business (Chydenia building)

Aalto University School of Business is part of the Aalto University. Established in 2010, the Aalto University is a new university that has centuries of experience. The Aalto University was created from the merger of three Finnish universities: Helsinki School of Economics, Helsinki University of Technology and The University of Art and Design Helsinki. The combination of three schools opens up new possibilities for strong multi-disciplinary education and research. The name "Aalto University" symbolizes change and is a tribute to a courageous, overarching renaissance man, Alvar Aalto. Aalto himself is one of our alumni as well as being the architect of the School of Science and Technology main building.

The School of Business (former Helsinki School of Economics) is both the largest and the highest ranking business school in Finland, consistently listed among the best business schools in Europe and worldwide by the Financial Times. The School was awarded AACSB accreditation in 2007. Its MBA and EMBA Programs are the first business management programs in Finland and the Nordic Countries to receive AMBA accreditation. In addition it was among the first European business schools to receive EQUIS accreditation. The Finnish Higher Education Evaluation Council (FINHEEC) has audited the Business School quality system. Aalto University School of Business is also a member of CEMS, the Global Alliance in Management Education and PIM, Partnership in International Management.

The Chydenia building is one of the buildings of the Business School. The Business School took this building for its use in 1970. Before that, it was used by a high school for girls.



(Photo source: Aalto archives)











# **PROGRAM HIGHLIGHTS**

#### **PLENARY SESSIONS**

# Plenary session 1: Tuesday 16 June, 9:00 - 10:30

Nonparametric smoothing and shape constraints
Christopher Parmeter
Andrew Johnson

# Plenary session 2: Wednesday 17 June, 9:00 - 10:30

Finalists of Aalto "That's Interesting!" paper competition
The prize jury has selected the following three papers as the finalists:

The value of being Socially Responsible: A DEA Approach for Recovering Shadow Prices of CSR Activities in the Food Manufacturing Sector

Daniela Puggioni\* and Spiro Stefanou

Management in Production: From Unobserved to Observed

Thomas Triebs\* and Subal Kumbhakar

The Productivity of the Internet from the Perspective of Households **Russel Cooper** 

The three finalists will present their works in the plenary session. Each finalist should give a presentation of 20 min, followed by questions and comments from the jury consisting of Jaap Bos, Victor Podinovski, and Timo Kuosmanen. After the plenary session, the jury meets to decide the winner. The winner will be announced at the Conference Dinner held at the Grand Marina Congress Center, on the evening of 17<sup>th</sup> of June.

#### **SOFTWARE TUTORIALS**

The following software tutorials are offered during the pre-conference day 15 June.

# **Basic R tutorial**

Introduction to SFA and DEA estimation using R

**Time:** 9:00-12:00

Location: Classroom C-250, The main building of Aalto University School of Business

**Instructor:** Tomasz Czekaj

# **Advanced R tutorial**

R tutorial for advanced users, including kernel regression and density estimation

Time: 13:00-16:00

Location: Classroom G-113, Chydenia building of Aalto University School of Business

**Instructor:** Chris Parmeter

### **GAMS tutorial**

Frontier estimation and efficiency analysis using GAMS (General Algebraic Modeling System)

Time: 13:00-16:00

Location: Classroom C-250, The main building of Aalto University School of Business

**Instructor:** Andrew Johnson

Contact Antti Saastamoinen for a trial license of GAMS.

# **CONFERENCE MECHANICS**

#### Venues

# Main conference 16-18 June

Grand Marina Congress Center Street address: Katajanokanlaituri 6

### Pre-Conference, 15 June

Chydenia building of Aalto University School of Business.

Street address: Runeberginkatu 22-24.

#### **Location and maps**

The location of the conference venues and the indoor maps are at the end of this program book.

#### **Session rooms**

#### **Pre-conference:**

The young researchers' pre-workshop is held in the room G-324 (Stora Enso) of the Chydenia building. The room is located on the third floor of the building.

#### Main conference:

The conference rooms are the located in the first and second floor of the Grand Marina Congress Center. See the indoor map at the end of this book.

Note that each room has a laptop for the presentations.

# **Registration**

On 15<sup>th</sup> of June, registration takes place at the lobby of Chydenia building in Aalto University School of Business.

On 16<sup>th</sup>-18<sup>th</sup> of June registration takes place at the registration desk in the main lobby of Grand Marina Congress Center.

# **Internet connections**

See separate instructions provided in the conference bag.

# **Name Badges**

Name badges are provided at the registration. The name badges must be worn at all sessions and social events throughout the conference.

#### Language

Official language of the conference is English. No simultaneous translation will be provided.

#### **Local currency**

The local currency is Euro (€). In the city center, money exchange can be found for example from Central Railway Station and from the shopping mall Kamppi.

#### **Credit cards**

Common credit cards such as Visa, Mastercard, Eurocard, Diners Club and American Express are accepted almost everywhere.

#### **Transportation**

The city center is within walking distance from the main conference venue. If you want to explore Helsinki further, we would recommend to use public transportation. Within the city center, tram is the most effective way to move around. Single tickets can be bought from the driver. Further information about the tickets and the tram routes can be found from the following link: http://www.hsl.fi/EN/

#### Weather

The weather in mid-June in Helsinki is pleasant, varying from 20-25 Celsius degrees of daily high temperature during the daytime to around 10 Celsius degrees at the night time. Occasional showers and wind from the sea are possible.

## The conference package:

Your conference package should include the following items:

- This program book
- Name badge
- Vouchers for the Conference Dinner (for those who registered for these events)
- A pen and a notebook

#### Information Desk/Conference office

During the conference you may ask assistance from the student assistants at the registration desk. The conference office during the main conference is located at the Meeting Room 1 of Grand Marina Congress Center (see the maps at the end of the book for rooms)

#### **Lunches**

**Pre-conference:** Restaurants Proffa/Rafla in the Main building. Please show your name badge at the cashier to identify yourself as a conference delegate.

Main conference: Restaurant of the Grand Marina Congress Center (2<sup>nd</sup> floor).

# **Coffee Breaks**

During the main conference, coffee is available all the time at the lobby of Congress center. During the scheduled coffee breaks, some light snacks are provided.

#### **Smoking**

The conference venue is a non-smoking site, smoking is not permitted anywhere inside the building. Smokers should use the designated smoking areas outside the building.

# **Toilets**

See the maps given at the end of this program book to see the location of toilets.

### **Announcements**

News, announcements, or last minute changes to the conference program will be posted on the conference website at **ewepa.org** and on the bulletin board next to the registration desks.

# **Changes and cancellations to the program**

Further requests to change the conference program will not be processed at this juncture as the final program has gone to print. Please inform to the event chair Antti Saastamoinen (antti.saastamoinen@aalto.fi) or the program chair Abolfazl Keshvari (abolfazl.keshvari@aalto.fi) about any last minute cancellations.

### **Hotel Information**

Scandic Grand Marina is the official main conference hotel. The hotel is located right next to the Grand Marina Congress Center.

#### **Scandic Grand Marina**

Katajanokanlaituri 7 00160, Helsinki +358 9 16661 grandmarina@scandichotels.com

Below we have listed the contacts of two hostels that we have recommended and which offer affordable accommodation.

Hotel	Street address	Phone
Euro Hostel	Linnankatu 9	+358 9 622 0470
Hostel Academica	Hietaniemenkatu 14	+358 9 1311 4334

# **Important telephone numbers**

General emergency number 112

Helsinki City Tourist Information +358 9 3101 3300 Helsinki-Vantaa Airport Information +358 200 14636 Taxi (Taksi Helsinki) +358 100 0700

#### **SOCIAL EVENTS**

The following social events are arranged. Except for the Conference Dinner, all social events are included to the conference fee and thus are free for all conference participants. The name badge is however required for all events. For the Conference Dinner, also the **dinner voucher** is needed.

# **Informal Get-together**

Date and Time: Monday June 15, 17:30 onwards

Location: Third floor lobby in the Chydenia building of Aalto University School Business

When the academic program ends on Tuesday, the party begins in the hallway. Wine, beverages, and snacks will be served.

# A reception/networking event sponsored by the City of Helsinki

**Date and Time:** Tuesday June 16, 18:00-19:30 **Location:** Helsinki City Hall, Pohjoisesplanadi 11–13

City Hall is located at Kauppatori ('Market Square') and it is within walking distance from the main conference venue. See the location from the maps at the end of this book.



Helsinki City Hall

Source of the photo:
http://commons.wikimedia.org/wiki/File:Helsingin\_kaupungintalo\_satamasta.jpg

#### **Conference Dinner**

**Date and Time:** Wednesday June 17, 18:30-00:00 **Location:** Fennia 1 hall, Grand Marina Congress Center

Welcome drinks are served at 18:30 and the dinner itself starts at 19:00. Please have your dinner voucher with you, these will be collected by our student assistants at the registration desk. After the dinner, a cash bar for beverages opens to the second floor lobby of the Congress Center.

# **Farewell Coffee**

Date and Time: Thursday June 18, 15:30-16:00

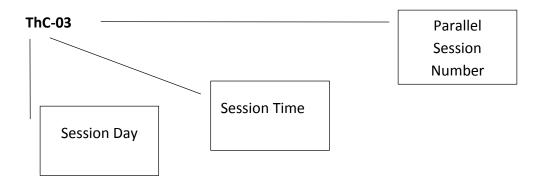
**Location:** The first floor hallway of the Congress Center

Informal farewell coffee.

# **HOW TO READ THE PROGRAM**

Each session has been assigned an alphanumeric session code that helps one to see immediately the time, the type of session, and the session room.

The first two letters (capital letter and a lower case letter) indicate the conference day. The third capital letter indicates the session time. The two numbers after a hyphen indicate the parallel session number. The parallel sessions with the same number are always in the same conference room.



Conference days:	Session Time	Parallel Session Number
Mo: Monday 15	A: (9:00-10:30)	00-09
Tu: Tuesday 16	B: (11:00-12:30)	If possible, parallel sessions
We: Wednesday 17	C: (14:00-15:30)	have been numbered such
Th: Thursday 18	D: (16:00-17:30)	that the same topic has the same number throughout the workshop. Plenaries are numbered as 00.

For co-authored papers, the presenting author is indicated by asterisk \*.

#### **GUIDELINES FOR SESSIONS**

#### **SESSION CHAIRS**

As a general rule, the last presenter of each parallel session has been assigned as the session chair, unless otherwise indicated in the conference program. All session chairs should be aware of the session type as the presentation times differ across session type. In general, the session chair should arrive to the conference room <u>at least 15 minutes before the session starts</u>. Note that each room has a laptop for the presentations.

The session chair is responsible for keeping the session on time. For this purpose, the session chairs can show the presenters a card that indicates the remaining presentation time when there is 5 minutes or 1 minute of presentation time left. These cards are provided in the rooms.

The recommended presentation times are the following:

- Discuss sessions (3 papers): 20 min presentation + 5 min discussant + 5 min general discussion
- Explain sessions (3 papers): 25 min presentation + 5 min general discussion
- Express sessions (depending on the number of papers)

5 papers: 15 min presentation + 3 min general discussion

4 papers: 18 min presentation + 4 min general discussion

3 papers: 25 min presentation + 5 min general discussion

In the case of last minute cancellations, the presentation times can be adjusted accordingly. It is recommended to use all the time allocated for the session and not leave gaps in the program.

#### **PRESENTERS**

Presenters are kindly asked to adhere to the following general guidelines. Note that each room has a laptop for the presentations.

- 1. Prepare your presentation to match the session type. Unless otherwise agreed with the session chair, the presentation times are the following:
- Discuss sessions (3 papers): 20 min presentation + 5 min discussant + 5 min general discussion
- Explain sessions (3 papers): 25 min presentation + 5 min general discussion
- Express sessions (depending on the number of papers)
  - 5 papers: 15 min presentation + 3 min general discussion
  - 4 papers: 18 min presentation + 4 min general discussion
  - 3 papers: 25 min presentation + 5 min general discussion
  - 2. Arrive to the conference room at least <u>15 minutes before your session starts</u> and identify yourself to the session chair. Bring your presentation with you on a memory stick, and keep a copy of the file accessible through the internet (e.g., in your own webmail inbox).
  - 3. Copy your presentation to the desktop of the PC used for presentation.

#### **DISCUSSANTS**

Presenters in the Discuss session are expected to discuss one paper if they have been assigned a discussant role in the session program. Please check carefully from the session program which paper you are expected to discuss. If you have not received the paper you are discussant for, please contact the author/presenter directly.

**Some general instructions and tips:** Discussants have approximately 5 minutes to make their comments and questions. Please keep this time. Discussants can use visual aids (e.g., PPT presentation) but this is not mandatory. The discussants are not expected to summarize the paper (this is the job of the author). Present your critical comments in a constructive manner. All authors appreciate comments and questions that can help them to improve their paper. Keep focus on the contribution of the paper and avoid discussion of minor details.

# **OVERALL SCHEDULE**

Time	Track	Monday	Tuesday	Wednesday	Thursday
8:30 - 17:00		Registration	Registration	Registration	Registration
9:00 - 10:30	Α	Young researcher workshop Software tutorials	Plenary session 1 TuA	Plenary session 2: That's Interesting Competition WeA	Discuss sessions ThA
10:30 - 11:00		Coffee break	Coffee break	Coffee break	Coffee break
11:00 - 12:30	В	Young researcher workshop Software tutorials	Discuss sessions TuB	Discuss sessions WeB	Express sessions ThB
12:30 - 14:00		Lunch break	Lunch break (EWEPA Scientific committee lunch meeting)	Lunch break (JPA Editiorial Board lunch meeting)	Lunch break
14:00 - 15:30	С	Young researcher workshop Software tutorials	Express sessions TuC	Express sessions WeC	Explain sessions ThC
15:30 - 16:00		Coffee break	Coffee break	Coffee break	Farewell coffee
16:00 - 17:30	D	Young researcher workshop	Explain sessions TuD	Explain sessions WeD	
17:30-		Informal get-together at Aalto University School of Business (Chydenia)			
18:00-			Reception at the City Hall		
18:30-				Conference Dinner at Grand Marina Congress Center	

# **SESSION SCHEDULE - MONDAY**

# Young Researcher (YR) Workshop, Software Tutorials \* Pre-registration required for software tutorials.

Time	Young researcher workshop,	Software tutorials *	
	H324 Stora Enso (Chydenia building)	C250 Tieto (Main building)	G113 (Chydenia building)
8:30 - 17:00	Registration, Lobby		
8:50 - 9:00	Opening Remarks		
9:00 - 10:30	MoA-01: Inference	MoA-02 Basic R Tutorial	
10:30 - 11:00	Coffee break		
11:00 - 12:30	MoB-01: Dynamic models 1	Basic R Tutorial (cont.)	
12:30 - 14:00	Lunch break (Restauran	ts Proffa and Rafla in the	e Main Building)
14:00 - 15:30	MoC-01: Regions and sectors	MoC-02 GAMS Tutorial	MoC-03 Advanced R Tutorial
15:30 - 16:00	Coffee break		
16:00 - 17:30	MoD-01: Dynamic models 2	GAMS Tutorial (cont.)	Advanced R Tutorial (cont.)

# **SESSION SCHEDULE - TUESDAY**

Time	Track								
8:30- 17:30	Registration								
9:00 - 10:30	A Plenary	,,							
10:30 - 11:00		Coffee break							
				Ses	sion rooms				
		Europaea	Fennia I	Fennia II	Nordia	Nautica	Press room	Baltica	
11:00 -	В	TuB-01	TuB-02	TuB-03	TuB-04	TuB-05	TuB-06	TuB-07	
12:30	Discuss	Banking 1	Nonparametric models	Stochastic frontiers 1	TFP 1	Energy 1	Agriculture 1		
12:30 - 14:00			EWEP	`	Restaurant, 2 <sup>nd</sup> fl nittee meeting (N				
14:00 -	С	TuC-01	TuC-02	TuC-03	TuC-04	TuC-05	TuC-06	TuC-07	
15:30	Express	Banking 2	Production theory	Stochastic frontiers 2	TFP 2	Energy 2: Regulation	Agriculture 2		
15:30 - 16:00	Coffee break								
16:00 - 17:30	D Explain	TuD-01 Banking 3	TuD-02 DEA 1	TuD-03 Stochastic frontiers 3	TuD-04 TFP 3	TuD-05 Energy 3	TuD-06 Education 1	TuD-07	

# **SESSION SCHEDULE - WEDNESDAY**

Time	Track									
8:30 -		Registration								
17:30										
9:00 -	Α	Plenary Session 2, WeA-01 (Europaea): Aalto That's Interesting! finalists Daniela Puggioni, Thomas Triebs and Russel Cooper								
10:30	Plenary	Plenary								
10:30 -					Coffee break					
11:00										
					Session rooms					
		Europaea	Fennia I	Fennia II	Nordia	Nautica	Press room	Baltica		
11:00 -	В	WeB-01	WeB-02	WeB-03	WeB-04	WeB-05	WeB-06	WeB-07		
12:30	Discuss	Banking 4	DEA 2		Health care 1	Energy 4	Education 2	Stochastic frontiers 4		
12:30 -				Lunch b	reak (Restaurant, 2 <sup>nd</sup>	floor)				
14:00				JPA editoria	l board meeting (Ma	rine room)				
14:00 -	С	WeC-01	WeC-02	WeC-03	WeC-04	WeC-05	WeC-06	WeC-07		
15:30	Express	Environment 1			Health care 2	Energy 5	Education 3	Banking 5		
15:30 -					Coffee break					
16:00										
16:00 -	D	WeD-01	WeD-02	WeD-03	WeD-04	WeD-05	WeD-06	WeD-07		
17:30	Explain	DEA 3			Stochastic	Energy 6	Education 4	Decision making 1		
					frontiers 5					

# **SESSION SCHEDULE - THURSDAY**

Time	Track									
9:00 - 11:00		Registration								
		Session rooms								
		Europaea	Fennia I	Fennia II	Nordia	Nautica	Press room	Baltica		
9:00 -	Α	ThA-01	ThA-02	ThA-03	ThA-04	ThA-05	ThA-06	ThA-07		
10:30	Discuss	Banking 6		Well-being	TFP 4	Energy 7	Agriculture 3	DEA 4		
10:30 - 11:00		Coffee break								
11:00 -	В	ThB-01	ThB-03	ThB-02	ThB-04	ThB-05	ThB-06	ThB-07		
12:30	Express	Stochastic frontiers 6	DEA 5	Environment 2	TFP 5	Energy 8	Agriculture 4			
12:30 - 14:00				L	unch break					
14:00 -	С	ThC-01	ThC-02	ThC-03	ThC-04	ThC-05	ThC-06	ThC-07		
15:30	Explain	Stochastic frontiers 7	DEA 6		Decision making 2	Energy 9	Agriculture 5			
15:30 - 16:00				Fa	rewell coffee					

# **SESSION PROGRAM**

#### **MONDAY 15 June**

Note: the presenting author indicated by asterisk \*

Opening Remarks 8:50 - 9:00, H-324 Stora Enso

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MoA-01: Inference

9:00-10:30, H-324 Stora Enso

Session chair: Christopher Parmeter

Bootstrap-based testing for network DEA:
Some theory and application
Kelly Trinh\* and Valentin Zelenyuk
Discussant: Mika Kortelainen

Heterogeneity of inefficiency persistence under a Bayesian framework Ioannis Skevas,\* Grigorios Emvalomatis and Bernhard Bruemmer

Discussant: TBA

Non-parametric efficiency estimation using Richardson-Lucy blind deconvolution Xiaofeng Dai

**Discussant**: Christopher Parmeter

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MoA-02: Basic R Tutorial 9:00-10:30, C250 Tieto (Main Building) 11:00-12:30, C250 Tieto (Main Building) Tomasz Czekaj

MoB-01: Dynamic models 1 11:00-12:30, H-324 Stora Enso Session chair: Andrew Johnson

Nonparametric analysis of dynamic production with storable and durable input Laurens Cherchye and Pieter Jan Kerstens\*

Discussant: Andrew Johnson

Dynamic stochastic analysis of the farm subsidy-efficiency link: Theory and evidence Jean Joseph Minviel\* and Timo Sipiläinen

**Discussant**: TBA

US bank main financial ratios time varying and size effects: An econometric examination of inter-temporal stability and proportionality Richard Simper and Aristeidis Dadoukis\* and Yuzhu Li and Rob Webb and Andrea Pilava

Discussant: TBA

MoC-01: Regions and sectors 14:00-15:30, H-324 Stora Enso

Session chair: Jaap Bos

Financial effects of Chinese import competition: The case of disappearing IPOs Jaap Bos, Omar Hassib\* and Lu Zhang

**Discussant**: Thomas Triebs

Scale economies of multi-output public agencies: An empirical analysis of English and Welsh local male prisons
Veerle Hennebel,\* Richard Simper and Marijn Verschelde

**Discussant**: Victor Podinovski

An evaluation of production efficiency of ICT sectors in the EU: A stochastic frontier approach to Malmquist productivity index Jan Mandak

**Discussant**: Jaap Bos

MoC-02: GAMS Tutorial 14:00-15:30, C250 Tieto (Main Building) 16:00-17:30, C250 Tieto (Main Building)

Andrew Johnson

MoC-03: Advanced R Tutorial 14:00-15:30, G113 (Chydenia Building) 16:00-17:30, G113 (Chydenia Building)

**Christopher Parmeter** 

\_\_\_\_\_

MoD-01: Dynamic models 2 16:00-17:30, H-324 Stora Enso Session chair: Kristiaan Kerstens

Environmental growth convergence among Chinese regions Jean Philippe Boussemart, Hervé Leleu and Zhiyang Shen\*

Discussant: Mette Asmild

Measuring the technical efficiency of farms producing environmental output:
Semiparametric estimation of multi-output stochastic ray production frontiers
Tomasz Gerard Czekaj\*

**Discussant:** Daniel Henderson

Measuring the development of efficiency and productivity of banks in the Visegrád group:
An application of CCR model and the Malmquist approach
Lucie Chytilova

**Discussant**: Kristiaan Kerstens

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### **TUESDAY 16 June**

TuA-01: Plenary session 1 9:00-10:30, Europaea

# Nonparametric smoothing and shape constraints

Christopher Parmeter Andrew Johnson

Coffee break

TuB-01: Banking 1 11:00-12:30, Europaea

Session chair: Jaap Bos

Considering favourability indexes as part of the Malmauist index

Mette Asmild and Kwaku Ohene-Asare\*

**Discussant:** Jaap Bos

Banking on Industry: microeconomic evidence on the impact of financial services on industrial structure and development Jaap Bos and Marta Degl'Innocenti\*

**Discussant:** Mette Asmild

A double whammy: Credit chains and idiosyncratic supplier shocks
Dennis Bams, Jaap Bos\* and Magdalena Pisa

Discussant: Marta Degl'Innocenti

TuB-02: Nonparametric models 11:00-12:30, Fennia I

Session chair: Andrew Johnson

Bandwidth selection issues for nonparametric conditional efficiency estimation: a Monte-Carlo investigation

Luiza Badin,\* Cinzia Daraio and Leopold

Simar

**Discussant:** Abolfazl Keshvari

Penalized shape restricted least squares with an application to productivity analysis Abolfazl Keshvari

**Discussant:** Andrew Johnson

Shape constrained kernel weighted least squares for the estimation of production functions

Daisuke Yagi\* and Andrew Johnson

Discussant: Luiza Badin

TuB-03: Stochastic frontiers 1 11:00-12:30, Fennia II

Session chair: Subal Kumbhakar

The validity of statistical inference about unitspecific technical efficiencies in crosssectional stochastic frontier models: Comparison of Bayesian and classical approaches

Oleg Badunenko and Yaryna Kolomiytseva\*

**Discussant:** Christine Amsler

Endogeneity in stochastic frontier models
Christine Amsler, Artem Prokhorov\* and
Peter Schmidt

**Discussant:** Subal Kumbhakar

A general error revenue function model with technical inefficiency: An application to Norwegian fishing trawler Subal Kumbhakar, Frank Asche, Kristin Roll and Ragnar Tveteras\*

Discussant: Yaryna Kolomiytseva

TuB-04: TFP 1
11:00-12:30, Nordia
Session chair: David Tripe

Offshoring, biased technical change and the increasing capital share: An analysis of global manufacturing production

Marcel Timmer and Xianjia Ye\*

Discussant: Thanh Ngo

The innovative input mix: Assessing the importance of R&D and ICT investments for firm performance in manufacturing and services

Marina Rybalka **Discussant:** Xianjia Ye

Nonparametric Fisher total factor productivity index using shadow prices: panel

vs. time series data

Thanh Ngo\* and David Tripe **Discussant:** Marina Rybalka

TuB-05: Energy 1 11:00-12:30, Nautica

Session chair: Mette Bjørndal

Operational conditions in regulatory benchmarking models - A Monte Carlo simulation study

Maria Nieswand and Stefan Seifert\*

**Discussant:** Mark Andor

SFA quasi-likelihood: A new stochastic frontier estimation method
Mark Andor

**Discussant:** Astrid Cullmann

Challenged, or just inefficient? Compensating for exogenous cost drivers in the regulation of electricity networks

Endre Bjørndal, Mette Bjørndal, Astrid Cullmann, and Maria Nieswand **Discussant:** Maria Nieswand

TuB-06: Agriculture 1

11:00-12:30, Press room

Session chair: Magdalena Kapelko

Estimating the economic value of symbiotic nitrogen: A distance function approach Robertson Khataza,\* Atakelty Hailu, Graeme

Doole and Marit Kragt

Bayesian analysis of productivity growth of Polish dairy farms Kamil Makiela, Jerzy Marzec and Andrzej Pisulewski\* Dynamic input-specific productivity change: measurement and application to European dairy manufacturing firms

Magdalena Kapelko,\* Alfons Oude Lansink and Spiro Stefanou

Lunch break

TuC-01: Banking 2 14:00-15:30, Europaea Session chair: Paul Rouse

Sources of productivity growth in Indonesian banks: An empirical analysis during 1993 – 2011

Felisitas Defung

Efficiency and risk in the banking industry: Evidence from Southeast Europe Bashkim Nurboja

How many and what to include: Reevaluating the Z environmental variables in an SFA cross country banking model Richard Simper,\* Aristeidis Dadoukis, Yuzhu Li and Rob Webb

How do we know what the right price is (and does it matter)?

Paul Rouse\* and David Tripe

TuC-02: Production theory 14:00-15:30, Fennia I

Session chair: Kristiaan Kerstens

Choice of technology which generates normalized CES production function

Andrei Matveenko and Vladimir Matveenko\*

Multiplicative duality theory in production economics

Walter Briec and Paola Ravelojaona\*

Frontier metatechnologies and convexity: A restatement

Kristiaan Kerstens,\* Christopher O'Donnell and Ignace Van de Woestyne

TuC-03: Stochastic frontiers 2

**14:00-15:30, Fennia II** Session chair: Jos Blank

Assessing substitutability among undesirable outputs using parametric directional output distance function: A Monte Carlo analysis Viktor Khanzhyn

The assimilation of young workers into the labour market in France: A stochastic frontier approach

Stephen Bazen and Khalid Maman Waziri\*

The scaling property and the use of a system of equations approach: An application to Dutch secondary education

Jos Blank\*

TuC-04: TFP 2 14:00-15:30, Nordia

Session chair: Nicky Rogge

Effects of imports on technical efficiency in Russian food industry
Yevhenii Shchetynin

The dynamics of total factor productivity and its components: Russian plastic production Irina Ipatova

Relation between determinants of total factor productivity and stock returns Matthieu Belarouci

Benchmarking EU social inclusion and poverty policies in the period 2005 – 2012
Nicky Rogge

TuC-05: Energy 2: Regulation 14:00-15:30, Nautica

Session chair: Roar Amundsveen

Comments on the Brazilian benchmarking model for energy distribution regulation - Fourth cycle of tariff review (2015-2018)
Peter Bogetoft and Ana Lopes\*

Application of the StoNED method in the regulation of electricity distribution operators in Finland: The regulator's perspective Matti llonen

Economies of vertical integration and efficient electricity markets

Roar Amundsveen and Hilde Marit Kvile\*

TuC-06: Agriculture 2 14:00-15:30, Press room

Session chair: Tomasz Czekaj

Scale efficiency of farms with different systems of rearing pigs Elzbieta Jadwiga Szymanska

Addressing technical efficiency and technology heterogeneity in the Irish cattle sector: Exploring the effects of the Single Farm Payment on different cattle farm types Maria Martinez-Cillero,\* James Breen, Fiona Thorne, Thia Hennessy and Michael Wallace

Determinants of MD2\* adoption, production efficiency and technology gaps in the Ghanaian pineapple production sector Amos Mensah\* and Bernhard Brümmer

A meta-frontier approach for causal inference in productivity analysis: The effect of contract farming on sunflower productivity in Tanzania

Arne Henningsen, Daniel Mpeta, Anwar Adem, Joseph Kuzilwa and Tomasz Czekaj

Coffee break

TuD-01: Banking 3

**16:00-17:30, Europaea**Session chair: Paul Wilson

Managerial efficiency under centralized management - A dynamic approach with an empirical illustration to German saving banks Mohsen Afsharian\* and Heinz Ahn

Bank branch operational performance: A robust and fuzzy clustering approach
Oscar Herrera-Restrepo and Kostas Triantis\* and William Seaver and Joseph Paradi

Sources of returns to scale of U.S. banks: Cost, revenue, and profit David Wheelock and Paul Wilson\*

TuD-02: DEA 1 16:00-17:30, Fennia I

Session chair: Jesus Pastor

Output-specific inputs in DEA Maria Portela

Performance evaluation of the public employment services in Finland
Juha Eskelinen\* and Abolfazl Keshvari

An enhanced BAM for unbounded or partially bounded CRS additive models Jesus Pastor,\* Juan Aparicio, Javier Alcaraz, Fernando Vidal, Diego Pastor and Juan Monge

TuD-03: Stochastic frontiers 3 16:00-17:30, Fennia II

Session chair: Peter Schmidt

Do direction, normalization and the Jacobian matter in the productivity measurements based on the directional output distance function?

Mike Tsionas, Emir Malikov and Subal Kumbhakar\*

Stochastic metafrontiers
Christine Amsler,\* Christopher O'Donnell and
Peter Schmidt

Distinguishing heterogenity and inefficiency in a panel data stochastic frontier model

Christine Amsler and Peter Schmidt\*

**TuD-04: TFP 3 16:00-17:30, Nordia** Session chair: Bert Balk

Productivity and efficiency in the handbook of input-output analysis
Thijs ten Raa

A novel approach to the aggregation of economic productivity indices
Bert Balk

TuD-05: Energy 3 16:00-17:30, Nautica

Session chair: Gerald Granderson

Energy efficiency and the economy-wide rebound effect: A computable general equilibrium analysis for Spain Pablo Arocena\* and Antonio Gómez-Plana and Sofía Peña

A decomposition of the aggregate energy intensity change of Spanish manufacturing industry

Pablo Arocena and Antonio Gómez-Plana and Sofía Peña\*

Impact of the 1990 Clean Air Act, and ISO membership, on production cost and efficiency in the electric utility industry
Gerald Granderson and Finn Forsund

**TuD-06: Education 1 16:00-17:30, Press room**Session chair: Jose Dula

A unified productivity-performance approach applied to secondary schools in the Netherlands Laurens Cherchye, Kristof De Witte and Sergio Perelman\* Assessing the multidimensional performance of universities: Overcoming rankings with conditional efficiency analysis
Cinzia Daraio,\* Andrea Bonaccorsi and Leopold Simar

Lessons learned from DEA applied to university rankings
M.-L. Bougnol and Jose Dula\*

#### **WEDNESDAY 17 June**

WeA-01: Plenary session 2 9:00-10:30, Europaea

# Finalists of Aalto "That's Interesting!" award

The value of being socially responsible: A DEA approach for recovering shadow prices of CSR activities in the food manufacturing sector Daniela Puggioni\* and Spiro Stefanou

Management in production: From unobserved to observed Thomas Triebs\* and Subal Kumbhakar

The productivity of the internet from the perspective of households **Russel Cooper** 

Discussants: Jaap Bos, Victor Podinovski and

Timo Kuosmanen

Coffee break

WeB-01: Banking 4

11:00-12:30, Europaea Session chair: Mette Asmild

A global house of debt effect? Mortgages and post-crisis recessions in fifty economies

Lu Zhang\* and Dirk Bezemer Discussant: Tsu-Tan Fu

Performance evaluation of Taiwan banking industry with the consideration of corporate governance and risk management

Tsu-Tan Fu

**Discussant:** Mette Asmild

Inefficiency patterns amongst different types, and generations, of Bangladeshi bank Mette Asmild,\* Dorte Kronborg and Kent Matthews

Discussant: Lu Zhang

WeB-02: DEA 2

11:00-12:30, Fennia I Session chair: Marijn Verschelde

The moments bootstrap: An alternative to

smooth bootstrap DEA Panagiotis Tziogkidis

Disciussant: Marijn Verschelde

Ranking with a Euclidean common set of weights in data envelopment analysis: With application to the NZ banking sector

Thanh Ngo and David Tripe\* **Discussant:** Panagiotis Tziogkidis

Nonparametric analysis of multi-product firms with unobserved technological heterogeneity

Laurens Cherchye, Thomas Demuynck, Bram

De Rock and Marijn Verschelde\* **Discussant:** David Tripe

WeB-04: Health care 1

11:00-12:30, Nordia Session chair: Katharina Schley

An evaluation of technical efficiency in the nursing home sector in Ireland

Shiovan Ni Luasa,\* Declan Dineen and Marta

Zieba

Discussant: Ana Rodríguez Álvarez

By estimating the cost of reducing the waiting lists: A new approach Ana González Vidales and Ana Rodríguez

Álvarez\*

Discussant: Shiovan Ni Luasa

Health care efficiency differences in German districts

Helmut Herwartz and Katharina Schley\*

WeB-05: Energy 4 11:00-12:30, Nautica

Session chair: Endre Bjørndal

Cluster analysis for energy distribution benchmarking: the 2014 Brazilian case Marcelo Costa,\* Aline Veronese and Ana Lopes

**Discussant:** Antti Saastamoinen

Merger gains in the Norwegian electricity distribution industry

Antti Saastamoinen,\* Endre Bjørndal and

Mette Bjørndal

**Discussant:** Ana Lopes

Malmquist productivity analysis based on StoNED: The case of Norwegian electricity distribution companies

Xiaomei Cheng,\* Endre Bjørndal and Mette

Bjørndal

**Discussant:** Marcelo Costa

WeB-06: Education 2 11:00-12:30, Press room

Session chair: Sverre Kittelsen

Quality of upper secondary schools in Finland: evaluating persistent and non-persistent differences in value-added Mika Kortelainen,\* Heikki Pursiainen and Jenni Pääkkönen

**Discussant:** Sverre Kittelsen

Environmental influences on academic performance: Evidence from Colombian higher education institutions
Ligia Melo and Jorge Ramos
Discussant: Mika Kortelainen

Productivity of Norwegian institutions of higher education 2004 – 2013

Dag Fjeld Edvardsen, Finn Førsund and Sverre Kittelsen\*

**Discussant:** Jorge Ramos

WeB-07: Stochastic frontiers 4

11:00-12:30, Baltica

Session chair: Daniel Wikström

The non-linear input-output model with time varying random coefficients: Evidence for the US economy

Panayotis Michaelides,\* Efthymios Tsionas and Konstantinos Konstantakis

A two-tier stochastic frontier model with correction for sample selection Hung-pin Lai

A stochastic frontier model with discrete inefficiency Aljar Meesters

Modified fixed effects estimation of technical inefficiency
Daniel Wikström

Lunch break

WeC-01: Environment 1 14:00-15:30, Europaea Session chair: Alan Wall

Dynamic eco-efficiency under the byproduction of undesirable output Hervé Dakpo\* and Alfons Oude Lansink

Reconcilableness of environment and income
- An environmental efficiency analysis of
smallholder palm oil and rubber producers
Mareike Holtkamp\* and Bernhard Brümmer

Estimating the materials balance condition: A stochastic frontier approach
Benjamin Hampf\*

Eco-efficiency using a stochastic frontier approach with applications to dairy farming José Antonio Pérez, Luis Orea, David Roibás and Alan Wall\*

WeC-04: Health care 2 14:00-15:30, Nordia

Session chair: Michael Vardanyan

Testing gender differences in productivity: an application to Spanish hospitals

Maria Perez-Villadoniga,\* Ana RodriguezAlvarez and David Roibas

The efficiency of health expenditure: Comparison of European countries Mária Grausová, Miroslav Hužvár\* and Jana Štrangfeldová

A directional distance function approach for identifying the input/output status of medical residents

Gary Ferrier, Hervé Leleu, Vivian Valdmanis and Michael Vardanyan\*

WeC-05: Energy 5 14:00-15:30, Nautica

Session chair: Heike Wetzel

The use of composite indicators to evaluate the performance of Brazilian hydropower plants

Ana Camanho,\* Andreia Zanella and Felipe Calabria

Efficiency of wind power production and its determinants

Simone Pieralli,\* Matthias Ritter and Martin Odening

Carbon-decreasing developments among new competitors: Gas- and coal-fired plants in the US power sector

Christian Growitsch, Simon Paulus and Heike Wetzel\*

WeC-06: Education 3
14:00-15:30, Press room
Session chair: Claudio Thieme

What can be learned from efficiency in sports to rank schools?

Julio del Corral

Locus of decision-making and the efficiency of the education sector

Marie Le Mouel,\* Alexander Schiersch and Martin Gornig

Exploring cross-country differences in the efficiency of schools: A conditional nonparametric approach
Jose Cordero,\* Cristina Polo, Daniel Santin and Rosa Simancas

An educational value added method using weight restrictions and nonparametric frontier techniques
Claudio Thieme,\* Diego Prior, Emili Tortosa-Ausina and René Gempp

WeC-07: Banking 5 14:00-15:30, Baltica

Session chair: Stefania Rossi

The performance evaluation on the efficiency and productivity change of securities industry in China

Mei-Ying Huang\* and Jun-Wey Fan

What drives performance among Tanzanian savings and credit cooperatives? Multiple case study approach

Nyankomo Marwa and Meshach Aziakpono

Does ownership always matter? Evidence from the Indian banking Ram Mohan\* and Ganesh Radhakrishnan

Credit crunch, gender discrimination and social capital: An empirical investigation on the European countries
Emma Galli and Stefania Rossi\*

Coffee break

WeD-01: DEA 3

16:00-17:30, Europaea

Session chair: Victor Podinovski

Measuring input-specific productivity change through a Luenberger indicator based on the principle of least action Juan Aparicio, Magdalena Kapelko, Bernhard Mahlberg\* and Jose Sainz-Pardo

Interval scale data in the BoD model Roxani Karagiannis\* and Giannis Karagiannis

Consistent weight restrictions and production trade-offs in DEA
Victor Podinovski and Tatiana Bouzdine-

WeD-04: Stochastic frontiers 5 16:00-17:30, Nordia

Session chair: Leopold Simar

Chameeva

Elasticities of substitution and complementarity across space
Anthony Glass,\* Karligash Kenjegalieva,
Robin Sickles and Thomas Weyman-Jones

Global dependence and productivity: A robust nonparametric world frontier analysis Camilla Mastromarco\* and Leopold Simar

The "wrong skewness" problem in stochastic frontier models: A new approach Christian Hafner, Hans Manner and Leopold Simar\*

WeD-05: Energy 6 16:00-17:30, Nautica

Session chair: William Greene

Yardstick regulation of electricity distribution

– Disentangling short-run and long-run
inefficiency
Subal Kumbhakar and Gudbrand Lien\*

Persistent and transient efficiency – An application to the Swiss hydro power sector Massimo Filippini, Thomas Geissmann\* and William Greene

Persistent and transient productive inefficiency of the New Zeeland electricity distribution companies

Massimo Filippini and William Greene\*

WeD-06: Education 4
16:00-17:30, Press room
Session chair: Jill Johnes

Efficiency in education: A review of literature and a way forward
Kristof De Witte\* and Laura Lopez-Torres

The three i's of public schools: Irrelevant inputs, insufficient resources and inefficiency Daniel Henderson,\* Leopold Simar and Le Wang

University mergers in England: An analysis of efficiency effects using Bayesian methods
Jill Johnes\* and Mike Tsionas

WeD-07: Decision making 1 16:00-17:30, Baltica

Session chair: Jef Van Meensel

The effect of manager's risk preference and bank consolidation on risk diversification in U.S.

Ming-Hsiang Huang,\* Hsiu-Wen Hsueh, Tsui-Yueh Cho and Yung-Lieh Yang

Inefficiency and risk taking behavior in Spanish banking Maria García-Alcober, Emili Tortosa-Ausina, Diego Prior\* and Manuel Illueca

Marrying frontier analysis-based benchmarking and user-tailored decision support

Jef Van Meensel\* and Ludwig Lauwers

#### **THURSDAY 18 June**

ThA-01: Banking 6 9:00-10:30, Europaea

Session chair: Emili Grifell-Tatjé

Evaluating private pension funds using data envelopment analysis considering the effect of regulations and experts' judgments Maryam Badrizadeh\* and Joseph Paradi

A cost efficiency analysis of the Insurance Industry in Mexico

Ana María Reyna\* and Hugo Fuentes **Discussant:** Jonathan Calleja-Blanco

Downsizing effects on the financial performance of European automobile production plants

Jonathan Calleja-Blanco\* and Emili Grifell-

**Discussant:** Ana María Reyna

ThA-03: Well-being 9:00-10:30, Fennia II

Session chair: Chiara Peroni

Part-time work and firm productivity:
Evidence from Italy
Francesco Devicienti, Elena Grinza\* and
Davide Vannoni

**Discussant:** Chiara Peroni

Measuring of quality of life in Turkey provinces
Halil Tunca

Discussant: Elena Grinza

Making wellbeing productive: A network DEA

framework

Charle-Henri Dimaria, Chiara Peroni\* and

Francesco Sarracino
Discussant: Halil Tunca

ThA-04: TFP 4 9:00-10:30, Nordia

Session chair: Elina Berghäll

Cross-country income differences revisited: accounting for the role of intangible capital Wen Chen

**Discussant:** Marianna Papakonstantinou

Composition of human capital, distance to the frontier and productivity

Marianna Papakonstantinou\*

Discussant: Elina Berghäll

FDI and the world technology frontier Elina Berghäll

Discussant: Wen Chen

ThA-05: Energy 7 9:00-10:30, Nautica

Session chair: Humberto Brea-Solís

Tariff regulation of electricity distribution: A comparative analysis of regulatory benchmarking models

Ana Lopes and Roberto Mesquita\*

Bayesian mapping methods applied to the 2014 Brazilian energy distribution benchmarking models: accounting for unobserved local determinants of inefficiency Guilherme Gil, Marcelo Costa\* and Ana Lopes

**Discussant:** Humberto Brea-Solís

The twilight zone between latent class modelling and outlier detection: A caveat for the regulatory use of frontier analysis
Per Agrell and Humberto Brea-Solís\*

**Discussant:** Marcelo Costa

ThA-06: Agriculture 3 9:00-10:30, Press room

Session chair: Alfons Oude Lansink

Climatic variability and adaptation in U.S. agriculture

Eric Njuki and Boris Bravo-Ureta **Discussant:** Alfons Oude Lansink

Decomposing profit change: A Fisher-based approach applied to Finnish farms

Xavier Irz\* and Timo Sipiläinen

Discussant: Boris Bravo-Ureta

Dynamic profit inefficiency: A DEA application to Belgian dairy farms

Frederic Ang and Alfons Oude Lansink\*

**Discussant:** Xavier Irz

ThA-07: DEA 4 9:00-10:30, Baltica

Session chair: Michaela Staníèková

Two decades of data envelopment analysis applied to the transport sector: A bibliometric analysis

Laurent Cavaignac and Romain Petiot **Discussant:** Michaela Staníèková

Application of the nonparametric DEA metafrontier approach to compare technology gaps and environmental efficiency technology gaps among European regions Jana Hanèlová, Lukáš Melecký\* and Michaela Staníèková

**Discussant:** Romain Petiot

Context-dependent DEA approach:
Performance catching up among European
EU28 NUTS 2 regions

Michaela Staníèková\* and Lukáš Melecký and Jana Hanèlová

**Discussant:** Laurent Cavaignac

Coffee break

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ThB-01: Stochastic frontiers 6 11:00-12:30, Europaea Session chair: Robin Sickles Importing scale efficiencies from publicprivate collaboration in household waste collection

J.A. Wilschut,\* H. de Groot, Thomas Niaounakis and Jos Blank

Importing scale efficiencies through municipality collaboration. An application of the one-step approach to Dutch municipality taxes

Thomas Niaounakis\* and Jos Blank

Returns to scale and curvature in the presence of spillovers: Evidence from European countries
Anthony Glass, Karligash Kenjegalieva\* and Robin Sickles

ThB-02: DEA 5
11:00-12:30, Fennia I
Session chair: John Walden

The orientation of DEA models with dual-role factors
Wen-Chih Chen

A DEA-based approach to evaluate the efficiency in the performing arts: Focus on German and Italian opera houses
Andrea Baldin\* and Stefania Funari

Economic measures of capacity utilization: A nonparametric cost function analysis
Subhash Ray and John Walden\*

ThB-03: Environment 2 11:00-12:30, Fennia II

Session chair: Fabrizio Erbetta

Sustainable Directions
Frederic Ang,\* Simon Mortimer, Francisco
Areal and Richard Tiffin

Measuring social welfare and drivers of its change Martin Lábaj, Mikuláš Luptáèik and Eduard Nežinský\*

Marginal CO2 abatement costs: Findings from alternative shadow price estimates for Shanghai industrial sectors Xun Zhou

Business innovation and waste management sustainability: the case of door-to-door collection Graziano Abrate, Clementina Bruno, Fabrizio

ThB-04: TFP 5 11:00-12:30, Nordia

Session chair: Doreen Cerny

Erbetta,\* and Giovanni Fraquelli

Price-setting with unobservable elasticities of demand: The business-cycle effects of heterogeneous expectations Christian Jensen

Productivity, structural change and informality: the case of Russia Ilya Voskoboynikov and Vladimir Gimpelson

The sources of economic growth in Sub-Sahara African countries Nosratollah Nafar

Productivity versus self-regulation - An empirical analysis on paradoxes in teaching profession Doreen Cerny

ThB-05: Energy 8 11:00-12:30, Nautica

Session chair: Manuel Llorca

Analyzing efficiency of biogas plants in Austria using data envelopment analysis Andreas Eder,\* Günther Bochmann and Bernhard Mahlberg

Estimation of efficiency levels in electricity consumption by Swiss households: A Stochastic frontier approach Nina Boogen,\* Souvik Datta and Massimo Filippini

A new approach to measuring the rebound effect associated to energy efficiency improvements: An application to the US residential energy demand Luis Orea, Manuel Llorca\*, and Massimo Filippini

ThB-06: Agriculture 4 11:00-12:30, Press room Session chair: Alan Wall

Trade reform and technical efficiency in the Indonesian food industry Bernadetta Dwi Suatmi\* and Ruhul Salim and Harry Bloch

*Inefficient or just different? Accounting for* heterogeneity in small-scale rice production using latent class stochastic frontier models R. Owusu\* and Atakelty Hailu

Production potential, heterogeneous technology and productivity: The case of Hungarian crop producing farms Lajos Baráth\* and Heinrich Hockmann

The effects of forage crop mix on the efficiency and quality of milk production Luis Orea, Jose Perez, David Roibas\* and Alan Wall

Lunch break

ThC-01: Stochastic frontiers 7 14:00-15:30, Europaea

Session chair: Phill Wheat

Nonparametric least squares methods for stochastic frontier models Leopold Simar and Ingrid Van Keilegom and Valentin Zelenyuk\*

A Stochastic frontier model with endogenous treatment status and mediator Yi-Ting Chen and Yu-Chin Hsu and Hung-Jen Wang\*

Uncertainty in efficiency predictions in common panel data stochastic frontier models

Phill Wheat\*

ThC-02: DEA 6 14:00-15:30, Fennia I

Session chair: Emmanuel Thanassoulis

Cross-country difference in evaluations of socioeconomic conditions: A life satisfaction approach

Hideyuki Mizobuchi,\* Jue Yang and Shunsuke Managi

On aggregating cross efficiencies Giannis Karagiannis\*

Identifying the scope for savings at inpatient episode level: An illustration applying DEA to chronic obstructive pulmonary disease Emmanuel Thanassoulis\*, Maria Portela, and Mike Graveney

ThC-04: Decision making 2 14:00-15:30, Nordia

Session chair: Pekka Korhonen

Two-stage processes and an evaluation of their efficiencies with a multiple objective DEA model

Mahdi Mahdiloo\*, Abdol Hossein Jafarzadeh, Abdollah Noorizadeh, Reza Farzipoor Saen and Peter Tatham

A multiple criteria data envelopment analysis approach to two-stage processes
Adel Hatami-Marbini and Mehdi Toloo

Non-convex value efficiency analysis
Pekka Korhonen\*, Merja Halme, and Juha
Eskelinen

ThC-05: Energy 9
14:00-15:30, Nautica
Session chair: Luis Orea

Capital structure and ownership in regulated electricity distribution

Astrid Cullmann, Maria Nieswand and Stefan Seifert

Estimating market power in homogenous product markets using a composed error model: application to the California electricity market

Luis Orea\* and Jevgenijs Steinbuks

ThC-06: Agriculture 5 14:00-15:30, Press room

Session chair: Christopher O'Donnell

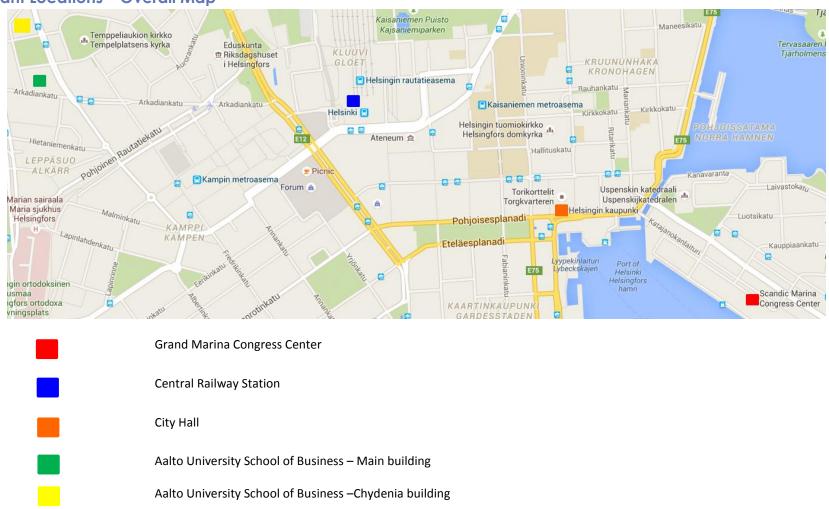
Defining low input dairy farms across European countries: a frontier approach J. Hamerlinck, J. Van Meensel, J. Bijttebier, S. Moakes, J. Buysse, and L. Lauwers\*

Land problems and efficiency in Salvadoran agriculture: A state-contingent approach Boris Bravo-Ureta, María Pérez-Urdiales, and Alan Wall

Maize productivity and input subsidies in Malawi: A state-contingent stochastic production frontier approach S.T. Holden and Christopher O'Donnell\*

arewell coffee		

MAPS
Important Locations – Overall Map

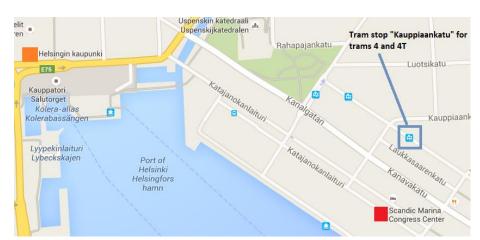


# **Directions – Grand Marina Congress Center**

Easiest way to get to the conference location is to use tram 4 or 4T. The closest stop is called "Kauppiaankatu". The trams 4 and 4T can be taken from the Mannerheimintie close to Railway station.



1) From Central Railway Station, go to stop Lasipalatsi to take either tram 4 or 4T towards Katajanokka.



2) Get off on the stop "Kauppiaankatu.

# Directions - Aalto University School of Business; Chydenia building

The Chydenia building is easily reached from Railway Station with tram 2 towards Töölö. Tram 2 can be taken directly in front of Railway Station from the stop "Rautatieasema". The closest stop to Chydenia building is "Sammonkatu" the next stop from "Kauppakorkeakoulut" stop that is the main stop for Business School.



# Grand Marina Congress Center – Indoors Map

# VIEW TO WATERFRONT Terrace Seaside Meeting Room 4 Meeting Room 3 Meeting Room 2 Meeting Room 1 SECOND FLOOR 2nd Floor Entrance Nautica Bar Nautica Loading Platform **FIRST FLOOR** Press Room Cloakrooom Service Info Entrance Elevator

# **List of Participants**

Last name First name Affiliation

Abrate Graziano University of Piemonte Orientale
Afsharian Mohsen Technische Universität Braunschweig

Ahlgren Oskar Aalto University

Ahn Heinz Technische Universität Braunschweig

Akkanen Päivi University of Helsinki

Alcaraz Javier Universidad Miguel Hernández

Alem Habtamu NMBU

Amsler Christine Michigan State University

Amundsveen Roar Norwegian Water Resources and Energy Directorate
Andor Mark Rheinisch-Westfälisches Institut für Wirtschaftsforschung

Ang Frederic The University of Reading
Arocena Pablo Universidad Pública de Navarra
Asmild Mette University of Copenhagen

Badin Luiza Bucharest University of Economic Studies

Badrizadeh Maryam University of Toronto Baldin Andrea Università Ca' Foscari

Balk Bert M. Erasmus University Rotterdam
Baráth Lajos Hungarian Academy of Sciences

Belarouci Matthieu Institut Catholique de Lille

Berghäll Elina VATT Institute for Economic Research
Bjørndal Endre Norwegian School of Economics
Bjørndal Mette Norwegian School of Economics
Blank Jos Delft University of Technology

Boogen Nina ETH Zürich

Bos Jaap Maastricht University

Boussemart Jean-Philippe IESEG School of Management
Bravo-Ureta Boris University of Connecticut
Brea Solis Humberto University of Liege

Briec Walter University of Perpignan Via Domitia
Calleja Blanco Jonathan Autonomous University of Barcelona

Camanho Ana University of Porto Carlsen Line Energitilsynet

Cavaignac Laurent Université de Perpignan Via Domitia
Cerny Doreen University of Teacher Education Salzburg

Chen Wen University of Groningen

Chen Wen-Chih National Chiao Tung University
Cheng Xiaomei Norwegian School of Economics
Chytilová Lucie VŠB-Technical University of Ostrava
Cooper Russel University of New South Wales
Cordero Ferrera Jose Manuel University of Extremadura

Costa Marcelo UFMG
Cullmann Astrid DIW Berlin

Czekaj Tomasz University of Copenhagen Dadoukis Aristeidis University of Nottingham

Dai Xiaofeng Aalto University School of Business

Dakpo Herve INRA

Daraio Cinzia Sapienza University of Rome

De Witte Kristof KU Leuven

Defung Felisitas Curtin University

Degl'Innocenti Marta University of Southampton Julio del Corral Cuervo University of Castilla-La Mancha Virginia Commonwealth University Dula Jose Eder Institute for Industrial Research (IWI) **Andreas** Ek Göran Swedish Energy Markets Inspectorate Erbetta Fabrizio University of Piemonte Orientale Eskelinen Juha Aalto University School of Business Feteira Inácio Catarina EDP - ENERGIAS DE PORTUGAL, SA

Frantsev Anton Aalto University
Fu Tsu-Tan Soochow University

Geissmann Thomas ETH Zurich

Glass Anthony Loughborough University Glass Karligash Loughborough University Goude Fanny Karolinska Institutet Granderson Gerald Miami University Grausová Mária Matej Bel University Greene William **New York University** 

Grifell-Tatjé Emili Universitat Autònoma de Barcelona

Grinza Elena University of Turin

Hampf Benjamin Darmstadt University of Technology Hančlová Jana VŠB-Technical University of Ostrava

Hassib Omar Maastricht University

Hatamimarbini Adel Université Catholique de Louvain-la-Neuve

Henderson Daniel University of Alabama

Hennebel Veerle KU Leuven

Holden Stein T. Norwegian University of Life Science

Holtkamp Mareike University of Göttingen Huang Mei-Ying National Taipei University

Huang Ming-Hsiang National Changhua University of Education

Hužvár Miroslav Matej Bel University
Ilonen Matti Finnish Energy Authority

Ipatova Irina HSE

Irz Xavier LUKE Natural Resources Institute Finland
Jamasb Tooraj Durham University Business School

JensenChristianUniversity of South CarolinaJohnesJillUniversity of HuddersfieldJohnsonAndrewTexas A&M University

Kapelko Magdalena Wroclaw University of Economics

Karagiannis Giannis University of Macedonia

Karagiannis Roxani Centre for Planning and Economic Research

Kerstens Kristiaan IESEG School of Management

Kerstens Pieter Jan KU Leuven

Keshvari Abolfazl Aalto University School of Business Khanzhyn Viktor Nebraska Wesleyan University Khataza Robertson University of Western Australia

Kittelsen Sverre Frisch Centre

Kolomiytseva Yaryna University of Cologne

Korhonen Pekka Aalto University School of Business Kortelainen Mika VATT Institute for Economic Research

Kronborg Dorte Copenhagen Business School

Kumbhakar Subal SUNY Binghamton and University of Stavanger

Kuosmanen Natalia LUKE Natural Resources Institute Finland

Kuosmanen Timo Aalto University School of Business

Kvile Hilde Marit Norwegian Water Resources and Energy Directorate

Hung-pin National Chng Cheng University

Lauwers Ludwig ILVO
Le Mouel Marie DIW Berlin

Lai

Lien Gudbrand Lillehammer University College
Li Yuzhu University of Nottingham
Llorca Manuel Durham University

Lopes Ana Lucia M UFMG

Luptacik Mikulas Economic University Bratislava

Mahdiloo Mahdi Griffith University

Mahlberg Bernhard Institute for Industrial Research (IWI)
Makiela Kamil Uniwersytet Ekonomiczny w Krakowie

Maman Waziri Khalid AMSE-GREQAM

Manďák Jan VŠB-Technical University of Ostrava

Martinez Cillero Maria University College Dublin

Marwa Nyankomo University of Stellenbosch Business School

Mastromarco Camilla University of Salento

Matveenko Andrei CERGE-EI

Meesters Aljar University of Groningen

Melecký Lukáš VŠB-Technical University of Ostrava

Melo Ligia Colombian Central Bank

Mendonça Boucinha Júlia EDP - ENERGIAS DE PORTUGAL, SA Mensah Amos Georg-August-University Göttingen

Mesquita Roberto Univ. do Estado de Mato Grosso/Univ. Federal de Minas Gerais

Michailidis Panagiotis National Technical University of Athens

Minviel Jean Joseph INRA

Mizobuchi Hideyuki Ryukoku University
Moesgaard Rune Energitilsynet
Mohan Ram IIM Ahmedabad

Monge Juan Universidad Miguel Hernández

Nafar Nosratollah Economic research and Policy Development

Nevidomaya Veronika Aalto University

Nežinský Eduard University of Economics in Bratislava

NgoThanhMassey UniversityNguyenVu Thuy LinhAalto UniversityNi LuasaShiovanUniversity of Limerick

Niaounakis Thomas TU Delft Nieswand Maria DIW Berlin

Njuki Eric University of Connecticut
Nurboja Bashkim University of Ljubljana
O'Donnell Christopher University of Queensland
Orea Sanchez Luis University of Oviedo
Oude Lansink Alfons Wageningen University

Owusu Rebecca University of Western Australia

Pajala Tommi Aalto University

Pakarinen Sami Aalto University School of Business

Papakonstantinou Marianna University of Groningen
Parmeter Christopher University of Miami

Pastor Jesús Universidad Miguel Hernández
Pena Vidondo Sofia Public University of Navarre

Pena Vidondo Sofia Public University of Navarre (UNAVARRA)

Perelman Sergio University of Liège Pérez Villadóniga Maria José University of Oviedo

Peroni Chiara STATEC

Petiot Romain Université de Perpignan Via Domitia

Pieralli Simone University of Maryland & Humboldt University Berlin

Pisulewski Andrzej Uniwersytet Ekonomiczny w Krakowie

PodinovskiVictorLoughborough UniversityPortelaMariaPortuguese Catholic UniversityPriorDiegoUniversitat Autonoma de Barcelona

Prokhorov Artem University of Sydney

Puggioni Daniela Pennsylvania State University

Puolokainen Tarmo University of Tartu Ravelojaona Paola University of Perpignan

Reyna Bernal Ana Maria Instituto Technologico De Monterrey

Riber Thomsen Ida Energitilsynet
Rodriguez Alvarez Ana University of Oviedo

Rogge Nicky Katholieke Universiteit Leuven

Roibas David University of Oviedo
Rossi Stefania University of Cagliari
Rouse Paul University of Auckland
Rybalka Marina Statistics Norway

Saal David Loughborough University

Saastamoinen Antti Aalto University School of Business

Schley Katharina University of Göttingen
Schmidt Peter Michigan State University

Seifert Stefan DIW Berlin Shchetynin Yevhenii HSE

Shen Zhyiang Catholic University of Lille

Sickles Robin Rice University

Simar Leopold Université Catholique de Louvain-la-Neuve

Skevas Ioannis University of Goettingen

Staníčková Michaela VŠB-Technical University of Ostrava

Suatmi Bernadetta Curtin University

Szymańska Elżbieta Warsaw University of Life Sciences

ten Raa Thijs Tilburg University
Thanassoulis Emmanuel Aston University

Thieme Jara Claudio Universidad Diego Portales

To Son Aalto University

Toloo Mehdi VŠB-Technical University of Ostrava

Triantis Konstantinos Virginia Tech

Trinh Dung University of Queensland
Tripe David Massey University
Tunca Halil Pamukkale University
Tveteras Ragnar University of Stavanger
Tziogkidis Panagiotis Plymouth Business School

Upreti Bikesh Aalto University

Walden John NOAA

Wall Alan University of Oviedo

Van Meensel Jef ILVO

Wang Hung-Jen National Taiwan University
Vardanyan Mikayel IÉSEG School of Management

Veronese da Silva Aline Federal University of Minas Gerais

Verschelde Marijn KU Leuven

WetzelHeikeUniversity of KasselWheatPhillUniversity of LeedsWikströmDanielDalarna University

Wilson Janneke Technical University Delft Wilson Paul W. Clemson University

Voskoboynikov Ilya HSE

Voutilainen Raimo Nordea Henkivakuutus Suomi

Yagi Daisuke Texas A&M University
Ye Xianjia University of Groningen
Zelenyuk Valentin University of Queensland
Zhang Lu University of Groningen

Zhou Xun Aalto University

Zieba Marta University of Limerick