



**EWEPA XIX CONFERENCE PROGRAM**

**June 16<sup>th</sup> – 19<sup>th</sup>, 2026**

**Munich, Germany**



**LAST UPDATED: 27.04.2026**

CONFERENCE PROGRAMME AT A GLANCE

<b>Tuesday, June 16<sup>th</sup></b>	
09:00 – 10:00	Welcome & Plenary 1 – Mette Asmild
10:00 – 10:30	Coffee break
10:30 – 12:00	Parallel sessions
12:00 – 13:30	Lunch
13:30 – 15:00	PhD sessions
15:00 – 15:30	Coffee break
15:30 – 17:00	Parallel sessions
17:30 –	Welcome drinks
<b>Wednesday, June 17<sup>th</sup></b>	
09:00 – 10:00	Plenary 2 – Johan Swinnen
10:00 – 10:30	Coffee break
10:30 – 12:00	Parallel sessions
12:00 – 13:30	Lunch JPA meeting
13:30 – 15:00	Parallel sessions
15:00 – 15:30	Coffee break
15:30 – 17:00	Parallel sessions
<b>Thursday, June 18<sup>th</sup></b>	
09:00 – 10:00	Plenary 3 – Christoph Kaserer
10:00 – 10:30	Coffee break
10:30 – 12:00	Parallel sessions
12:00 – 13:30	Lunch ISEAPA meeting
13:30 – 15:00	Parallel sessions
15:00 – 15:30	Coffee break
15:30 – 17:00	Parallel sessions
19:00 –	Conference dinner
<b>Friday, June 19<sup>th</sup></b>	
09:00 – 10:30	LAA to Erwin Diewert
10:30 – 11:30	Bavarian brunch
11:30 – 13:00	Parallel sessions
13:00 – 14:00	Light lunch
14:00 – 15:30	Parallel sessions
15:30 – 16:00	Coffee break
16:00 – 17:30	Parallel sessions
17:30 – 18:00	Closing session

DETAILS OF SCIENTIFIC PROGRAMME

		Terra	Jupiter	Mars 1	Mars 2	Venus 1	Venus 2	Orion 1
Tue (16 <sup>th</sup> )	09:00 – 10:00	Welcome & Plenary 1 Mette Asmild						
	10:30 – 12:00	Agriculture 1	SFA methods 1	Regulation 1	Sust & eco-eff 1	Country analysis 1	Energy 1	
	13:30 – 15:00	PhD Session 1	PhD Session 2	PhD Session 3				
	15:30 – 17:00	Organized session 1: Efficiency & sustainability	DEA methods 1	Banking & Finance 1	Education 1	Electricity 1	Productivity 1	
Wed (17 <sup>th</sup> )	09:00 – 10:00	Plenary 2 Johan Swinnen						
	10:30 – 12:00	Special Session: Index numbers	Agriculture 2	Productivity 2	SFA methods 2	Manufacturing 1	Water 1	
	13:30 – 15:00	Organized Session 2: Agricultural TFP + Environment	DEA methods 2	Energy 2	Country analysis 2	Health 1	Governance 1	
	15:30 – 17:00	Organized session 3: Composite indicators	Agriculture 3	Energy 3	SFA methods 3	Sust & eco-eff 2	Regulation 2	
Thu (18 <sup>th</sup> )	09:00 – 10:00	Plenary 3 Christoph Kaserer						
	10:30 – 12:00	DEA methods 3	Agriculture 4	Productivity 3	Sust & eco-eff 3	Oxera 1	ACM 1	Health 2
	13:30 – 15:00	Special plenary session In Honor of Knox Lovell						
	15:30 – 17:00	Sust & eco-eff 4	DEA methods 4	Banking & Finance 2	Justice 1	Oxera 2	ACM 2	Education 2
Fri (19 <sup>th</sup> )	09:00 – 10:30	Life-time Achievement Award to Erwin Diewert						
	11:30 – 13:00	DEA methods 5	Agriculture 5	Sust & eco-eff 5	Education 3	Justice 2	Gender	
	14:00 – 15:30	Organized session 4: Efficiency in system design	Agriculture 6	Country analysis 3	Sust & eco-eff 6	Manufacturing 2	Health 3	
	16:00 – 17:30	Agriculture 7	SFA methods 4	Sust & eco-eff 7	Productivity 4	Justice 3	Water 2	
	17:30 – 18:00	Closing session						

**TUESDAY JUNE 16th, 2026**

**Tue | 09:00-10:00 | Terra & Jupiter - Welcome and Plenary 1**

**Mette Asmild**, Professor, Section for Production, Markets and Policy, Department of Food and Resource Economics (IFRO), University of Copenhagen.

**Tue | 10:30-12:00 | Terra - Agriculture 1**

**CLIMATE-SMART AGRICULTURE AND TECHNICAL EFFICIENCY UNDER EXTREME WEATHER: A LATENT CLASS STOCHASTIC FRONTIER ANALYSIS OF SOYBEAN FARMS IN SÃO PAULO, BRAZIL**  
Larissa Gui Pagliuca; Marcelo José Carrer; Rodrigo Damasceno; Marcela de Mello Brandão Vinholis

**TECHNICAL EFFICIENCY OF SEEMINGLY “RELATED” COW AND CALF PRODUCTION.**

Federico Garcia Suarez; Camilo Alvarez Garcia; Mercedes Motta

**PREDICTORS OF EMISSION-ADJUSTED EFFICIENCY IN POLISH CROP FARMS: NONLINEARITIES, INTERACTIONS AND POLICY THRESHOLDS**

Jakub Staniszewski; Bazyli Czyżewski; Anna Matuszczak

**CLIMATE CHANGE, POLICY INITIATIVES AND FARM EFFICIENCY: THE CONTRASTING CASE OF TWO STATES IN THE INDIAN HIMALAYAS**

Subir Sen

**Tue | 10:30-12:00 | Jupiter - SFA Methods 1**

**IMPLICIT ESTIMATION FOR STOCHASTIC FRONTIER MODEL**

Mohamed Nejib Ouertani; Hanene Hamdani

**INCORPORATING INTERMEDIATE OUTPUTS INTO STOCHASTIC COST FRONTIER MODELS**

Alexander Stead; Trang Tran; Phill Wheat

**ZERO INEFFICIENCY AND LATENT CLASS STOCHASTIC FRONTIER MODEL AND ITS APPLICATION**

Yi-Wun Chen

**IATROGENIC MISSPECIFICATION ERROR AND ESTIMATION OF INEFFICIENCY**

Christopher Parmeter

**Tue | 10:30-12:00 | Mars 1 – Regulation 1**

**IMPACT OF OPERATING SUBSIDIES ON SEWERAGE EFFICIENCY**

Tomohiro Kitamura

**MODELING SPATIAL COOPETITION IN ENVIRONMENTAL EFFICIENCY: A NON-PARAMETRIC APPROACH FOR FAIR REGIONAL GOVERNANCE**

Yunlong Zhang; Emili Grifell-Tatjé; Zhiyang SHEN

**EFFICIENCY OF CENTRAL GOVERNANCE: A STOCHASTIC INPUT DISTANCE FUNCTION ANALYSIS**

Nan Jiang

**A DEA BASED MODEL OF SEWAGE TREATMENT COSTS WITH MULTIPLE PLANTS AND SHARED OPERATIONAL MANAGEMENT**

David Saal; Takayoshi Nakaoka; Tomoyasu Tanaka

**Tue | 10:30-12:00 | Mars 2 – Sustainability/Eco-efficiency 1**

**EVALUATING HEALTH, ENVIRONMENTAL AND CIRCULARITY TRADE-OFFS OF WASTE DERIVED FUELS IN THE CEMENT INDUSTRY**

Maria Michali

**DEVELOPMENT AND APPLICATION OF A METHODOLOGY FOR ASSESSING THE EFFICIENCY OF SUSTAINABLE DEVELOPMENT USING DEA, SHANNON ENTROPY, AND MACHINE LEARNING**

Thomas E. Pappas; Roxani Karagiannis; Georgios Tsaples; Andreas C. Georgiou

**NAVIGATING SUSTAINABILITY TRADE-OFFS: BENCHMARKING ORGANIC AND CONVENTIONAL DAIRY FARMS UNDER CARBON TAXATION**

Andreas Michael Wolff; Mette Asmild

**FARMERS' OPPORTUNITY COSTS OF BIODIVERSITY PROVISION AND AGRI-ENVIRONMENTAL PAYMENTS**

Carolin Canessa, Philipp Mennig, Johannes Sauer

**Tue | 10:30-12:00 | Venus 1 – Country Analysis 1**

**UNLOCKING EFFICIENCY IN INDONESIA'S PALM OIL INDUSTRY: A STUDY ON INEFFICIENCY AND PRODUCTION RISKS**

Muhammad Fawait; Dyah Wulan Sari; Rista Setyana; Haura Azzahra Tarbiyah Islamiya

**EFFICIENCY UNVEILED: EXPLORING GEOGRAPHICAL CHALLENGES AND NATURAL RISKS IN ITALIAN MUNICIPALITIES THROUGH A STOCHASTIC FRONTIER ANALYSIS**

Graziella Bonanno; Francesco Aiello; Lucia Errico; Sandro Rondinella

**THE WORKLOAD–PERFORMANCE RELATIONSHIP WHEN OVERSEEING ALGORITHMIC SYSTEMS**

Changyu Men; Maud Van den Broeke; Marijn Verschelde; Bart Roets

**ARTIFICIAL INTELLIGENCE AND THE PRODUCTIVITY PARADOX: FRONTIER EXPANSION, EFFICIENCY DYNAMICS, AND POLARIZATION IN A CROSS-COUNTRY SETTING**

Francesco Aiello; Graziella Bonanno; Lidia Mannarino; Valeria Pupo

**Tue | 10:30-12:00 | Venus 2 – Energy 1**

**THE PERFORMANCE IMPLICATIONS OF INTERIM CEO APPOINTMENT: EVIDENCE FROM SWEDISH ELECTRICITY DISTRIBUTORS**

Kristofer Månsson; Magnus Soederberg; Pär Sjölander; Jan Weiss

**EXPLORING CONDITIONAL DEA FOR DETERMINING REVENUE CAPS FOR NORWEGIAN ELECTRICITY DSOS**

Håvard Bergheim Holvik

**THE EFFECT OF SMALL-SCALE ELECTRICITY GENERATION ON THE COST AND EFFICIENCY OF ELECTRICITY DISTRIBUTORS: A THRESHOLD RIDGE APPROACH**

Fatemeh Jamhiri; Kristofer Månsson; Pär Sjölander

**STATIC AND DYNAMIC EFFICIENCY ASSESSMENT FOR EUROPEAN GAS TRANSMISSION: THE ACER STUDY**

Per J. Agrell

**Tue | 13:30-15:00 | Terra – PhD Session 1**

**CONDITIONAL FRONTIER DIAGNOSTICS OF STRUCTURAL PRODUCTIVITY CONSTRAINTS UNDER CLIMATE STRESS: EVIDENCE FROM KENYAN SMALLHOLDER AGRICULTURE**

Denis Momanyi

**UNDERSTANDING THE RELATIONSHIP BETWEEN U.S. AGRICULTURAL LABOR AND MACHINERY**

Linge Yang

**ECONOMIES OF SCOPE IN CONVENTIONAL AND ORGANIC FARMING**

William Louis Reingaard Vissing

**Tue | 13:30-15:00 | Jupiter – PhD Session 2**

**BY-PRODUCTION EFFICIENCY ANALYSIS UNDER A CAP-AND-TRADE FRAMEWORK**

Nicolas Marissiaux PhD

**META GREEN INNOVATION EFFICIENCY IN EUROPEAN REGIONS: SPATIAL SPILLOVERS FROM REGIONAL FINANCIAL DEVELOPMENT**

Myungjun Kim

**TRANSITIONING FROM LIVESTOCK TO CROP PRODUCTION: A BAYESIAN STOCHASTIC RAY PRODUCTION FRONTIER ANALYSIS**

Jeronya Mbiatat Petnkeu

**Tue | 13:30-15:00 | Mars 1 – PhD Session 3**

**A COPULA-BASED FRAMEWORK FOR IDENTIFYING CONGESTION IN DATA ENVELOPMENT ANALYSIS**

Zakiatul Wildani

**EVALUATING TEACHING EFFICIENCY IN EUROPEAN UNIVERSITIES USING NONPARAMETRIC TECHNIQUES**

Andreea Monica Munteanu

**EVALUATING MULTIDIMENSIONAL PERFORMANCE IN THE EUROPEAN UNION: A COMPOSITE INDEX APPROACH TO EUROPE 2030**

Jonathan Alulea Pembwe

**Tue | 15:30-17:00 | Terra – Organized session 1: Efficiency and Sustainability**

**Efficiency and Sustainability in European Agriculture: Evidence from the AgEnRes Project**

This organized session presents selected results from the AgEnRes project, focusing on the joint assessment of productivity, environmental performance, and energy efficiency in European agriculture. The contributions combine methodological advances in efficiency and frontier analysis with newly integrated economic, structural, and environmental data. By linking FADN, structural surveys, and biophysical indicators, the papers move beyond conventional productivity measures toward multidimensional performance assessment. Empirical evidence covers multiple European countries and production systems,

with particular attention to energy use, emissions, and policy impacts. Together, the session offers insights relevant for researchers and policymakers concerned with sustainable agricultural transitions.

**ENVIRONMENTAL PRODUCTIVITY MEASUREMENT USING SHADOW PRICES: AN APPLICATION TO DUTCH DAIRY FARMS**

Kexin Wang

**INTEGRATING ECONOMIC, STRUCTURAL AND ENVIRONMENTAL DATA FOR MULTI-DIMENSIONAL EFFICIENCY ANALYSIS IN EUROPEAN AGRICULTURE**

Tamás Krisztin

**A CROSS-COUNTRY COMPARISON OF LONG- AND SHORT-TERM NON-RENEWABLE ENERGY USE EFFICIENCY IN EUROPEAN AGRICULTURE**

K. Hervé Dakpo

**TECHNOLOGICAL HETEROGENEITY AND HETEROGENEOUS SUBSIDY EFFECTS ON TECHNICAL EFFICIENCY: EVIDENCE FROM SWEDISH DAIRY FARMS**

Zhen Chen

**Tue | 15:30-17:00 | Jupiter – DEA Methods 1**

**EVERY COIN HAS TWO SIDES: AN EXTENDED FRAMEWORK FOR MODELING BENEFICIAL AND HARMFUL BY-PRODUCTS**

Yunguo Mu; Zhiyang Shen; Michael Vardanyan

**GAIN-LOSS PORTFOLIO EFFICIENCY AND ASSET-PRICING BOUNDS: A DIRECTIONAL DISTANCE APPROACH**

Maryam Hasannasab; Dimitris Margaritis

**A UNION ENDOGENOUS DIRECTIONAL DISTANCE FUNCTION APPROACH TO META-FRONTIER EFFICIENCY ANALYSIS UNDER TECHNOLOGICAL HETEROGENEITY**

Ming-Miin Yu; Rajinder Kaur

**ENHANCING FDH BY PRODUCTION TRADE-OFFS**

Mahmood Mehdiloo; Grammatoula Papaioannou; Victor Podinovski

**Tue | 15:30-17:00 | Mars 1 – Banking & Finance 1**

**A GROUP-BASED PROFITABILITY GAP DECOMPOSITION MODEL: AN APPLICATION TO TAIWANESE AND CHINESE CITY BANKS**

Xiang Chen; Xisi Chen

**THE EFFECT OF CORPORATE SOCIAL RESPONSIBILITY ON BANK PERFORMANCES: AN APPLICATION OF NETWORK STOCHASTIC FRONTIER ANALYSIS**

Chu-Nan Hu; Kuo-Jui Huang

**ASSESSING THE EFFICIENCY OF EUROPEAN LISTED REGIONAL BANKS: A CONDITIONAL NONPARAMETRIC APPROACH**

Anamaria Aldea; Luiza Bădin; Carmen Lipară

**COST, OUTREACH AND GENDER: AN EMPIRICAL ANALYSIS OF SOUTH ASIAN MICROFINANCE INSTITUTIONS**

Sayati Ghosh; Simanti Bandyopadhyay

**Tue | 15:30-17:00 | Mars 2 – Education 1**

**FEED A COLD: NEW EVIDENCE ON THE IMPACT OF COVID-19 ON SCHOOL ATTENDANCE AND ACHIEVEMENT**

Kathy Hayes; Lori Taylor; Shawna Grosskopf; Laura Razzolini

**TWO DECADES OF PUBLIC SPENDING EFFICIENCY IN EU COMPULSORY EDUCATION**

Giovanni Antonini; Tommaso Agasisti

**MODELING THE DETERMINANTS OF EDUCATION EFFICIENCY UNDER FISCAL DECENTRALIZATION: A TWO-STAGE DEA–TOBIT ANALYSIS IN EAST JAVA, INDONESIA**

Widya Sylviana; Dyah Wulan Sari; Haura Azzahra Tarbiyah Islamiya; Muhammad Fawait; Rista Setyana

**NETWORK DEA MODEL FOR EFFICIENCY ANALYSIS OF THE UNIVERSITIES IN THE UK**

Akram Dehnokhalaji; Oleg Badunenko

**Tue | 15:30-17:00 | Venus 1 – Electricity 1**

**DISTINGUISHING HIGH-IMPACT AND ATYPICAL OUTLIERS IN REGULATION: EVIDENCE FROM GERMAN ELECTRICITY NETWORKS**

Mohsen Afsharian; Peter Bogetoft

**TOTEX-BASED REGULATORY BENCHMARKING: EUROPEAN LESSONS FOR THE BRAZILIAN ELECTRICITY DISTRIBUTION FRAMEWORK**

Ana Lopes Ahn; Bruno Vilela; Heinz Ahn Heinz; Carolin Ladda; Roberto Mesquita; Roger dos Reis Alves

**OPTIMAL MERGERS AND SECTOR RESTRUCTURING**

Peter Bogetoft; Merc.

**FRONTIER REGULATION OF ELECTRICITY DISTRIBUTION: WHY ECONOMISTS ARE WRONG AND ENGINEERS ARE ONLY HALF RIGHT**

Kristiaan Kerstens; Stefano Nasini; Miguel Alves Pereira

**Tue | 15:30-17:00 | Venus 2 – Productivity Analysis 1**

**A THEORY OF TECHNOLOGY-BASED PRODUCTIVITY INDEX**

Sung Ko Li; Long Zhao

**FIRM SUBSIDIES AND FACTOR USE**

Thomas Triebs; Mingyang Li; Kai Sun

**STRUCTURAL IDENTIFICATION OF MULTIDIMENSIONAL PRODUCTIVITY SPILLOVERS**

Zhezhi Hou; Emir Malikov; Shunan Zhao

**PARADOXES OF THE PUBLIC SECTOR PRODUCTIVITY MEASUREMENT**

Timo Kuosmanen; Xun Zhou

WEDNESDAY JUNE 17th, 2026

**Wed | 09:00-10:00 | Terra & Jupiter - Plenary 2**

**Johan Swinnen**, Director General, International Food Policy Research Institute (IFPRI)

*Chair:* Spiro E. Stefanou

**Wed | 10:30-12:00 | Terra – Special session: Index numbers**

**Chair:** Christopher Parmeter

**ON THE THEORY AND PRACTICE OF PROPER INDEXES**

Erwin Diewert

**PROPER QUANTITY INDEXES FOR COHERENT PRODUCTIVITY COMPARISONS**

Christopher O'Donnell

**Wed | 10:30-12:00 | Jupiter – Agriculture 2**

**HOW CAP SUBSIDIES AFFECT TECHNICAL EFFICIENCY: EVIDENCE FROM HUNGARIAN DAIRY FARMS USING AN ENDOGENEITY-CORRECTED DYNAMIC BAYESIAN SFA**

Lajos Baráth; Andrzej Pisulewski; Imre Fertó; Jerzy Marzec

**AGRICULTURAL PRODUCTIVITY AND CARBON DIOXIDE EMISSIONS IN BRAZIL: EVIDENCE FOR THE BORLAUG HYPOTHESIS**

Ricardo Muniz Simões; Humberto Francisco Silva Spolador

**A SYSTEMATIC REVIEW OF THE NET CONTRIBUTION OF PESTICIDES ON AGRICULTURE: ACCOUNTING FOR ECONOMIC, ENVIRONMENTAL, AND SOCIAL EFFECTS**

Xiaojie Wen; Niklas Möhring

**PRODUCTIVITY GROWTH ADJUSTED FOR ANIMAL HEALTH IN SWEDISH DAIRY FARMS**

Frederic Ang; Enoch Owusu-Sekyere; Karin Alvåsen; Helena Hansson

**Wed | 10:30-12:00 | Mars 1 – Productivity Analysis 2**

**INTANGIBLES IN TANGIBLE PRODUCTIVITY DISCREPANCIES**

Charles-Henri DiMaria

**STATISTICAL INFERENCE FOR CONSUMER PRICE INDICES**

Valentin Zelenyuk; Shirong Zhao

**MAKING INFERENCES ABOUT DIFFERENCES IN PRODUCTIVITY ACROSS GROUPS IN NON-PARAMETRIC, CROSS-SECTIONAL SETTINGS**

Paul Wilson

**SATO-VARTIA PRODUCTIVITY INDEX**

Hideyuki Mizobuchi; Valentin Zelenyuk

**Wed | 10:30-12:00 | Mars 2 – SFA Methods 2**

**PANEL STOCHASTIC FRONTIERS: COINTEGRATION AND ENDOGENEITY**

Anton Skrobotov; Artem Prokhorov; Yiannis Karavias

**STANDARD STOCHASTIC FRONTIER ANALYSIS FRAMEWORK WITH DEPENDENCY BETWEEN INEFFICIENCY AND NOISE**

Zangin Zeebari; Scott Hacker

**SHAPE-AWARE DEEP LEARNING FOR MODELS OF PRODUCTION**

Artem Prokhorov; Zheng Wei; Huiyan Sang; Yu Ma

**SPATIAL DISTRIBUTIONAL STOCHASTIC FRONTIER ANALYSIS: SPECIFICATION AND INEFFICIENCY IMPLICATIONS**

Ioannis Skevas; Thomas Kneib

**Wed | 10:30-12:00 | Venus 1 – Manufacturing 1**

**SIZE THRESHOLDS AND THE ADOPTION OF AI-BASED TECHNOLOGIES: EVIDENCE FROM SPANISH MANUFACTURING FIRMS**

Luis Orea; Inmaculada Álvarez; Christopher Parmeter; Desiderio Romero

**COMPARING PERFORMANCE USING ADDITIVE MODELS BASED ON REGRESSION SPLINES: AN APPLICATION TO FIRMS IN MAJOR EUROPEAN COUNTRIES WITHIN THE MEAT MANUFACTURING INDUSTRY**

Juan Aparicio; Victor J. España; Magdalena Kapelko

**FROM FUNDS TO FRONTIERS: HOW PON E&C SHAPES EFFICIENCY IN ITALIAN MANUFACTURING SECTOR**

Marco Alberto De Benedetto; Camilla Mastromarco; Anna Rita Dipierro

**PARETO KOOPMANS EFFICIENCY AT THE UNIT AND THE INDUSTRY LEVEL: AN APPLICATION TO INDIAN MANUFACTURING**

Subhash C Ray

**Wed | 10:30-12:00 | Venus 2 – Water 1**

**WATER-USE EFFICIENCY IN WINE-GRAPE PRODUCTION. STOCHASTIC ESTIMATION WITH PANEL DATA**

Ines Hugalde; Sebastián Riera; Dela Dem Do Fiankor

**VALUING WATER QUALITY AND QUANTITY TRADE-OFFS FROM IRRIGATION: AN INTEGRATED BIO-PHYSICAL - PRODUCTIVITY APPROACH**

Tiho Ancey; Morian Bostian; Akash Ghokale; Francisco Rosas

**EVALUATING IRRIGATION WATER PRODUCTIVITY, SHADOW PRICES, AND PER-HECTARE WATER VALUATION IN VINEYARDS USING STOCHASTIC FRONTIER ANALYSIS**

Carlos Bopp; Roberto Jara-Rojas; Boris Bravo-Ureta; Alejandra Engler

**LINKING SUSTAINABILITY EFFICIENCY TO FARMERS' WILLINGNESS TO ADOPT IMPROVED WASTEWATER MANAGEMENT: EVIDENCE FROM COLOMBIAN COFFEE FARMS**

Maria Vrachioli; Amer Ait Sidhoum

**Wed | 13:30-15:00 | Terra – Organized session 2: Agricultural TFP and environment**

**Agricultural Productivity Slowdown under Environmental Pressure: Competitiveness Implications Across Scales**

Agricultural productivity growth is central to global food security, farm incomes, and environmental sustainability, yet recent decades have witnessed a marked slowdown in total factor productivity (TFP). This session examines the role of weather extremes and climate change as non-marketed inputs shaping agricultural performance from global to local scales. Combining macro-level evidence with micro-level farm data, the contributions assess the persistence, magnitude, and distributional effects of climate shocks on productivity and competitiveness. The session emphasizes policy-relevant insights on resilience and adaptation in an increasingly competitive international environment. A clear message for policymakers is complemented by methodological discussion and audience engagement.

**Chair: Simone Pieralli**

**THE PERSISTENCE OF CLIMATE SHOCKS ON GLOBAL AGRICULTURAL PRODUCTIVITY GROWTH**

Ariel Ortiz-Bobea; Yurou He; David B. Lobell

**AN ENVIRONMENTAL EXTENSION OF THE FARM ACCOUNTANCY DATA NETWORK USING GEOLOCATIONS: A CASE STUDY ON FARM CLIMATE VULNERABILITY**

Ana Klinnert; Kevin Schneider

**MEASURING THE EXTREME EFFECTS OF WEATHER ON FRENCH AGRICULTURAL FARMERS**

Simone Pieralli

**Discussant: Bob Chambers**

**Wed | 13:30-15:00 | Jupiter – DEA Methods 2**

**EXTENSIONS OF DEA-MARKOV MODELS WHEN TARGETS, PLANNING HORIZON AND DMUS ARE CO-DESIGNED**

Andreas Georgiou; Emmanuel Thanassoulis; Konstantinos Kaparis; Georgios Tsaples

**NONPARAMETRIC PRODUCTION APPROACH TO HEDONIC PRICE FUNCTIONS**

Kassoum Ayouba; Hervé Leleu

**WINDOW-BASED DYNAMICS IN CHANCE-CONSTRAINED DATA ENVELOPMENT ANALYSIS MODEL WITH OPTIMAL CONTROL THEORY PRINCIPLES: A TOTAL COST EFFICIENCY MODEL**

Paulo Nocera Alves Junior; Isotilia Costa Melo

**A THREE-STAGE NETWORK DEA APPROACH FOR MODELING RESILIENCE AND DYNAMIC EFFICIENCY UNDER EXTREME CLIMATE EVENTS**

Juan Pablo Henao Henao; Maria Vrachlioli; Roberto Villalba; Johannes Sauer

**Wed | 13:30-15:00 | Mars 1 – Energy 2**

**EFFICIENCY MEASUREMENT THROUGH NON-PARAMETRIC AND PARAMETRIC TECHNIQUES: ACCOUNTING FOR SAMPLE HETEROGENEITY AND CONTEXTUAL VARIABLES IN EUROPEAN ELECTRICITY DSO**

Rui Rita; Vitor Marques; Diogo Bárbara

**PERSISTENT AND TRANSIENT PRODUCTIVE INEFFICIENCY IN THE SWISS HYDROPOWER SECTOR**

Samuel Schenk; Massimo Filippini

**THE EFFECTS OF SETTLEMENT STRUCTURES AND WIND PARK PLANNING ON THE EFFICIENCY OF ELECTRICITY DISTRIBUTION IN SWEDEN**

Maria Nieswand

**COST WEIGHTS AS MODEL OUTPUT IN A WORLD OF RAPID AND ASYMMETRIC PRICE INCREASES**

Brita Engen Finne; Kathrine Aasvik

**Wed | 13:30-15:00 | Mars 2 – Country Analysis 2**

**MEASURING AND EXPLAINING RESOURCE IMPACTS ON GLOBAL INNOVATION PERFORMANCES**

Barnabe Walheer

**SPATIAL SPILLOVERS AND PROVINCIAL ECONOMIC EFFICIENCY IN VIETNAM: EVIDENCE FROM A SPATIAL STOCHASTIC FRONTIER APPROACH**

Thanh Viet Nguyen; Michel Simioni

**FRONTIER ANALYSIS OF ECO-EFFICIENCY GAPS: EVIDENCE FROM EUROPEAN COUNTRIES**

Golnaz Amjadi; Charles-Henri Di Maria

**MEASURING PRODUCTIVITY GROWTH USING MACHINE LEARNING. AN APPROACH BASED ON EFFICIENCY ANALYSIS TREES APPLIED TO OECD COUNTRIES**

Mateusz Wojniak; Magdalena Kapelko; Juan Aparicio; Marta Zieba

**Wed | 13:30-15:00 | Venus 1 – Health 1**

**A CONDITIONAL COMPOSITE INDICATOR WINDOW APPROACH TO MONITORING DETERIORATING SOCIAL RESILIENCE: AN APPLICATION TO HOME-CARE**

Ahmed-Youssef Oukassou; Marijn Verschelde; Raluca Parvulescu; Nicky Rogge

**WHEN PARALLEL NETWORK DEA MEETS AGGREGATED DATA: LIMITS OF PROCESS-LEVEL DIAGNOSIS IN PUBLIC HOSPITALS**

Marta Abreu; Miguel Pereira

**PRIMARY HEALTHCARE ORIENTATION, HEALTH SYSTEM EFFICIENCY, AND PROGRESS TOWARD SDG 3 TARGETS: INFRASTRUCTURE AND SUSTAINABILITY DIMENSIONS IN SUB-SAHARAN AFRICA**

Kwadwo Arhin; Eric Fosu Oteng-Abayie

**A MULTI-FRONTIER APPROACH TO SUSTAINABILITY: PRODUCTIVITY ANALYSIS IN ECONOMIC, ENVIRONMENTAL, AND SOCIAL DIMENSIONS**

Wenzhuo Zhou; Zhiyang Shen; Michael Vardanyan

**Wed | 13:30-15:00 | Venus 2– Governance 1**

**BEYOND EVALUATION SUITES FOR LLMS: ROBUST PARTIAL-FRONTIER COST-EFFECTIVENESS USING TOKEN PRICES AND USER PREFERENCES**

Simone Di Leo

**WHY TAX ADMINISTRATIONS DO NOT FULLY ENFORCE: A RATIONAL INEFFICIENCY APPROACH**

Ebrahim Rezaei; Josef Jablonsky

**CONSUMPTION EFFICIENCY AND POPULATION AGING: EVIDENCE FROM EXPENDITURE FRONTIERS IN BRAZIL**

Alexandre Nunes Almeida; Carlos R. Azzoni; Subal C. Kumbhakar

**POLITICS, REVEALED PREFERENCES AND LOCAL SPENDING PERFORMANCE: A BENEFIT OF THE DOUBT APPROACH**

Lorenzo Catalano; [Giovanna D'Inverno](#); Kristof De Witte

**Wed | 15:30-17:00 | Terra – Organized session 3: Composite indicators**

**Benchmarking and Monitoring with Composite Indicators**

This organized session brings together researchers and practitioners working on the methodological development and applied use of composite indicators and scoreboards. Co-organised in collaboration with the European Commission's Joint Research Centre and the Competence Centre on Composite Indicators and Scoreboards (CC-COIN), the session highlights recent advances in Benefit-of-the-Doubt and related frameworks. The contributions cover innovations in benchmarking methodologies as well as applications to health care, education, justice, industry, social rights, and regional development. Emphasis is placed on robustness, conditional assessments, and interpretability for policy monitoring. The session aims to foster interdisciplinary exchange and strengthen links between research and policy practice.

**MEASURING AND BENCHMARKING NURSES' PERFORMANCE IN HOME CARE NURSING: A CONDITIONAL BENEFIT-OF-THE-DOUBT APPROACH**

[Nicky Rogge](#)

**SUSTAINABLE RURAL DEVELOPMENT IN SEMIARID REGIONS: A STUDY OF THE CAATINGA BIOME IN BRAZIL**

[Jefferson Staduto](#); [Andreia Zanella](#); [Hermilio Vilarinho](#); [Ana S. Camanho](#)

**UNVEILING COMPANY READINESS FOR INDUSTRY 4.0 USING BENEFIT-OF-THE-DOUBT MODELS**

[Hermilio Vilarinho](#); [André Guimarães](#); [Eduardo Oliveira](#); [Teresa Pereira](#)

**A ROBUST CONDITIONAL ASSESSMENT OF PERFORMANCE TRENDS IN EDUCATION AND TRAINING SYSTEMS OF EUROPEAN REGIONS**

[Fernando J. Osorio](#); [Flavia Barbosa](#); [Giovanna D'Inverno](#); [Ana S. Camanho](#)

**AN INTERVAL SCALE BENEFIT-OF-THE-DOUBT MODEL**

[Roxani Karagiannis](#); [Giannis Karagiannis](#)

**A COMPOSITE PERFORMANCE INDICATOR FOR COURTS OF JUSTICE**

[Giannis Karagiannis](#); [Stavros Kourtzidis](#); [Panagiotis Ravanos](#)

**EVALUATING THE EUROPEAN PILLAR OF SOCIAL RIGHTS: A BENEFIT-OF-THE-DOUBT APPROACH WITH COMMON WEIGHTS**

[Laura Carosi](#); [Giovanna D'Inverno](#); [Davide Zucchini](#)

**Wed | 15:30-17:00 | Jupiter – Agriculture 3**

**MANAGEMENT CONTROL SYSTEMS AND PRODUCTIVE PERFORMANCE OF SPANISH AGRI-FOOD SMES**

[Beatriz García-Cornejo](#); [José Antonio Pérez-Méndez](#); [Alan Wall](#)

**SENSITIVITY OF FARM RESILIENCE TO ALTERNATIVE DROUGHT THRESHOLDS: THE CASE OF SMALLHOLDER FARMING IN MALAWI**

[Carlos Böke Pascual](#); [Fabian Frick](#); [Johannes Sauer](#)

**ASSESSING CLIMATE CHANGE IMPACTS ON CEREAL PRODUCTION EFFICIENCY IN CATALONIA**

Amer Ait-Sidhoum; [Bouali Guesmi](#); Khezri-nejad-gharaei Mahdieh; José Maria Gil

**IDENTIFYING THE IMPACTS OF CLIMATE AND WEATHER ON ARABLE FARMS' PERFORMANCE**

[Raushan Bokusheva](#)

**Wed | 15:30-17:00 | Mars 1 – Energy 3**

**CARBON MITIGATION COST WITH MARKET DISTORTIONS: EVIDENCE FROM POWER PLANTS IN CHINA**

[Chunbo Ma](#)

**BALANCING OUTPUT GROWTH AND ENERGY EFFICIENCY GOALS IN INDIAN MANUFACTURING: SOME ALTERNATIVE SCENARIOS**

[Kankana Mukherjee](#)

**ENERGY CONSERVATION STRATEGIES AND FIRM-LEVEL ENERGY EFFICIENCY: EVIDENCE FROM HIGH-COMBUSTION INDUSTRIES IN INDIA**

[Vipin Valiyattoor](#); Anuvinda Anuvinda; Tanmay Basu

**INTEGRATING EXERGY INTO DEA: A THERMODYNAMICALLY CONSTRAINED EFFICIENCY BENCHMARK**

[Anatoliy Goncharuk](#); Biresh Sahoo

**Wed | 15:30-17:00 | Mars 2 – SFA Methods 3**

**INCORPORATING INTERMEDIATE OUTPUTS INTO SFA USING AN EQUATION SYSTEM APPROACH WITH APPLICATION TO TRANSPORT**

Trang Tran; [Phill Wheat](#); Alexander Stead; Andrew Smith

**TESTING SEPARABILITY AND THE SCALING PROPERTY IN STOCHASTIC FRONTIER MODELS**

[Samuele Centorrino](#); Christopher Parmeter

**HOMOTHETIC DATA GENERATED PRODUCTION METATECHNOLOGIES**

[Antonio Peyrache](#)

**THE COST OF REGULARITY: EMPIRICAL EVIDENCE ON MONOTONICITY, QUASI-CONCAVITY, AND FRONTIER FLEXIBILITY**

[Pietro Sala](#); Maria Vracholi; Fabian Frick; Johannes Sauer

**Wed | 15:30-17:00 | Venus 1– Sustainability/Eco-efficiency 2**

**HOW DOES RESTORATION SHIFT THE FRONTIER: THE ECO-EFFICIENCY OF SPECIES-RICH GRASSLANDS**

[Moritz Leonhard Ptacek](#)

**GREEN INVESTMENT, INEQUALITY AND MISALLOCATION**

[Louis-Marie Harpedanne](#)

**IS SPAIN'S ENERGY VOUCHER LIGHTING THE WAY FOR THE POOR? A MICROECONOMIC EVALUATION OF THE BONO SOCIAL ELÉCTRICO**

[Ana Rodriguez](#); Manuel Llorca

**DYNAMIC CONVERGENCE IN SUSTAINABLE DEVELOPMENT EFFICIENCY**

Godwill Nunya Agordoh; Kwaku Ohene-Asare; Emily Asaa Addison

**Wed | 15:30-17:00 | Venus 2– Regulation 2**

**PRODUCTIVE INFRASTRUCTURE, GOVERNANCE AND STRUCTURAL TRANSFORMATION:  
EMPIRICAL EVIDENCE FROM AFRICAN ECONOMIES**

Pierre Joubert Nguetse Tegoum

**REDUCING EXTREME TRADE-OFFS IN REGULATORY BENCHMARKING THROUGH FRONTIER  
REFINEMENT**

Sara Kamali; Mohsen Afsharian; Heinz Ahn

**DO RECENT PUBLIC R&D FUNDING INCREASE SPANISH FIRMS' R&D? AN EMPIRICAL EVALUATION  
USING MACHINE-LEARNING TECHNIQUES**

Dario Blanco Fernandez; Desiderio Romero Jordán; Inmaculada C. Álvarez; Luis Orea

**PUBLIC SUBSIDY AND COST EFFICIENCY IN FINNISH THEATRES**

Christopher Parmeter; Marta Zieba

THURSDAY JUNE 18th, 2026

**Thu | 09:00-10:00 | Terra & Jupiter - Plenary 3**

**THE COST OF CAPITAL IN REGULATED NETWORKS: HAVE WE MADE ANY PROGRESS?**

**Christoph Kaserer**, Dean of TUM School of Management and Professor of Finance, Technical University of Munich

**Thu | 10:30-12:00 | Terra – DEA Methods 3**

**ENDOGENEITY IN NONPARAMETRIC PANEL DATA ESTIMATION: APPLICATION TO CONDITIONAL PRODUCTION FRONTIERS**

Camilla Mastromarco; Léopold Simar; Anne Vanhems

**SINGLE INDEX MODELS FOR NONPARAMETRIC CONDITIONAL FRONTIERS**

Catherine Cazals; Jean-Pierre Florens; Léopold Simar

**BEYOND STATIC EFFICIENCY: A DYNAMIC DEA MODEL FOR SUSTAINABLE MUTUAL FUNDS**

Alfons Oude Lansink; Magdalena Kapelko; Albane Tarnaud

**COMBINING MULTICRITERIA METHODS WITH EFFICIENCY ANALYSIS: A CONICAL FDH DIRECTIONAL LUENBERGER APPROACH INCLUDING TIME-VARYING PREFERENCES**

Cinzia Daraio; Thyago Nepomuceno; Leopold Simar

**Thu | 10:30-12:00 | Jupiter – Agriculture 4**

**CONSISTENT AGGREGATION AND DECOMPOSITION OF PRODUCTIVITY CHANGE: APPLICATION TO ENERGY PRODUCTIVITIES IN NORWEGIAN FISHERIES**

Kenneth Løvold Rødset; Kristin Helen Roll; Timo Kuosmanen

**ADOPTION OF CROP–LIVESTOCK INTEGRATION AND TECHNICAL EFFICIENCY IN SOYBEAN FARMING: EVIDENCE FROM SÃO PAULO, BRAZIL**

Larissa Aparecida Lopes de Souza; Marcelo José Carrer; Marcela de Mello Brandão Vinholis; Aduino Brasilino Rocha Jr.; Larissa Gui Pagliuca; Rodrigo Damasceno

**CAN PRICE INCENTIVES DRIVE LEGUME ADOPTION? A TECHNICAL AND ECONOMIC BEST PRACTICES STUDY FROM FRANCE**

Jean-Philippe Boussemart; Maé Guinet; Salomé Kahindo; Munier-Jolain; Romain Nandillon; Raluca Parvulescu

**IS BIO-INPUT ADOPTION ASSOCIATED WITH TECHNICAL EFFICIENCY? EVIDENCE FROM SOYBEAN FARMS IN BRAZIL**

Rodrigo Damasceno; Marcelo José Carrer; Hildo Meirelles de Souza Filho; Marcelo de Mello Brandão Vinholis; Larissa Gui Pagliuca

**Thu | 10:30-12:00 | Mars 1 – Productivity Analysis 3**

**NONLINEAR PANEL DATA MODELS WITH ROBUST CORRELATED RANDOM EFFECTS WITH APPLICATION TO THE PUBLIC CAPITAL PRODUCTIVITY PUZZLE**

Daniel Henderson; Emma Kate Henry; Andros Kourtellos

**AN INDUSTRY-LEVEL MEASURE OF QUALITY-ADJUSTED HUMAN CAPITAL IN THE EUROPEAN UNION**

Juan Duran; Michelle Alicia Jordan; Iulia Siedschlag

**NAVIGATING AN AGEING WORKFORCE AND PRODUCTIVITY IN AN ERA OF DIGITALIZATION AND AUTOMATION: AN ANALYSIS OF AUSTRIAN EMPLOYER-EMPLOYEE LINKED DATA**

Bernhard Mahlberg

**ANALYZING LABOR PRODUCTIVITY CHANGES IN THE GERMAN BREWING INDUSTRY**

Giannis Karagiannis; Magnus Kellerman; Klaus Salhofer

**Thu | 10:30-12:00 | Mars 2 – Sustainability/Eco-efficiency 3**

**PERSPECTIVES FOR BRAZILIAN SOCIOBIODIVERSITY PRODUCTION: A REGIONAL ANALYSIS FOR THE PERIOD 2008-2025**

Luísa Fancelli Coelho; Humberto Francisco Silva Spolador

**ECONOMIC AND ENVIRONMENTAL EFFICIENCY IN EUROPE: A BY-PRODUCTION DEA ACROSS INDUSTRY SECTORS.**

Rodrigo Cestau; Pablo Arocena

**PROBABILISTIC EFFICIENCY ANALYSIS USING INTERPRETABLE ARTIFICIAL INTELLIGENCE: ASSESSING THE ROLE OF ENVIRONMENTAL VARIABLES**

Ricardo González-Moyano; Juan Aparicio Baeza; José Luis Zofío Prieto

**ARE ENVIRONMENTAL EFFICIENCIES OF SWEDISH AGRICULTURE MORE TRANSIENT OR MORE PERSISTENT? HETEROGENEITY AND DETERMINANTS**

Vivian Wei Huang

**Thu | 10:30-12:00 | Venus 1 – Oxera 1 facilitated session:**

**Pushing the Frontier: Efficiency & Productivity Debates in German Energy Regulation**

Presenters: TBA

**Thu | 10:30-12:00 | Venus 2 – ACM 1 sponsored sessions: Regulatory challenges - Efficiency of energy networks in transition**

**REGULATORY SOLUTIONS FOR BALANCING INCENTIVES**

Gert Brunekreeft

**NEST (Networks. Efficient. Secure. Transforming)**

Jean-Marc Behringer

**RHIO-3 (Revenues = Incentives + Innovation + Outputs)**

Teresa Romano

**Thu | 10:30-12:00 | Orion 1 – Health 2**

**IMPACT OF THE HOSPITAL READMISSION REDUCTION PROGRAM (HRRP) ON THE COST EFFICIENCY OF U.S. URBAN HOSPITALS**

Gerald Granderson

**MAPPING DIET EFFICIENCY GAPS: A SLACK-BASED BENCHMARKING APPROACH**

Gabriel Rosero; Liesbeth Colen

**MANAGERIAL PRACTICES AND ALTRUISM IN HEALTHCARE DELIVERY**

David Contreras-Loya; Paul J. Gertler; Ada Kwan

**EFFICIENCY OF BRAZILIAN PRIMARY HEALTH CARE UNITS: A DYNAMIC DEA APPROACH WITH SOCIODEMOGRAPHIC AND EPIDEMIOLOGICAL FACTORS**

Ríchila Aquino; Luciano Sampaio; Raquel Sampaio; Anne Carvalho; Lucas Luz

**Thu | 13:30-15:00 | Terra & Jupiter - Special plenary session in honor of Knox Lovell**

**Chair:** Robin C. Sickles

**COMMENTS ON KNOX LOVELL'S LIFE OF CONTRIBUTIONS TO OUR SCIENCE OF EFFICIENCY AND PRODUCTIVITY ANALYSIS**

**Presenters:**

1. Peter Schmidt

**ON THE ORIGINS OF AIGNER, LOVELL AND SCHMIDT, 1977 AND THE DEVELOPMENT OF STOCHASTIC FRONTIER ANALYSIS**

2. Valentin Zelenyuk

**A PRESENTATION OF KNOX LOVELL'S LAST PUBLICATION: MEASURING CLIMATE RISKS: A NEW MULTIDIMENSIONAL INDEX FOR GLOBAL VULNERABILITY AND RESILIENCE**

by Johanna Fajardo-Gonzalez, C.A. Knox Lovell, Julie Lovell, Heidi Edmonds, Environmental Development, Volume 56, September 2025, 101227.

3. Jesús T. Pastor

**INTERPRETING PROFIT-RELATED INEFFICIENCIES AS EUCLIDEAN DISTANCES IN THE CONTEXT OF DIRECTIONAL DISTANCE FUNCTIONS AND DATA ENVELOPMENT ANALYSIS**

forthcoming in Journal of Productivity Analysis Special Issue in Memory of C. A. Knox Lovell

4. Emili Grifell Tatje

**OUT OF THE FRYING PAN INTO THE FIRE: MARKUP AND PRODUCT DIFFERENTIATION IN THE U.S. AIRLINE INDUSTRY 2002-2022**

forthcoming in Journal of Productivity Analysis Special Issue in Memory of C. A. Knox Lovell.

**Thu | 15:30-17:00 | Terra – Sustainability/Eco-efficiency 4**

**MEASUREMENT, DECOMPOSITION AND DETERMINANTS OF GREENHOUSE GAS EMISSION EFFICIENCY: AN APPLICATION TO AUSTRIAN DAIRY FARMS**

Andreas Eder

**FARM-LEVEL ENVIRONMENTALLY SUSTAINABLE PRODUCTIVITY AND PRECISION AGRICULTURE**

Maria Vrachioli; Dejana Golic; Tassos Haniotis; Tamas Krisztin

**VALUING POLLUTION-GENERATING COMMODITIES: A SHADOW PRICING APPROACH.**

Arnaud Abad; Walter Briec; Paola Ravelojaona

**SHADOW PRICING ECOSYSTEM SERVICES IN BOREAL FORESTS**

Moriah Bostian; Shuyi Wang; Tommy Lundgren

**Thu | 15:30-17:00 | Jupiter – DEA Methods 4**

**FROM BENCHMARKING TO REDESIGN: A LOCATION-ROUTING FRAMEWORK FOR RATIONALIZING SERVICE NETWORKS**

Payam Rostami; Mohsen Afsharian

**GUIDING INTO THE NEW SPACE ERA: AN EFFICIENCY EVALUATION OF ITALIAN SPACE FIRMS**

Pierluigi Toma; Anna Rita Dipierro

**UNDERSTANDING HOW WELL COMMUNITIES LIVE AND HOW EFFICIENTLY THEY OPERATE: A COMPARATIVE MOORA AND DEA ANALYSIS**

Chiara Colamartino; Pierluigi Toma; Francesco Manfredi; Vincenzo Calabrese

**INVERSELY PROPORTIONAL OUTPUT REDUCTION STRATEGY FOR DEA RANKING MODEL**

Kuo-chih Yuan

**Thu | 15:30-17:00 | Mars 1 – Banking & Finance 2**

**CAN ESG IMPROVE THE TOTAL FACTOR PRODUCTIVITY GROWTH OF COMMERCIAL BANKS? EVIDENCE FROM CHINA**

Ning Zhu; Biyin Ma; Zhiqian Yu

**MICROFOUNDATIONS IN MEASUREMENT AND THEORY**

Junyi Zhu

**ASYMMETRIC PASS-THROUGH OF THE CENTRAL BANK'S POLICY RATE TO BANKS' RETAIL RATES: EVIDENCE FROM PAKISTAN'S BANK-LEVEL DATA**

Alfred Haug; Dorian Owen; Syed Hussain

**RISK-RETURN-ESG INEFFICIENCY OF EUROPEAN MUTUAL FUNDS: A BY-PRODUCTION APPROACH**

Alfons Oude Lansink; Magdalena Kapelko; Albane Tarnaud

**Thu | 15:30-17:00 | Mars 2 – Justice 1**

**ON MODELING PENDING CASES IN COURT EFFICIENCY ANALYSIS**

Giannis Karagiannis; Stavros Kourtzidis; Panagiotis Ravanos

**TAKING INTO ACCOUNT THE COURTS' OPERATING ENVIRONMENT: A CONDITIONAL NONPARAMETRIC APPROACH**

Luiza Badin; Camilla Mastromarco; Angelo Zago

**THE JUSTICE PRODUCTION TECHNOLOGY**

Giannis Karagiannis; Antonio Peyrache; Angelo Zago; Osman Zaim

**A HYBRID COST EFFICIENCY MODEL UNDER FIXED AND NON-FIXED PRICES: A CASE STUDY ON THE POLISH JUSTICE COURTS**

Magdalena Kapelko; Dimitrios Sotiros; Sebastian Tomczak

**Thu | 15:30-17:00 | Venus 1 – Oxera 2 facilitated session:**

**Efficiency & Productivity Analysis in Action: Current Debates in German Energy Regulation**

Presenters: TBA

**Thu | 15:30-17:00 | Venus 2 – ACM 2 sponsored sessions: Efficiency methods- Efficiency of energy networks in transition**

**METHODS/TECHNIQUES FOR MEASURING EFFICIENCY**

TBC

**REFERENCE NETWORK ANALYSIS (RNA)**

Alexander Fuchs

**PRODUCTIVITY INDEX NUMBERS (PIN)**

Michael Cunningham

**Thu | 15:30-17:00 | Orion 1 - Education 2**

**TO WHAT EXTENT CAN TUITION DISCOUNTING BE APPLIED IN LOW-TUITION REGIMES? A STOCHASTIC COST FRONTIER STUDY OF HIGHER EDUCATION INSTITUTIONS IN TAIWAN**

Tsu-Tan Fu; Wei-Hsin Kong; Wen-Jen Tsay

**A BI-OBJECTIVE OPTIMIZATION APPROACH FOR STRATEGIC BENCHMARKING IN INTERVAL SCALE DEA WITH AN APPLICATION TO THE NATIONAL STUDENT SURVEY (NSS) IN THE UK**

Akram Dehnokhalaji; Nasim Nasrabadi; Banu Lokman

**ECONOMIES OF SCALE AND SCOPE IN EUROPEAN HIGHER EDUCATION: THE ROLE OF SUBJECT MIX**

Gaetano Francesco Coppeta; Tommaso Agasisti; Luigi Brighi

**PERFORMANCE ASSESSMENT OF EUROPEAN EDUCATION SYSTEMS AT THE REGIONAL LEVEL: DECOMPOSING TEMPORAL TRENDS USING A ROBUST CONDITIONAL MALMQUIST INDEX**

Fernando Osório; Ana Camanho; Flávia Barbosa; Giovanna D'Inverno

FRIDAY JUNE 19th, 2026

**Fri | 09:00-10:30 | Terra & Jupiter - Life-time Achievement Award to Erwin Diewert**

Erwin Diewert, Professor Emeritus, Vancouver School of Economics, University of British Columbia.

Invited speakers: **Paul Schreyer** (OECD); **Robert Hill** (University of Graz); **Chihiro Shimizu** (University of Tokyo).

**Fri | 11:00-12:30 | Terra - DEA Methods 5**

**A SPATIAL SCAN STATISTIC FOR SECOND STAGE ANALYSIS OF BRAZILIAN DISTRIBUTOR SYSTEM OPERATORS**

Tatielle Menolli Longhini; Marcelo Azevedo Costa; Bruno de Almeida Vilela

**CHECKING THE CONVERGENCE OF BOOTSTRAP DEA AND IMPUTATION-PROPELLED DEA**

Ardhana M. Prabhash; Vipin Valiyattoor

**A CIRCULAR SLACKS-BASED METAFRONTIER PSEUDO-MALMQUIST INDEX FOR GROUP PERFORMANCE COMPARISON: APPLICATION TO GLOBAL PETROLEUM FIRMS**

Kwaku Ohene-Asare; Emily Asaa Addison; Eric D. Ofosu-Hene

**VISUALIZING AND ANALYZING TRADE-OFFS IN DATA ENVELOPMENT ANALYSIS USING GRAPH THEORY**

Alexander Öttl; Mette Asmild

**Fri | 11:00-12:30 | Jupiter - Agriculture 5**

**THE EFFECT OF EXTREME WEATHER ON AGRICULTURAL PRODUCTIVITY**

Carina Ober; Johannes Sauer

**PRODUCTIVE EFFICIENCY OF CHINESE CHESTNUT CULTIVARS: A WEATHER VARIABLE DEA**

Jonathan Meinholz

**DO BLAST-RESISTANT WHEAT VARIETIES ADOPTION IMPROVE COST EFFICIENCY AND GLOBAL COMPETITIVENESS? EVIDENCE FROM BANGLADESH**

Khaled Hasan Bappy; Hasneen Jahan; Mohammad Ariful Islam; Pawan Kumar Singh

**FROM SURVIVAL TO PROSPERITY: CLIMATE CHANGE ADAPTATION STRATEGIES AND ITS WELFARE IMPACT ON HOUSEHOLDS IN KENYA: A CASE STUDY OF SUBUKIA SUB-COUNTY**

Peter Kipkorir; Leonard Karani

**Fri | 11:00-12:30 | Mars 1 - Sustainability/Eco-efficiency 5**

**DO PUBLIC-PRIVATE PARTNERSHIPS IMPROVE ENVIRONMENTAL PRODUCTIVITY? EVIDENCE FROM JAPAN'S SEWAGE TREATMENT SECTOR**

Takayoshi Nakaoka

**ASSESSING THE INDIVIDUAL CONTRIBUTIONS OF INPUTS AND OUTPUTS TO ENVIRONMENTALLY SUSTAINABLE PRODUCTIVITY CHANGE**

Paola Ravelojaona

**A MULTILATERAL SUSTAINABILITY INDEX: THEORY, MEASUREMENT, AND DYNAMICS**

Tebila Nakelse; Elliott Dennis

**ENVIRONMENTAL TOTAL FACTOR PRODUCTIVITY AND THE COST-EFFECTIVENESS OF GHG EMISSION REDUCTION**

Yang Liu; Maria Vrachioli; Johannes Sauer

**Fri | 11:00-12:30 | Mars 2 - Education 3**

**BEYOND PERFORMANCE: PRODUCTIVITY AND EQUITY DYNAMICS ACROSS OECD EDUCATION SYSTEMS**

Gabriela Sicilia; Giovanna D'Inverno; Rosa Simancas; Cristina Polo

**EFFICIENCY ASSESSMENT OF THE QUALITY-RELATED RESEARCH (QR) FUNDING: THE CASE OF ENGLAND'S HIGHER EDUCATION**

Boon Lee

**CONSTRUCTION OF EUROPEAN EDUCATION POLICY: OUTLINING WAYSTATIONS BASED ON REGIONAL CAPACITY**

Dovile Stumbriene; Jose Luis Ruiz; Inmaculada Sirvent

**Fri | 11:00-12:30 | Venus 1 - Justice 2**

**NOT ALL CASES ARE CREATED EQUAL (OR WHY WEIGHT RESTRICTIONS ARE ESSENTIAL IN COURT EFFICIENCY STUDIES)**

Mette Asmild; Alexander Öttl; Jonas Månsson

**ADOPTION OF TECHNOLOGY AND ITS CONSEQUENCES FOR PERFORMANCE - SWEDISH DISTRICT COURTS**

Jonas Månsson; Christopher O'Donnell; Anupama Unnikrishnan

**IT'S A COMPLEX CASE: BENCHMARKING COURTS OF JUSTICE**

Jaap Bos; Mette Asmild; Deborah Kaut

**Fri | 11:00-12:30 | Venus 2 - Gender**

**GENDER EFFECTS ON MICROFINANCE SOCIAL EFFICIENCY: A ROBUST APPROACH INCORPORATING UNDESIRABLE OUTPUTS**

Cinzia Daraio; Francois Seck Fall; Leopold Simar; Anne Vanhems

**CHINA, USA AND GLOBAL EFFICIENCY FRONTIER: LIMITING INFLUENCES OF SOCIAL EXCLUSION: LESSONS FOR EMERGING MARKETS**

Augustine Obiorah

**GENDER, ICT ADOPTION AND TECHNICAL EFFICIENCY: A SELECTION-CORRECTED STOCHASTIC FRONTIER ANALYSIS OF INDIA'S UNINCORPORATED MANUFACTURING SECTOR**

Mahak Vijay; Rama Pal

**INVERTED SBM-VRS BENCHMARKING OF WORKFORCE RELATIONS STABILITY UNDER MODERN SLAVERY RISK PRESSURES**

Isotilia Costa Melo; Paulo Nocera Alves Junior; Morteza Alaeddini; Isotilia Costa Melo

**Fri | 14:00-15:30 | Terra - Organized session 4: Efficiency in system design**

**Efficiency-Driven Socio-Technical System Design**

This organized session explores how efficiency analysis can inform the design, evaluation, and governance of complex socio-technical engineered systems. Moving beyond purely technical perspectives, the contributions explicitly integrate human behavior, organizational dynamics, and adaptive decision-making into performance assessment frameworks. Drawing on systems engineering, efficiency analysis, complexity science, and data analytics, the session presents conceptual advances, methodological innovations, and applied case studies. Empirical applications span transportation, healthcare, safety-critical operations, and adaptive organizational systems. Collectively, the session highlights how efficiency-driven design can support resilient, context-sensitive, and policy-relevant system performance.

**EFFICIENCY-DRIVEN DESIGN OF SOCIO-TECHNICAL ENGINEERED SYSTEMS: AN OVERVIEW**

Konstantinos Triantis; Joseph Godfrey; Yas Mashayekhy; Saman Mohsenirad; Leon Sobrie; Maria Tomai

**UNDERSTANDING COMPLEX TRANSPORTATION SYSTEMS: RAILWAY DELAYS AND POLICY INTERVENTIONS FOR IMPROVED PERFORMANCE**

Yas Mashayekhy; Konstantinos Triantis

**A PROBLEM TYPE TAXONOMY USING DONABEDIAN'S STRUCTURE-PROCESS-OUTCOME MODEL**

Joseph Godfrey; Leon Sobrie; Maria Tomai; Konstantinos Triantis

**TRUST-BASED INPUT REGIMES AND CLIMATE RESILIENCE EFFICIENCY: A CROSS-COUNTRY META-FRONTIER DEA STUDY WITH ROBUST SIMULATION-BASED AUGMENTATION**

Juan Carlos Franco; Konstantinos Triantis

**Fri | 14:00-15:30 | Jupiter - Agriculture 6**

**AGRICULTURAL SERVICES AND RESOURCE ALLOCATION EFFICIENCY: EVIDENCE FROM CHINA**

Ruizhi Pang; Xuejie Bai

**PEER EFFICIENCY ANALYSIS FOR TARGETED EXTENSION TO IMPROVE PRODUCTIVITY AMONG UGANDAN DAIRY FARMERS**

Elizabeth Ahikiriza; Guido Van Huylenbroeck; Ludwig Lauwers

**EFFICIENCY AND PEER-TARGET ANALYSIS IN EUROPEAN BEEKEEPING: LEARNING FROM EACH OTHER**

Ludwig Lauwers; Marie Van Espen; Wim Verbeke

**THE EFFECTS OF ADVISORY SERVICES AND TECHNOLOGY CHANNELING ON FARM YIELDS AND TECHNICAL EFFICIENCY OF WHEAT FARMERS IN ETHIOPIA**

Asresu Yitayew Mengie; Awudu Abdulai; Yigezu A. Yigezu

**Fri | 14:00-15:30 | Mars 1 - Country Analysis 3**

**QUALITY PERFORMANCE OF WATER UTILITIES SERVICES IN SUB-SAHARAN AFRICA. A NON-PARAMETRIC ANALYSIS OF DRC**

Jeannine Mwakw; Barnabé Walheer

**INVESTMENT PERFORMANCE OF INDIAN FINANCIAL ASSETS UNDER MEAN-STANDARD DEVIATION VS. MEAN-SEMIDEVIATION MODEL: APPLICATION OF STOCHASTIC FRONTIER ANALYSIS**

Anup Kumar Bhandari

**CORPORATE TAX UNDER-REPORTING IN DEVELOPING COUNTRIES: EVIDENCE FROM ETHIOPIA**

Fikru Kefyalew Alemayehu; Subal Kumbhakar; Soressa Jarra

**MODELLING THE FISCAL–SERVICE–SATISFACTION CHAIN: A PANEL NETWORK DEA STUDY OF SPANISH MUNICIPALITIES**

María Teresa Balaguer-Coll; Isabel Narbón-Perpiñá; Diego Prior; Emili Tortosa-Ausina

**Fri | 14:00-15:30 | Mars 2 - Sustainability/Eco-efficiency 6**

**PERFORMANCE EVALUATION OF BUS LINES USING THE BENEFIT-OF-THE-DOUBT APPROACH**

Gabriel Eduardo Cursino da Silva; Lucio Silva; Luann Bruno Vidal de Andrade; Thyago Nepomuceno

**THE INFLUENCE OF ENVIRONMENTALLY FRIENDLY VEHICLES ON AIR POLLUTION**

Maria Jose Perez-Villadoniga; Ana Rodriguez-Alvarez; David Roibas

**PRODUCTIVE EFFICIENCY OF METRO DC: 2020-2025—A SPATIAL ANALYSIS APPROACH**

Robert Mosheim; Carl Paruska

**FROM BLIND FUNDING TO SMART ALLOCATION: OPTIMISING ECO-EFFICIENCY IN URBAN TRANSPORT SERVICES**

Victor Giménez; Gemma Pérez López; Pablo Povedano Fernández; Diego Prior; José Luis Zafra Gómez

**Fri | 14:00-15:30 | Venus 1 - Manufacturing 2**

**GVC UPSTREAMNESS AND FIRM PERFORMANCE: EVIDENCE FROM INDIAN MANUFACTURING**

Melvin Vincent

**THE ROLE OF SPATIAL DYNAMICS IN LABOR PRODUCTIVITY: A REGIONAL MULTIFACTOR PARTITIONING ANALYSIS OF MEXICO'S MANUFACTURING SECTOR: 1993-2018**

Jesús Antonio López Cabrera; Miguel Alejandro Flores Segovia; Robin Sickles

**PRODUCTIVITY DEVELOPMENT IN THE SWEDISH PROCESS INDUSTRY**

Anupama Unnikrishnan; Jonas Månsson

**BRIDGING THE TECHNOLOGY GAP: ABSORPTION, ADOPTION AND TFP GROWTH OF INDIAN MANUFACTURING FIRMS**

Anuvinda Anuvinda; Vipin Valiyattoor

**Fri | 14:00-15:30 | Venus 2 - Health 3**

**DIFFERENCES IN PERFORMANCE OF THE STATES OF INDIA DURING COVID-19 PANDEMIC IN THE POST-VACCINATION PHASE DEPENDING ON WHETHER THE VACCINES USED WERE DISTRIBUTED CENTRALLY OR NOT**

Trishit Bandyopadhyay Fellow

**THE MANAGERIAL USE OF EFFICIENCY INFORMATION IN PUBLIC HOSPITALS**

Paul Rouse; Ajit Arulambalam

**MEASURING SOCIAL BENEFIT-COST EFFICIENCY IN EUROPEAN SPORTS INDUSTRY USING DYNAMIC DEA**

Pin-Hsuan Sung; Chin-Yi Fang

Fri | 16:00-17:30 | Terra - Agriculture 7

**POLICY DISTORTIONS AND RESOURCE MISALLOCATION IN AGRICULTURE: EVIDENCE FROM ITALIAN CEREAL FARMS UNDER THE POST-2013 CAP REFORM**

Maria Alessandra Rossi; Cristina Salvioni

**TRADE-OFFS BETWEEN GOOD AND BAD OUTPUTS IN GERMAN DAIRY FARMS**

Fabian Frick, Johannes Sauer

**A PROXY-VARIABLE INPUT DISTANCE FUNCTION FOR MULTI-OUTPUT PRODUCTION: EVIDENCE ON FERTILIZER AND PESTICIDE REDUCTION IN EU AGRICULTURE**

Lukas Cechura; Zdenka Zakova Kroupova; Jiri Vacek; Subal C. Kumbhakar

**IMPROVING AGRICULTURAL DATA: INPUT-OUTPUT DEVELOPMENT AND QUALITY ADJUSTMENTS**

Eric Njuki

Fri | 16:00-17:30 | Jupiter - SFA Methods 4

**BAYESIAN ESTIMATION OF PANEL STOCHASTIC FRONTIER MODELS WITH SPATIALLY AND TIME-VARYING INEFFICIENCY**

Rouven E. Haschka

**INDIRECT INFERENCE IN PANEL STOCHASTIC FRONTIER MODEL WITH ENDOGENOUS SWITCHING AND ENDOGENOUS INPUTS**

Hung-pin Lai

**SEMIPARAMETRIC PANEL DATA MODELS WITH INTERACTIVE FIXED EFFECTS**

Emma Kate Henry; Daniel Henderson

**UNDER-REPORTING IN MACROECONOMIC OUTPUT AND INPUT DATA SERIES: A TWO-TIER STOCHASTIC FRONTIER APPROACH**

Alecos Papadopoulos

Fri | 16:00-17:30 | Mars 1 - Sustainability/Eco-efficiency 7

**TECHNOLOGY SPILLOVERS FROM FOREIGN DIRECT INVESTMENT ON THE GREEN INNOVATION PERFORMANCE OF LOCAL FIRMS**

Iulia Siedschlag; Juan Duran

**MINING, MILLS, AND EMISSIONS: DECOMPOSING EMISSION-REDUCTION PATHWAYS IN GLOBAL STEEL SUPPLY CHAINS**

Erik Enstad; Giacomo Benini; Lars Jaffke

**SUSTAINABLE PRODUCTIVITY & SUSTAINABLE PROFITABILITY**

Arne Henningsen; Frederic Ang; Moriah Bostian; Hervé Dakpo; Maria Vrachioli

**PATHWAYS TO GREEN SUSTAINABLE PRODUCTION USING FRONTIER ANALYSIS: THE ROLE OF INNOVATION, ENERGY EFFICIENCY, AND CARBON FOOTPRINTS IN INDIAN MANUFACTURING**

Aswin Jayachandran

Fri | 16:00-17:30 | Mars 2 - Productivity Analysis 4

**ADVANCED DIGITAL TECHNOLOGIES AND TOTAL FACTOR PRODUCTIVITY: EVIDENCE FROM SPANISH MANUFACTURING FIRMS**

Dolores Añón Higón; Juan Máñez; Amparo Sanchis; Juan Sanchis

**PRODUCTIVITY WITHOUT DEFORESTATION: EVIDENCE FROM OIL PALM PRODUCTION AND LAND-USE EFFICIENCY IN INDONESIA**

Haura Azzahra Tarbiyah Islamiya; Niken Widoretno; Dyah Wulan Sari; Widya Sylviana; Muhammad Fawait; Rista Setyana

**REVISITING TOTAL FACTOR PRODUCTIVITY IN CHINA: A DUAL-FRONTIER MEASUREMENT OF CATCH-UP AND RELATIVE COMPETITION EFFECTS**

Zhiyang Shen; Michael Vardanyan

**SPATIAL MISMATCH IN PRODUCTIVITY: ECONOMIC EFFECTS OF HOUSING SEGREGATION IN MEXICO**

Jesús piet López-Cabrera; Diego Andrés Cardoso-López; Robin C. Sickles

Fri | 16:00-17:30 | Venus 1 - Justice 3

**EFFICENCY ANALYSIS OF FIRST INSTANCE COURTS IN NORTH MACEDONIA: A POLICY PERSPECTIVE**

Katerina Shapkova Kocevska

**LOWERING THE BAR TO FILL THE BENCH: THE QUALITY-QUANTITY TRADE-OFF IN JUDICIAL LABOR MARKETS**

Deborah Kaut; Armela Maxhelaku

**DECONSTRUCTING THE CLEARANCE RATE AS A MEASURE OF COURT PERFORMANCE**

Pablo Arocena; Daniel Santín

**COMPARING COMMERCIAL COURTS IN IBERIAN PENINSULA**

Maria Silva; Pablo Arocena; Diogo Dias

Fri | 16:00-17:30 | Venus 2 - Water 2

**ANALYSING PRODUCTIVITY AND EFFICIENCY IN THE NORWEGIAN AQUACULTURE INDUSTRY: A METAFRONTIER DEA APPROACH**

Yajie Liu

**EFFICIENCY AS A PATHWAY TO SUSTAINABLE COASTAL DEVELOPMENT: EVIDENCE FROM EAST JAVA'S SMALL-SCALE FISHERIES**

Dyah Wulan Sari; Muhammad Fawait; Widya Sylviana; Haura Azzahra Tarbiyah Islamiya; Rista Setyana