CORE
ANNUAL REPORT
2020 – 2021

- Economics
- Econometrics
- Quantitative geography
- Operations research
Table of Content

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The academic year 2020-2021 is unlikely to remain in our memory as one of the best years for CORE. In July 2021, our colleague and friend Thierry Bréchet passed away. It is a shock to lose such a young colleague, so dedicated and passionate about research and so eager to intervene in the public debate. Thierry joined CORE in 2002. He has been a productive environmental economist for more than 25 years. Don’t hesitate to read the obituary written by Henry Tulkens and coauthors, who knew Thierry very well (DP 2022/10).

As can be expected, the year has also been deeply influenced by the pandemic. The most visible impact is, of course, that we could not host any short-term visitor. We hope to resume our visitor program as soon as possible. This program will remain a key component of our scientific life.

The Summer 2020-Summer 2021 period, however, had wonderfully begun, with the arrival of our newcolleague, Amma Panin. Amma studies decision making under risk and uncertainty. In particular, she has worked on how contemporary religious institutions evolve to provide substitutes to insurance and other services that might otherwise be provided by formal markets. In addition to developing theoretical models, Amma runs lab, field, and lab-type field experiments.

A second new face has popped up in the list of Faculty members below, the face of Philipp Kircher. Philipp is a well-known labor economist. His current main affiliation is Cornell University. As a grantee of an ERC Consolidator Grant, Philipp must be hosted by a European institution, where some of his scientific activities should be located. We are honored that Philipp has chosen CORE, where he spends a fraction of his time, during which we try to “exploit” him and intensify scientific exchanges.

The pandemic and the related difficulties to maintain a high level of scientific interactions did not divert us from doing research, writing discussion papers and publishing papers, as clearly shown in this report. The academic year 2020-2021 has also brought us a variety of prizes and honors. Our young colleagues Johannes Johnen and Amma Panin became Research Affiliates at the Center for Economic Policy Research (CEPR). Paul Belleflamme was awarded the “Chair in Digital Economics”. Anthony Papavassiliou received the Bodossaki distinguished young scientist award. For one of their joint papers, Ignacio Aravena, Quentin Lete, Anthony Papavassiliou and Yves Smeers were Runner-Up for ENRE 2021 Best Publication Award in Energy Transmission.

CORE members have also been particularly active in media in the period under review. This is true for almost all the research topics that we cover at CORE, from digital to health, environmental and public economics (with a special focus on pensions) and from supply chain management to transport. You will find details about it in the “topics” pages below. I take this opportunity to thank all researchers and staff members of CORE for their tremendous contributions to making CORE such a center of scientific excellence.

I wish you all a pleasant reading.
Mathieu Van Vyve  
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CORE TEAM | Faculty members

Per Agrell
Prof. of Operations Research

Paul Belleflamme
Prof. of Economics

Constantin Blome
Prof. of Operations Research

Thierry Bréchet
†

Daniele Catanzaro
Prof. of Operations Research

Philippe Chevalier
Prof. of Operations Research

François Glineur
Prof. of Operations Research

Jean Hindriks
Prof. of Economics

Johannes Johnen
Prof. of Economics

Bart Jourquin
Prof. of Operations Research

Philipp Kircher
Prof. of Economics

François Maniquet
Prof. of Economics
Ana Mauleon
Prof. of Economics

Yurii Nesterov
Prof. of Operations Research

Amma Panin
Prof. of Economics

Anthony Papavasiliou
Prof. of Operations Research

Jean-Sébastien Tancrez
Prof. of Operations Research

Isabelle Thomas
Prof. of Geography

Sébastien Van Bellegem
Prof. of Econometrics

Vincent Vannetelbosch
Prof. of Economics

Mathieu Van Vyve
Prof. of Operations Research
Pierre Pestieau  
Prof. of Economics

Léopold Simar  
Prof. of Econometrics

Yves Smeers  
Prof. of Operations Research

Jacques-François Thisse  
Prof. of Economics

Henry Tulkens  
Prof. of Economics

Laurence Wolsey  
Prof. of Operations Research
TOPICS

- Behavioral Economics
- Big Data
- Digital Economics
- Econometrics
- Education
- Energy
- Environmental Economics
- Financial Economics
- Game Theory
- Health
- Industrial Organisation
- Macroeconomics
- Mathematical Optimization
- Microeconomics Theory
- Pension
- Public Economic Theory
Topics

Regional & Geographical Sciences

Social Choice & Welfare Economics

Supply Chain

Transport Economics

Miscenalleous
TOPICS | Behavioral Economics

**CORE Reprints**


**Prizes and Awards**


**Media**

Amma Panin: Four reasons why analysis and economic policy and religion go hand-in-hand in sub-Saharan Africa. 20 juin 2021 - Pegnet
CORE Reprints

3142. Adam, Arnaud; Finance, Olivier; Thomas, Isabelle. Monitoring trucks to reveal Belgian geographical structures and dynamics: From GPS traces to spatial interactions. Journal of Transport Geography, 2021, vol. 91, 102977

3164. Trabelsi, Sonia; Casas Ruiz, Lidia; Nemery, Benoit; Thomas, Isabelle. Geography of medication reimbursements in Belgium: an exploratory analysis. CyberGeo : revue européenne de géographie, 2021, 982

CORE Working Paper

2021 /05 Promotion ban and heterogeneity in retail prices during the Great Lockdown
Jean Hindriks, Leonardo Madio, Valerio Serse
CORE Reprints


CORE Discussion Paper

2021 /08 How resilient are sharing economy platforms during pandemic times?
Paul Belleflamme, Muxin Li, Anaïs Périlleux, Alain Strowel

Prizes and Awards

The “Chair in Digital Economics” is based at UCLouvain and held by Prof. Paul Belleflamme.
Founded in June 2020, it acts as the interface between UCLouvain, Sponsors and DERN.

Media

Paul Belleflamme: WhatsApp partage toujours plus avec Facebook. 9 janvier 2021 - Le Soir

Paul Belleflamme: Evacuer complètement la logique des brevets, ce n’est pas faisable. 31 mars 2021 - Le Vif

Paul Belleflamme: Epic-Apple: la bataille royale de Fortnite pour renverser les stores d’applications. 3 mai 2021 - Le Soir

Paul Belleflamme: Un dernier Windows pour la route? 6 juin 2021 - Le Soir

Paul Belleflamme: Epic Games tente un coup de poker dans sa bataille contre Google et Apple. 20 août 2021 - La Libre ECO
**TOPICS | Econometrics**

**CORE Discussion Papers**

**2020/34** Modelling Realized Covariance Matrices: a Class of Hadamard Exponential Models  
Luc Bauwens and Edoardo Otranto

**2021/10** Why Minimum Corporate Income Taxation Can Make the High-Tax Countries Worse off: the Compliance Dilemma  
Jean Hindriks, Yukihiro Nishimura

**Other Published Papers**


TOPICS | Education

CORE Reprint

3169. Hindriks, Jean ; Arenas, Andreu. Intergenerational mobility and school inequality in the US. Research Outreach, 2021, 123, p. 122-125

Media

Jean Hindriks - La Nouvelle Gazette: Mobiliser tous les profs, même retraités! 2 septembre 2020 - La Nouvelle Gazette

Jacques-François Thisse: Le télétravail, déjà largement la norme chez les gros employeurs à Bruxelles. 16 octobre 2020 - Le Soir

Jean Hindriks : La réforme des rythmes scolaires aura un lourd impact sur l'économie belge ? 15 février 2021 - L'Echo

Thierry Brechet: Covid-19 et décrochage scolaire: une bombe à retardement, 10 février 2021 - Le Soir
TOPICS | Energy & Transport Economics

CORE Reprints


3173. Aravena, Ignacio; Lete, Quentin; Papavasiliou, Anthony; Smeers, Yves. Transmission capacity allocation in zonal electricity markets. Operations Research, 2021

3174. Smeers, Yves; Martin, Sebastian; Aguado, Jose A. Co-optimization of energy and reserve with Incentives to Wind Generation. IEEE Transactions on Power Systems, 2021

Prizes and Awards

Anthony Papavasiliou received the Bodossaki distinguished young scientist award.

Ignacio ARAVENA, Quentin LETE, Anthony PAPAVASILIOU, Yves SMEERS

Runner-Up for ENRE 2021 Best Publication Award in Energy Transmission Capacity Allocation in Zonal Electricity Markets

Media

Bart Jourquin: La France veut interdire les vols intérieurs courts : bonne ou mauvaise idée ? 17 mars 2021 - RTBF Info
CORE Discussion Paper

2021/09 Improving recycling: How far should we go?
Paul Belleflamme, Huan Ha

MEDIA

Thierry Brechet : Carte blanche sur les zadistes à Arlon: "Un combat pour les générations futures » - 09 février 2021, Le Soir

Thierry Brechet : Les fermes urbaines beaucoup plus que l'agriculture, 22 février 2021 - Le Soir
CORE Reprints


Other Published papers


Luo, Chenghong; Mauleon, Ana; Vannetelbosch, Vincent. Network formation with myopic and farsighted players. Economic Theory, (2020)
CORE Discussion Papers

2020/33 Do Stable Outcomes Survive in Marriage Problems with Myopic and Farsighted Players?
P. Jean-Jacques Herings, Ana Mauleon and Vincent Vannetelbosch

2020/35 Sharing a collective probability of success
Pierre Dehez

2021/03 Myopic-Farsighted Absorbing Networks
Pierre de Callatay, Ana Mauleon, Vincent Vannetelbosch

2021/04 Horizon-K Farsightedness in Criminal Networks
Jean-Jacques Herings, Ana Mauleon, Vincent Vannetelbosch

2021/06 Limited Farsightedness in R&D Network Formation
Ana Mauleon, Jose J. Sempere-Monerris, Vincent Vannetelbosch
**CORE Reprints**


3164. Trabelsi, Sonia; Casas Ruiz, Lidia; Nemery, Benoit; Thomas, Isabelle. Geography of medication reimbursements in Belgium: an exploratory analysis. CyberGeo : revue européenne de géographie, 2021, 982

**CORE Discussion Papers**

2020/30 Old age or dependence. Which social insurance?Yukihiro Nishimura and Pierre Pestieau

2020/32 Optimal Lockdown and Social Welfare
Pierre Pestieau and Gregory Ponthiere

**Media**

Thierry Brechet: Covid-19 et décrochage scolaire: une bombe à retardement, 10 février 2021 - Le Soir
TOPICS | Industrial Organisation

CORE Reprint


CORE Discussion Papers

2021/05 Promotion ban and heterogeneity in retail prices during the Great Lockdown  
Jean Hindriks, Leonardo Madlo, Valerio Sere

2021/09 Improving recycling: How far should we go?  
Paul Belleflamme, Huan Ha

Book

The economics of competition, collusion and In-between  
Claude d’Aspremont and Rodolphe Dos Santos Ferreira  
Palgrave Macmillan, 2021
TOPICS | Mathematical Optimization

CORE Reprints


3166. Dewez, Julien; Glineur, François. Lower bounds on the nonnegative rank using a nested polytopes formulation. ESANN2020, 28th European Symposium on Artificial Neural Networks - Computational Intelligence and Machine Learning, 2020

3165. Hautecoeur, Cécile; Glineur, François. Image completion via nonnegative matrix factorization using HALS and B-splines. ESANN2020, 28th European Symposium on Artificial Neural Networks - Computational Intelligence and Machine Learning, 2020


Other Published paper

CORE Discussion Papers

2020/29 Affine-invariant contracting-point methods for Convex Optimization Nikita Doikov and Yurii Nesterov

2021/01 Optimization Methods for Fully Composite Problems Nikita Doikov, Yurii Nesterov

MEDIA

Mathieu Van Vyve: Les prédictions mathématiques d’une épidémie sont-elles vraiment fiables? "C’est une cartographie de tout ce qui est plausible, mais il y a une part d’incertitude », 23 février 2021 - La DH
TOPICS | Pension

CORE Reprints


Media

Pierre Devolder: Pension minimale à 1500€: La mesure n'a de sens que si on parle de net. 24 septembre 2020 - RTBF

Jean Hindriks : La pension minimum à 1500€: les réponses à toutes vos questions. 25 septembre 2020 - La Meuse

Pierre Devolder: A votre avis: le gouvernement sera-t-il à la hauteur? 30 septembre 2020 - RTBF

Jean Hindriks: L’une des mesures “phares” du nouveau gouvernement est la pension minimale à 1500 euros. S’agit-il d’un montant brut ou net? Éléments de réponse. 1 octobre 2020 - RTL info

Jean Hindriks - Le Soir: La réforme des pensions légales: comment débloquer le dossier ? 5 janvier 2021 - Le Soir

Jean Hindriks : La réforme des pensions. 16 février - Itinéra

Jean Hindriks : Intergenerational mobility and school inequality in the US. 15 juin 2021 - Research Outreach
TOPICS | Public Economic Theory

CORE Reprints


3156. Robin Boadway, Pierre Pestieau. The Dubious Case for Annual Wealth Taxation. ifo DICE Report 16 (2), p. 3-7, 2018


3160. Pestieau, Pierre; Ponthière, Grégory. Le confinement optimal : quelques calculs exploratoires. Revue française d’économie, 2021, 35, 4, p. 3-21


CORE Discussion Papers

2020/30 Old age or dependence. Which social insurance? 
Yukihiro Nishimura and Pierre Pestieau

2020/31 Age-related taxation of bequests in the presence of a dependency risk
Marie-Louise Leroux and Pierre Pestieau

2020/36 A political economy of loose means-testing in targeted social programs
Helmut Cremer, Justina Klimaviciute and Pierre Pestieau

2020/37 Taxing Multinationals: The Scope for Enforcement Cooperation
Jean Hindriks and Yukihiro Nishimura

2021/02 Age and health related inheritance taxation
MarieLouise Leroux, Pierre Pestieau

2021/07 Counting the Missing Poor in Pre-Industrial Societies
Mathieu Lefebvre, Pierre Pestieau, Gregory Ponthiere

2021/11 Fair inheritance taxation
Benoit Decerf, François Maniquet

MEDIA

Jean Hindriks & Valerio Serse: Baisser la TVA dans l’horeca ne sauvera pas la restauration, 25 mai 2021 - L’Echo
CORE Reprints

3142. Adam, Arnaud; Finance, Olivier; Thomas, Isabelle. Monitoring trucks to reveal Belgian geographical structures and dynamics: From GPS traces to spatial interactions. Journal of Transport Geography, 2021, vol. 91, 102977

3164. Trabelsi, Sonia; Casas Ruiz, Lidia; Nemery, Benoit; Thomas, Isabelle. Geography of medication reimbursements in Belgium: an exploratory analysis. CyberGeo : revue européenne de géographie, 2021, 982

Other Published Paper


Media

Isabelle Thomas: Belgique et mobilité, où en est-on? 2 septembre 2020 - LN24

Isabelle Thomas: P+R, covoiturage...Comment séduire les sceptiques? 23 septembre 2020 - La Meuse
TOPICS | Social Choice and Welfare Economics

CORE Reprint


CORE Discussion Paper

2021/11 Fair inheritance taxation Benoit Decerf, François Maniquet

Book

Well-being in Belgium.

TOPICS | Supply Chain

CORE Reprint


MEDIA

Mathieu Van Vyve: Il faut améliorer l’efficacité de la chaîne logistique, 17 mars 2021 - Le Soir
Junior Researchers

PhD Students and Junior Researchers

Gautier Attanasi · Daniel Felipe Avila Girardot · Gilles Bertrand · Jacques Cartuyvels · Sefane Çetin · Xuyang Chen · Jehum Cho · Fabrizio Ciotti · Sarah Damai · Julian Das · Pierre de Callatay · Henri Dehaybe · Julien Dewez · Nikita Doikov · Jérôme Dollinger · Thomas Eisfeld · Martin Frohn · Sylvain Funck · Céline Gérard · Madeleine Guyot · Thuc Huan Ha · Thomas Hacardiaux · Manuel Herrera Rodriguez · Quentin Lete · Liana Sabina Luncasu · Illyès Mezghani · Gaétan Montero Redondo · Yuting Mou · Mariam Nanumyam · Robin Ng · Rishikesh Parma · Risa Pavia · Erika Pini · Nitansh Prasad · José-Miguel Quesada Perez · Anton Rodomanov · Mathieu Sauvenier · Valerio Serse · Yu Sun · Lorenzo Tondi · Tiziano Toniolo · Sonia Trabelsi

Post Doctoral Fellows

Research fellows are scholars working at CORE for a period of one to three years.

Masoud Akookhosh, KU Leuven, Belgium
Arnaud Adam, CORE, UCLouvain, Belgium
Mihai Florea, Aalto University, USA
Geovani Nunes Grapiglia, Federal University of Parana, Brazil
Mushin Li, Indiana University, Bloomington, USA
Elizaveta Lukmanova, National Bank of Belgium
Seyed Hassan Nosratabadi, Rutgers University, USA
Wenli Peng, Louvain School of Economics, Belgium
Evgeniya Vorontsova, Université Grenoble Alpes, France
Yi Zhu, Università Politecnica delle Marche (Italy)
Completed PhD Dissertations

5 CORE doctoral students successfully defended their Doctoral Dissertation at CORE.

Valerio SERSE on September 4, 2020
Title: Essays on Commodity Tax Incidence
Supervisors: Prof. Jean Hindriks and Prof. Sébastien Van Bellegem

Wenli PENG on March 22, 2021
Title: Supply chain modelling with uncertainty
Supervisor: Prof. Philippe Chevalier

Ilyes MEZGHANI on May 28, 2021
Title: Coordination of transmission and distribution system operations in electricity markets
Supervisor: Prof. Anthony Papavasiliou

Gilles BERTRAND on June 29, 2021
Title: Enhancing the value of flexible generation capacity through continuous intraday markets and scarcity pricing
Supervisor: Prof. Anthony Papavasiliou

Thuc Huan HA on July 5, 2021
Title: Essays in industrial organization and business models for the circular economy
Supervisors: Prof. Paul Belleflamme and Prof. Thierry Bréchet
CORE TEAM | Post-Doctoral Fellows

Masoud Ahookhosh
Postdoctoral researcher
ERC Project: Accelerated convex optimization
Fields of interest: mathematical optimization

Arnaud Adam
Postdoctoral researcher
FNRS Project: Trucks: Geography of traces and places
Fields of interest: transport, spatial, big data, networks

Muxin Li
Postdoctoral researcher
ARC project: Platform and operations in the sharing economy
Fields of interest: industrial organization, digitalization

Elizaveta Lukmanova
Postdoctoral researcher
ARC project: Negative and ultra-low interest rates: Behavioural and quantitative modelling
Fields of interest: monetary policy, international macroeconomics, macroeconometrics

Seyed Hassan Nosratabadi
Postdoctoral researcher
IWABE Project: Individual Welfare Analysis Based on Behavioral Economics
Fields of interest: decision theory and its application to both individual and social choice

Wenli Peng
Postdoctoral researcher
Louvain School of Economics
Thesis: Global supply chains modelling
Fields of interest: supply chain management

Evgeniya Vorontsova
Postdoctoral researcher
ERC Project: Accelerated convex optimization
Fields of interest: mathematical optimization

Yi Zhu
Postdoctoral researcher
Fields of interest: environmental health economics, industrial organization and international business
CORE TEAM | PhD Students

Gautier Attanasi
Louvain School of Economics
Thesis: Dimension reduction of high dimensional nonstationary time series
Supervisor: Sébastien Van Bellegem

Daniel Avila
Louvain School of Economics
Thesis: A stochastic programming approach to multi-stage TSO-DSO coordination under uncertainty
Supervisor: Anthony Papavasiliou

Gilles Bertrand
Louvain School of Engineering
Thesis: Adaptive trading in the continuous intraday market
Supervisor: Anthony Papavasiliou

Jacques Cartuyvels
Louvain School of Engineering
Thesis: Study on scarcity pricing in Belgium
Supervisor: Anthony Papavasiliou

Sefane Cetin
Louvain School of Economics
Thesis: Heterogenous preferences and risk sharing under different pension systems
Supervisor: Jean Hindriks

Xyuan Chen
Louvain School of Economics
Thesis: Tax enforcement and multinationals’ profit shifting
Supervisor: Jean Hindriks

Fabrizio Ciotti
Louvain School of Economics
Thesis: The economics of digitization
Supervisor: Paul Belleflamme

Sarah Damai
Louvain School of Management
Thesis: Managing impatient flows in a hospital taking into account the patient diagnosis and the stochastic nature of arrivals
Supervisor: Philippe Chevalier
Julan Das
Louvain School of Management
Thesis: Comparative analysis of external costs on the delivery of e-commerce products
Supervisor: Bart Jourquin

Pierre de Callataÿ
Louvain School of Economics
Thesis: The role of information in social dilemmas
Supervisor: Vincent Vannetelbosch

Henri Dehaybe
Louvain School of Management
Thesis: A deep reinforcement learning approach for solving stochastic inventory problems
Supervisor: Philippe Chevalier

Julien Dewez
Sciences de l'Ingénieur
Thesis: Lower bounds on the nonnegative rank
Supervisor: François Glineur

Nikita Doikov
Louvain School of Engineering
Thesis: Development of second order methods for structured optimization problems
Supervisor: Yuriii Nesterov

Jérôme Dollinger
Louvain School of Economics
Thesis: Coalitions interrelations and co-evaluations
Supervisors: Ana Mauleon and Vincent Vannetelbosch

Thomas Eisfeld
Louvain School of Economics
Thesis: Peer-dependent reference points
Supervisors: Johannes Johnen and François Maniquet

Martin Frohn
Louvain School of Engineering
Thesis: Greed, majorization, and their impact on optimization over lattices unrouted binary trees
Supervisor: Daniele Catanzaro
Sylvain Funck
Louvain School of Economics
Thesis: Matching with group-dependent preferences: Refugees resettlement and employment guarantee scheme
Supervisors: Ana Mauleon and Vincent Vannetelbosch

Céline Gérard
Louvain School of Engineering
Thesis: Mobilizing flexible demand electric power systems through service quality differentiation
Supervisor: Anthony Papavasiliou

Madeleine Guyot
Department of Geography
Thesis: Urban streetscape and wellbeing: The example of Brussels
Supervisors: Isabelle Thomas and Sophie Vanwambeke

Thuc Huan Ha
Louvain School of Economics
Thesis: Essays on industrial organization and circular economy
Supervisors: Paul Belleflamme and Thierry Bréchet

Thomas Hacardiaux
Louvain School of Management
Thesis: Benefits of horizontal cooperation in supply chains
Supervisor: Jean-Sébastien Tancrez

Manuel Herra Rodriguez
Louvain School of Management
Thesis: Three essays on port network optimization and Panama canal models
Supervisor: Per Agrell

Quentin Lété
Louvain School of Engineering
Thesis: Models and algorithms for the active management of the European electricity
Supervisor: Anthony Papavasiliou

Liana-Sabina Luncasu
Louvain School of Economics
Thesis: Nonparametric estimation of efficiency frontiers with noise in both variables
Supervisor: Sébastien Van Bellegem
Ilyès Mezghani  
Louvain School of Engineering  
Thesis: Coordinated scheduling of transmission and distribution operations in electric power systems  
Supervisor: Anthony Papavasiliou

Gaëtan Montero  
Department of Geography  
Thesis: Measuring and understanding the morphology of urban space. Theoretical and empirical contributions on the basis of Brussels metropolitan area  
Supervisor: Isabelle Thomas

Yuting Mou  
Louvain School of Engineering  
Thesis: Nonlinea  
Supervisors: Paul Belleflamme and Thierry Bréchet

Mariam Nanumyam  
Louvain School of Economics and Universität Bielefeld  
Thesis: The impact of opinion formation on expectations and market dynamics  
Supervisor: Paul Belleflamme

Jui Pin Robin Ng  
Louvain School of Economics  
Thesis: Essays on the economics of trust in the digital economy  
Supervisor: Paul Belleflamme

Risa Pavia  
Louvain School of Economics and Universidade Nova de Lisboa  
Thesis: Taxation of multinational corporations  
Supervisors: Jean Hindriks and Susana Peralta

Erika Pini  
Louvain School of Economics  
Thesis: Economic inequality, political polarization and voter turnout  
Supervisor: François Maniquet

Niranjana Prasad  
Louvain School of Economics  
Thesis: Family planning laws and contraception use in India  
Supervisor: François Maniquet
José-Miguel Quesada Perez
Louvain School of Management
Thesis: Sustainable economic growth and uncertainty
Supervisor: Thierry Bréchet and Sandy Tubeuf

Mathieu Sauvenier
Louvain School of Economics
Thesis: Express shipment service network design: Challenges, advances and robustness
Supervisor: Sébastien Van Bellegem

Lorenzo Tondi
Louvain School of Economics
Thesis: Optimal copyright duration
Supervisor: Paul Belleflamme

Sonia Trabelsi
Department of Geography
Thesis: Geographies of green and health in Belgium: Measurements, opportunities and challenges
Supervisor: Isabelle Thomas

Anton Rodomanov
Sciences de l'Ingénieur
Thesis: Quasi-Newton methods with provable efficiency guarantees
Supervisor: Yurii Nesterov

Yu Sun
Louvain School of Economics
Thesis: High dimension sparse econometric models
Supervisor: Thierry Bréchet and Sandy Tubeuf

Tiziano Toniolo
Louvain School of Economics
Thesis: Impact of effective taxation on labor supply and disposable income in Belgium
Supervisor: Julio Davila
Scientific Exchanges | Affiliate Members

CORE can count on the precious support of its affiliate members who are researchers and academics from outside UCLouvain that are contributing to the CORE scientific environment and domains of expertise.

Rabah Amir, University of Iowa, USA  
Paul Champsaur, Arcepts, France  
Bernard Cornet, Université Paris 1, France  
Koen Decancq, Universiteit Antwerpen, Belgium  
Jean-Charles Delvenne, ICTEAM, UCLouvain, Belgium  
Axel Gautier, Université de Liège, Belgium  
Michel Goemans, Massachusetts Institute of Technology, Cambridge, USA  
Adel Hatami-Mabini, De Montfort University, United Kingdom  
Elhanan Helpman, Harvard University, USA  
Jean-Jacques Herings, Universiteit Maastricht, The Netherlands  
Michel Lebreton, Toulouse school of Economics, France  
Marie-Louise Leroux, Université du Québec à Montréal, Canada  
Dunia Lopez Pintado, Universidad Pablo de Olavide, Seville, Spain  
Pascal Mossay, Newcastle University, United Kingdom  
George Nemhauser, Georgia University of Technology, Atlanta, USA  
Dimitri Paolini, Università degli Studi di Sassari, Italy  
Yves Pochet, PURATOS, Dilbeek, Belgium  
Heracles Polemarchakis, University of Warwick, United Kingdom  
Ernesto San Martín, Pontificia Universidade Católica de Chile, Santiago, Chile  
Erik Schokkaert, KU Leuven, Belgium  
Jose J. Monerris, Universidad de Valencia, Spain  
Jean-François Richard, University of Pittsburgh, USA  
Vladimir Shikhman, Technische Universität Chemnitz, Germany  
Joe Tharakan, Université de Liège, Belgium  
Giacomo Valetta, EDHEC Business School, Roubaix, France  
Dirk Van de Gaer, Universiteit Gent, Belgium  
Xavier Wauthy, Université Saint-Louis, Bruxelles, Belgium  
Shlomo Weber, New Economic School, Moscow, Russia

Visitors

Due to travel restrictions related to the pandemic, no guest visited CORE this year.
Conferences & Seminars

2020

December 11, 2020
LED OS - Mark Tremblay, Miami University
The Limits of Marketplace Fee Discrimination.

December 9, 2020
CORE Brown Bag Seminar Jonas Striaukas UClouvain, LIDAM LFIN
Machine Learning Panel Data Regressions with an Application to Nowcasting Price Earnings Ratios

December 4, 2020
LED YES- Federico Innocenti, University of Mannheim & Vitoria Rabello de Castro, University of Minnesota
Bayesian Persuasion with heterogeneous receivers and limited attention.

December 3, 2020
UCLouvain Economics Seminar Özlem Bedre-Defolie ESMT Berlin
Hybrid Platform Model

November 27, 2020
Led OS seminar - Tarik Roukny, Ku Leuven
Vertically Disintegrated Platforms?
(joint with C. Aymmans and M. Dewatripon).

November 25, 2020
CORE Brown Bag Seminar Jui Pin Robin Ng UClouvain, LIDAM/CORE
Ratings and Reciprocity

November 18, 2020
CORE Brown Bag Seminar Amma Panin, CORE
Time for Tea: Measuring Discounting Without the Utility Confound*

November 13, 2020
LED OS Seminar - Grazia Ceccere, Institut Mines Telecom
Privacy and Children: What Drives Digital Data Protection for Very Young Children?

November 6, 2020
LED Young Economist Seminar - Hung-Ni Chen, LMU Munich & Tatiana Rosá García, Pontifica Universidad Católica de Chile
Tow Big Brands or Walk Alone : The Impacts of Review Systems.
**October 30, 2020**

LED ONLINE Seminar - Özlem Bedre-Defolie, ESMT Berlin  
Platform Competition for Exclusivity with a Marquee Seller  
with G. Biglaiser

**October 21, 2020**

Brown Bag Seminar - Charles de Beaufort, IRES  
Fiscal and monetary policy interactions in a liquidity trap when government debt matters

**October 16, 2020**

LED Seminar - Martin Quinn, Católica Lisbon School of Business & Economics  
The Economic Effects of Mobile Internet Access: Evidence from Roam-Like-At-Home  
joint with Miguel Godinho de Matos and Christian Peukert

**October 9, 2020**

Led Seminar - Tianchi Li, Humboldt University of Berlin, and Guillermo Uriz-Uharte, UCLouvain  
We Value Your Privacy: Behavior-based price discrimination under endogenous privacy  
(joint with F. Heiny and M.Tolksdorf).

**October 2, 2020**

LED Seminar - Wynne Lam, University of East Anglia  
Data Usage and Strategic Pricing: Does Platform Entry Benefit Independent Traders?  
with X. Liu
Conferences & Seminars

2021

**July 16, 2021**
L&P OS seminar - Laura Abrardi, Politecnico di Torino
I don’t care about cookies! Platform data disclosure and time-inconsistent users

**July 2, 2021**
Louvain & Paris Online Seminar - Pinar Yildirim, Wharton School of the University of Pennsylvania
Matching Pennies on the Campaign Trail: An Empirical Study of Senate Elections and Media Coverage

**June 18, 2021**
Louvain & Paris Online Seminar - Tat-How Teh, National University of Singapore
Platform Governance

**June 4, 2021**
Louvain & Paris Online Seminar - Matt Shum, California Institute of Technology
The Impact of Privacy Measures on Online Advertising Markets

**May 21, 2021**
Louvain & Paris Online Seminar - Davide Proserpio, Marshall School of Business
Estimating the impact of Airbnb on the local economy: Evidence from the restaurant industry

**May 19, 2021**
CORE Brown Bag Seminar - Thi Nhung Luong, LIDAM/LFIN
Retail Investors’ Disposition Effect and Order Choices

**May 7, 2021**
Louvain & Paris Online Seminar - David Ronayne, ESMT Berlin
Competing Sales Channels with Captive Consumers

**May 7, 2021**
Joint Seminar ISBA/CORE - Oliver Linton, University of Cambridge
MeMeDi for Microstructure Noise

**May 6, 2021**
UCLouvain Economics Seminar / EOS Development Seminar - Mathieu Couttenier, University of Lyon
The Economic Costs of Conflict: A Production Network Approach

**May 5, 2021**
CORE Brown Bag Seminar - Kevin Genna, AMSE
How does biased technological change affects energy production in the US? Evidence from patent data
April 29, 2021
UCLouvain Economics Seminar - Marisa Mira do, Imperial College London
Innovation Diffusion and Physician Networks: Keyhole Surgery for Cancer in the English NHS

April 23, 2021
LED YES seminar - Allen Vong, Yale University
The crisis of expertise

April 22, 2021
UCLouvain Economics Seminar - Aleksei Parakhonyak, Oxford University
Dynamic Consumer Search

April 14, 2021
CORE Brown Bag Seminar - Angelo Luisi, LIDAM/LFIN
Fragmentation in the European Monetary Union: Is it really over?

April 01, 2021
Louvain & Paris Online Seminar - Hyunjin Kim, INSEAD Business school
The Value of Competitor Information: Evidence from a Field Experiment

March 26, 2021
LED YES seminar - Robin Ng, UCLouvain LIDAM/CORE
Ratings and Reciprocity

March 19, 2021
LED Online Seminar - Mariana Rojas Breu, Université Paris Dauphine Central-bank account for all: Efficiency and Stability

March 11, 2021
UCLouvain Economic Seminar - Vincent Dautel, LISER
Investigating neighbourhood effects in welfare-to-work transitions

March 05, 2021
Joint seminar ISBA/CORE: Gary Koop, University of Strathclyde Glasgow Forecasting Tail Risk in Non-parametric Macroeconomic VARs

March 03, 2021
CORE Brown Bag Seminar - Paul Belleflamme, UCLouvain, LIDAM/CORE Network goods, price discrimination, and two-sided platforms

February 26, 2021
LED YES seminar - Luise Eisfeld, Toulouse School of Economist
How do Online Product Rankings Influence Sellers’ Pricing Behavior?

February 25, 2021
UCLouvain Economics Seminar - Dennis Novy, Warwick University Transitivity in Trade

February 19, 2021
LED Online Seminar - Kevin Tran, University of Bristol
Value for Money and Selection: How Pricing Affects Airbnb Ratings

February 18, 2021
UCLouvain Economics Seminar - Kate Orkin, Oxford University
Aspirations, Assets, and anti-Poverty Policies

February 17, 2021
Brown Bag Seminar - Pierre Dehez, CORE
Sharing a collective probability of success
February 16, 2021
Webinaire - La réforme des pensions, Jean Hindriks, CORE
La réforme des pensions

February 11, 2021
UCLouvain Economics Seminar - Luigi Butera, Copenhagen Business School
A New Mechanism to Alleviate the Crises of Confidence in Science - With An Application to the Public Goods Game

February 5, 2021
L&P OS seminar - Jessica Fong, University of Michigan Ross School of Business
Dog Eat Dog: Measuring Network Effects Using a Digital Platform Merger

February 4, 2021
UCLouvain Economics Seminar - Bernard Cornet, Université de Paris I
Market frictions, hedging complements, and put-call parity

January 29, 2021
UCLouvain Economics Seminar - Francesca Monti, King’s College
Nowcasting with large Bayesian vector autoregressions

January 28, 2021
UCLouvain Economics Seminar - Romuald Méango, Munich Center for the Economics of the Aging
The (Option-)value of Overstaying

January 27, 2021
UCLouvain Economics Seminar - CANCELLED - Lukas Hoesch, Universitat Pompeu Fabra
Specification Tests Robust to Multiple Instabilities

January 25, 2021
UCLouvain Economics Seminar - Alexandros Theloudis, LISER
Consumption Inequality across Heterogeneous Families

January 22, 2021
L&P OS Seminar (Louvain and Paris Online Seminar)- Mattia Nardotto, KU Leuven
Identity, Media and Consumer Behavior

January 19, 2021
UCLouvain Economics Seminar - Marc Sangnier, Aix-Marseille University
Political Connections and White-collar Crime:
Evidence from Insider Trading in France

January 18, 2021
UCLouvain Economics Seminar - Tianyi Wang, University of Copenhagen
Media, Pulpit and Populist Persuasion:
Evidence from Father Coughlin

January 14, 2021
UCLouvain Economics Seminar - Stefan Pichler, ETH Zurich
Mandated Sick Pay: Coverage, Utilization and Welfare Effects
Prizes and Awards

Behavioral Economics
Amma Panin and Johannes Johnen were elected as a CEPR Research Affiliate.

Digital Economics
The “Chair in Digital Economics” is based at UCLouvain and held by Prof. Paul Belleflamme. Founded in June 2020, it acts as the interface between UCLouvain, Sponsors and DERN.

Energy
Anthony Papavasiliou received the Bodossaki distinguished young scientist award.

Ignacio ARAVENA, Quentin LETE,
Anthony PAPAVASILIOU, Yves SMEERS
Runner-Up for ENRE 2021 Best Publication Award in Energy
Transmission Capacity Allocation in Zonal Electricity Markets

Regional & Geographical Sciences
Arnaud Adam and Joris Bekers win Mercator - Ortelius prize 2020
This prize rewards a doctoral thesis in the field of economic geography, regional economics, regional planning or urban economics
Isabelle Thomas has been elected RSAI councillor for the term 2021-2023

Mathematical Optimization
Yurii Nesterov was elected in 2021 as an ordinary member of Academia Europaea:
https://www.ae-info.org/ae/Member/Nesterov_Yurii

Daniele Catanzaro have been committee member for the ORBEL Best PhD thesis award.
**Fundings**

### Behavioral Economics

**Expectations and Social Influence Dynamics in Economics (ExSIDE)**
CORE coordinator: Vincent Vannetelbosch
CORE researchers: Chenghong Luo, Mariam Nanumyam and Akylai Taalaibekova
Financement: European Commission
Date: January 2017 - December 2020

**Individual Welfare Analysis based on Behavioral Economics (IWABE)**
CORE coordinators: Johannes Johnen and François Maniquet
CORE researcher: Seyed Hassan Nosratabadi
Financement: FNRS (EOS)
Date: January 2018 - December 2021

### Big Data

**Following trucks with GPS data: Measuring and modelling routes for a spatially smarter and more equitable taxation**
CORE coordinator: Isabelle Thomas
CORE researcher: Arnaud Adam
Financement: FNRS (PDR)
Date: December 2018 - November 2020

**Les interdépendances entre la concurrence dans et la concurrence entre les marchés numériques**
CORE coordinator: Paul Belleflamme
Financement: FNRS (FRESH)
Date: février 2020 - Décembre 2021

### Digital Economics

**Platform Regulation and Operations in the Sharing Economy (PROSEco)**
CORE coordinators: Paul Belleflamme, Philippe Chevalier, Johannes Johnen and Jean-Sébastien Tancrez
CORE researchers: Muxin Li, Robin NG and Rishikesh Parma
Financement: Fédération Wallonie-Bruxelles (ARC)
Date: October 2019 - September 2024

**The interplay between competition on and competition among digitam marketplaces**
CORE coordinator: Paul Belleflamme
CORE researcher: Fabrizio Ciotti
Financement: FNRS (FRESH)
Date: February 2020 - January 2024

**Les interdépendances entre la concurrence dans et la concurrence entre les marchés numériques**
CORE coordinator: Paul Belleflamme
Financement: FNRS (FRESH)
Date: février 2020 - Décembre 2021

**Chaire Economie Digitale**
CORE coordinator: Paul Belleflamme
Financement: Google Belgium
Date: septembre 2020 - décembre 2025
Energy

Flexible energy production, demand and storage-based virtual power plants for electricity markets and resilient DSO operation (FEVER)
CORE coordinator: Anthony Papavasiliou
CORE researcher: Ilyes Mezghani, Nicolas Stevens
Financement: European Commission (H2020)
Date: February 2020 - July 2023

Francqui Foundation research professorship
CORE coordinator: Anthony Papavasiliou
Financement: Francqui Foundation
Date: September 2018 - August 2021

Models and algorithms for the active management of the European electricity grid
CORE coordinator: Anthony Papavasiliou
CORE researcher: Quentin Lété
Financement: FNRS (Aspirant)
Date: October 2019 - September 2021

Evaluating the value of flexibility in power system
CORE coordinator: Anthony Papavasiliou
CORE researcher: Gilles Bertrand
Financement: FNRS (FRIA)
Date: October 2018 - September 2020

Energy technology modelling framework for policy support towards a cost effective and sustainable society in 2030-2050 (ECPO 2030-2050)
CORE coordinator: Anthony Papavasiliou
CORE researcher: Jacques Cartuyvels
Financement: FNRS (FRIA)
Date: October 2018 - May 2023

Modeling flexibility at sub-hourly time scales
CORE coordinator: Anthony Papavasiliou
Date: February 2016 - October 2020

Color power
CORE coordinators: Philippe Chevalier and Anthony Papavasiliou
CORE researcher: Yuting Mou
Financement: Electrabel
Date: October 2015 - September 2021

Using analytics and optimization to enable Africa to leapfrog to energy
CORE coordinator: Anthony Papavasiliou
CORE researcher: Daniel Avila
Financement: Fonds de Recherche Pierre et Colette Bauchau
Date: April 2018 - December 2020

Financial Economics

Traitement théorique et empirique des primes de risque sur le marché des obligations d’Etat
CORE coordinator: Leonardo Iania
Financement: FNRS (Aspirant)
Date: October 2020 - September 2022
**Game Theory**

**Expectations and Social Influence Dynamics in Economics (ExSIDE)**  
CORE coordinator: Vincent Vannetelbosch  
CORE researchers: Chenghong Luo, Mariam Nanumyam and Akylai Taalaibekova  
Financement: European Commission  
Date: January 2017 - December 2020

**Social and economic network formation under limited farsightness: Theory and applications**  
CORE coordinator: Ana Mauleon  
CORE researcher: Jérôme Dollinger  
Financement: Fédération Wallonie-Bruxelles (ARC)  
Date: October 2015 - September 2020

**The role of information in social dilemmas**  
CORE coordinators: Ana Mauleon and Vincent Vannetelbosch  
CORE researcher: Pierre de Callatay  
Financement: FNRS (PDR)  
Date: July 2018 - June 2022

**Color power**  
CORE coordinators: Philippe Chevalier and Anthony Papavasiliou  
CORE researcher: Céline Gérard  
Financement: Electrabel  
Date: September 2017 - September 2020

**Self-selection in social dilemmas**  
CORE coordinators: Ana Mauleon and Vincent Vannetelbosch  
CORE researcher: Pierre de Callatay  
Financement: Fonds de Recherche Pierre et Colette Bauchau  
Date: January 2018 - December 2021

**The interplay between competition on and competition among digital marketplaces**  
CORE coordinator: Paul Belleflamme  
CORE researcher: Fabrizio Ciotti  
Financement: FNRS (FRESH)  
Date: February 2020 - January 2024

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**Health**

**Nature impact on mental health distribution**  
CORE coordinator: Isabelle Thomas  
CORE researchers: Madeleine Guyot and Sonia Trabelsi  
Financement: BELSPO (BRAIN)  
Date: July 2017 - December 2021

**Application of big data digital technologies in the healthcare sector**  
CORE coordinator: François Glineur  
Financement: Région wallonne  
Date: August 2017 - July 2021
Industrial Organization

Platform Regulation and Operations in the Sharing Economy (PROSEco)
CORE coordinators: Paul Belleflamme, Philippe Chevalier, Johannes Johnen and Jean-Sébastien Tancrez
CORE researchers: Muxin Li, Robin NG and Rishikesh Parma
Financement: Fédération Wallonie-Bruxelles (ARC)
Date: October 2019 - September 2024

The cost of hiding content quality, social welfare and privacy
CORE coordinator: Paul Belleflamme
CORE researcher: Leonardo Madio
Financement: UCLouvain (MOVE-IN Louvain)
Date: August 2018 - March 2020

The interplay between competition on and competition among digitam marketplaces
CORE coordinator: Paul Belleflamme
CORE researcher: Fabrizio Ciotti
Financement: FNRS (FRESH)
Date: February 2020 - January 2024

Mathematical Optimization

Accelerated Convex Optimization (ACCOpt)
CORE coordinator: Yurii Nesterov
CORE researchers: Masoud Ahookhosh, Nikita Doikov, Mihai Florea, Geovani Nunes Grapiglia, Anton Rodomanov and Evgenia Vorontsova
Financement: European Commission (ERC)
Date: September 2018 - September 2023

Trade-opt training data-driven experts in optimization
CORE coordinator: François Glineur
Financement: European Commission (ITN Marie-Curie H2020)
Date: June 2020 - May 2024

Application of big data digital technologies in the healthcare sector
CORE coordinator: François Glineur
Financement: Région wallonne
Date: August 2017 - July 2021

Structured low-rand and matrix/tensor approximation: Numerical optimization-based algorithms and applications
CORE coordinator: François Glineur
Financement: FNRS (EOS)
Date: January 2018 - December 2021

Models and algorithms for the active management of the European electricity grid
CORE coordinator: Anthony Papavasiliou
CORE researcher: Quentin Lété
Financement: FNRS (Aspirant)
Date: October 2019 - September 2021

Optimizing over unrooted binary tree: Bridging the gap between phylogenetics and coding theory
CORE coordinator: Daniele Catanzaro
CORE researcher: Martin Frohn
Financement: UCLouvain (FSR)
Date: October 2019 – September 2021

Computing the exact performance of black-box optimization methods: An automated tool to improve understanding and design better algorithms
CORE coordinator: François Glineur
Financement: UCL Louvain and KU Leuven (KU Leuven Global PhD parternships 2020 with UCLouvain)
Date: October 2020 - September 2022
Microeconomic Theory

**Expectations and Social Influence Dynamics in Economics (ExSIDE)**
CORE coordinator: Vincent Vannetelbosch
CORE researchers: Chenghong Luo, Mariam Nanumyam and Akylai Taalaibekova
Financement: European Commission
Date: January 2017 - December 2020

**Individual Welfare Analysis based on Behavioral Economics (IWABE)**
CORE coordinators: Johannes Johnen and François Maniquet
CORE researcher: Seyed Hassan Nosratabadi
Financement: FNRS (EOS)
Date: January 2018 - December 2021

Public Economic Theory

**Social preferences and the persistence of poverty**
CORE coordinator: François Maniquet
Financement: FNRS (PDR)
Date: October 2016 - September 2020

**Economic inequality, political polarization and voter turnout**
CORE coordinator: François Maniquet
CORE researcher: Erika Pini
Financement: FNRS (Aspirant)
Date: October 2018 - September 2022

Regional and Geographical Sciences

**Nature impact on mental health distribution**
CORE coordinator: Isabelle Thomas
CORE researchers: Madeleine Guyot and Sonia Trabelsi
Financement: BELSPO (BRAIN)
Date: July 2017 - December 2021

**Following trucks with GPS data: Measuring and modelling routes for a spatially smarter and more equitable taxation**
CORE coordinator: Isabelle Thomas
CORE researcher: Arnaud Adam
Financement: FNRS (PDR)
Date: December 2018 - November 2020

**Presupply Research Project**
CORE coordinators: Philippe Chevalier and Isabelle Thomas
CORE researcher: Henry Dehaybe
Financement: Logistics in Wallonia and N-Side
Date: December 2016 - December 2020
Social Choice and Welfare

Individual Welfare Analysis based on Behavioral Economics (IWABE) CORE coordinators: Johannes Johnen and François Maniquet
CORE researcher: Seyed Hassan Nosratabadi
Financement: FNRS (EOS)
Date: January 2018 - December 2021

Social preferences and the persistence of poverty
CORE coordinator: François Maniquet
Financement: FNRS (PDR)
Date: October 2016 - September 2020

Supply Chain

Kronos Group Chair in strategic sourcing and procurement
CORE coordinators: Per Agrell, Constantin Blome and Philippe Chevalier
Financement: Kronos Group Belgium
Date: September 2017 - September 2020