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3. Publications
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https://twitter.com/ResearchRem
REM - Research in Economics and Mathematics

6 research groups

80 integrated members

50 collaborators

3 doctoral programmes

548 articles in international journals,
2012 – March 2020 (highly ranked in Web of Science, Scopus, ABS, and FT)

11 recently funded FCT research projects

122 REM WPs 2017 – March 2020
1. Introduction

REM - Research in Economics and Mathematics is a research consortium hosted by ISEG, the School of Economics and Management of Universidade de Lisboa, which is the largest and most reputed Portuguese University. The consortium was formed in the middle of 2017 by bringing together two research centres:

Mathematics Applied to Forecasting and Economic Decision

Research Unit on Complexity and Economics

REM produces original research in Economics and Mathematics, both theoretical and applied, taking a multidisciplinary stance at complex problems in economies and societies. The consortium encompasses several areas of research covering economics, mathematics and finance, behavioural and political economy. The research produced is a useful instrument for the formulation and the critical analysis of public policy in connection with industry stakeholders. Moreover, REM bears strong cooperation ties with governmental institutions, Central Banks (notably Banco de Portugal), and international organisations (IMF, OECD, and ECB), and regulators to drive an updated agenda of research into economic and societal challenges.

REM’s researchers are organized in six groups: Econometrics; Mathematical Analysis and Computational Finance; Macroeconomics; Mathematics of Complex Systems; Microeconomics; and Statistics and Actuarial Science. At the end of 2018, there were 71 integrated members (4 other members entered already in 2019) and around 50 collaborators encompassing research associates and Ph.D. students.

REM hosts and coordinates three doctoral programmes at ISEG, being committed to research-based advanced teaching. Ph.D. students are integrated members of research teams, often in international consortia, and M.Sc. students prepare their dissertations in close articulation with ongoing research lines.

Regarding impact, REM ranks high in publication records according to international standards. There is an active policy for promoting publication in excellent scientific journals and books published by international publishers. Nonetheless, we are also strongly committed to make our research outputs freely available via working papers and open-access publications. Indeed, REM members have published more than 430 articles in international peer-reviewed journals in the period 2012-18, with more than 20% of them placed in the first quartile of Web of Science (or Scopus). These publications are also highly ranked in the ABS and FT journal rankings. In addition, REM has its own Working Paper series indexed in IDEAS/RePEc, with 77 published WPs between 2017 and the beginning of 2019.
REM is a member of the EconPol Europe – the European network for economic and fiscal policy research – a network of 14 policy-oriented university and non-university research institutes across 12 countries (Czech Republic, the Netherlands, Portugal, Spain, Switzerland, Germany, France, the UK, Finland, Austria, Italy and Belgium).

EconPol Europe was founded by:
- ifo Institute – Leibniz Institute for Economic Research at the University of Munich e. V. (ifo; Munich, Germany)

with
- Centre d’Études Prospectives et d’Informations Internationales (CEPII; Paris, France)
- Centre for European Policy Studies (CEPS; Brussels, Belgium)
- CERGE-EI (Prague, Czech Republic)
- CPB Netherlands Bureau for Economic Policy Analysis (The Hague, Netherlands)
- Institut für Höhere Studien (IHS; Vienna, Austria)
- Instituto Universitario de Economía at Universidad Carlos III de Madrid (Madrid, Spain)
- KOF Swiss Economic Institute at ETH Zurich (Zurich, Switzerland)
- REM at the Lisbon School of Economics and Management of the Universidade de Lisboa (Lisbon, Portugal)
- Toulouse School of Economics (Toulouse, France),
- Università di Trento (Department of Economics and Management) (Trento, Italy),
- University of Oxford (Centre for Business Taxation) (Oxford, Great Britain),
- VATT Institute for Economic Research (VATT; Helsinki, Finland)
- ZEW – Leibniz-Zentrum für Europäische Wirtschaftsforschung GmbH Mannheim (ZEW; Mannheim, Germany)

Participating Institutions
REM also participates in, and manages the XLAB, a laboratory for scientific research and data collection whose main goal is the study of decision-making processes and economic, political, and social behaviour. This infrastructure conducts experimental studies, surveys about economic and social behaviour, and measurement tests. XLAB is located at the Lisbon School of Economics & Management of the University of Lisbon.

The XLAB is a component of PASSDA (Production and Archive of Social Science Data) is the Portuguese infrastructure for the collection, archive and dissemination of data about social and political attitudes, values, and behaviours. It is the national node of several international research networks and infrastructures that collect these types of data through surveys applied to representative samples of the population, such as the European Social Survey-ERIC or the Comparative Study of Electoral Systems, as well as of the Consortium of European Social Science Data Archives (CESSDA-ERIC).

PASSDA is integrated in the Portuguese Roadmap of Research Infrastructures supported by the Foundation for Science and Technology, and was instituted as a partnership between research centres and units of the University of Lisbon, ISCTE-IUL, the University of Coimbra and the University of Porto.
2. Research Groups

2.1. Econometrics

The Econometrics group consists of 15 researchers who are also full-time lecturers at ISEG. The group is heterogeneous and conducts research in distinct areas of Econometrics. While some members exclusively conduct empirical research, others focus on theory. The majority, however, combine these two strands of research.

We highlight three principal areas of research: i) microeconometrics, more specifically, panel data, discrete choice models, fractional regression models, sample selection, quantile regression (mostly on cross-section analysis), conditional moments constraints, missing data, attrition, discrete-continuous choice models, endogeneity in nonlinear models and spatial econometrics; ii) time series, in particular, clustering and classification, multivariate Markov chain, regression-based tail index estimation, double unit roots and value-at-risk and expected shortfall; iii) applied economics on poverty, social exclusion, income distribution and social policy.

On top of these main areas, our group occasionally conduct research in areas close to statistics such as nonparametric estimation (e.g., density forecast based on time- and state-domain, expected time to cross a threshold, and structural change test in duration).

2.2. Economics and Mathematics of Complex Systems

The Economics and Mathematics of Complex Systems group is a multidisciplinary group that consists of 7 mathematicians and 7 economists who contribute to tackling human problems using their modelling expertise. Many of these contributions rely on the feedback of social phenomena, which, in addition to material constraints, are also a result of human decision processes.

We believe that modelling can only be relevant to the society if it addresses real and actual problems. Therefore, the joint expertise from mathematics and social sciences is needed. The members of this group have different backgrounds and diverse scientific training and work together in a true interdisciplinary spirit.

The group comprises four main research lines: i) non-linear dynamical systems (theory and applications), including computational economics and finance; ii) innovation studies, which includes modelling and reconstruction of innovation processes; iii) bibliometric and scientometric research, and iv) network structure and dynamics.

2.3. Macroeconomics

The Macroeconomics Group has 17 members, some of them also with links with Banco de Portugal. Several topics of research include fiscal policy, monetary policy alongside macro econometric modelling and DSGE modelling.

Other lines of research deal with macroeconomic dynamics, macro prudential policies and household indebtedness, government efficiency analysis, and international economic and financial integration, euro area long-term sovereign bond yields, macroeconomics of imperfect competition, firm dynamics and macroeconomic dynamics or on the mathematics of
macroeconomic dynamics, measuring the output gap, and the relevance of public investment for economic activity.

Members of the group organise a regular workshop on macro issues that takes place around the economics’ schools in Lisbon.

2.4. Mathematical Analysis and Computation Finance

The Mathematical Analysis and Computation Finance group consists of 8 researchers whose expertise relies on a strong quantitative background that allows tackling open questions in a set of diversified pure and applied domains that nowadays require an exigent mathematical framework.

In mathematical finance: nonlinear Black-Scholes equation and option pricing with transaction costs; stochastic analysis, control theory and optimal stopping problems, and applications to portfolio theory, option pricing, and real options; risk measures in complex markets; numerical and mathematical analysis of partial integro-differential equations and delay differential equations in option pricing with memory effects; parallel solution methods for linear systems that enable to overcome the curse of dimensionality in financial applications.

In mathematical analysis with applications to Economics, Finance, Medicine and Physics: combinatorial game theory concerning impartial games and the generation of all complete lattices with a well-chosen initial set of combinatorial games; approximation of parabolic PDEs arising in finance; evolution equations associated with strongly continuous Markov processes and controlled versions of such equations, with optimal control problems in view; numerical and mathematical analysis of partial differential equations of elliptic/parabolic type; parallel solution methods for linear systems arising in the solution of partial differential and integro-differential equations with biomedical applications; dispersive differential equations with quantum mechanics and dynamics of wave propagation in dispersive media in view.

2.5. Microeconomics

The Microeconomics group consists of 17 researchers, and most of them are also full-time lecturers at public universities. We conduct both theoretical and applied research using lab and field experimental methods and non-experimental survey data. Three research areas have been particularly productive.

In Urban Economics, with focus on transport (efficiency and distributional effects of transportation policies on urban form and mode choices; linkages between transport investment, agglomeration economies, and economic performance) and on regional development (causes of spatial disparities in regional development and socio-economic outcomes). Previous work resulted in an extensive list of publications and in the near future, we aim at examining the relationship between the expansion of the road network and the urban spatial structure in Portugal over the last 30 years.

In the field of Behavioural and Experimental Economics, previous work dealt with testing matching mechanisms in the lab, as well as investigating the role of information in coordination, cooperation, and competition games. Also, field and lab experiments investigate gender differences in economic decision-making and explore various institutional and policy interventions that possibly reduce the gender gap inefficiencies in labour markets. For the near future, we aim at linking overconfidence to other aspects of decision-making and real world
outcomes, with a focus on information processing and group dynamics. These experiments will be conducted at ISEG’s new XLAB (an experimental laboratory financed by PASSDA).

At last, International Trade, whose main contributions focus on multi-country dynamic trade models to study entry and exit from export markets, on the relevance of geography for multinational production, on exporters’ strategies, and on the effects of managers’ mobility on trade performance. For the near future, we aim at quantifying the effects of trade and labour market integration in the context of economic integration.

### 2.6. Statistics and Actuarial Science

The **Statistics and Actuarial Science group** is composed of 9 researchers, 8 of whom are also full-time lecturers at ISEG.

In this group, we explore a variety of themes, such as uncertainty quantification and model selection/hypotheses testing using a Bayesian approach. Current projects in this line involve the application of uncertainty quantification techniques to economic models and Bayesian hypotheses testing in the context of proportions. In another ongoing project, we focus on bivariate counting distributions with the objective of modelling dependence of risks in actuarial science and its implications on ratemaking. Yet another research topic focuses on the optimal reinsurance strategy from the cedant’s point of view when the risks for which reinsurance is sought are dependent. In this topic, we consider several optimization criteria, from single to multi-period models, and use approaches related to the theory of stochastic control. Finally, there are several ongoing projects in the area of ruin theory.

### 3. Publications

#### a) Articles

In 2019, considering also some forthcoming articles, REM published 70 articles in peer reviewed journals (49 articles in 2018, and increase of 43%), as listed below. Moreover, until March 2020, REM also published 41 articles, also listed below.

<table>
<thead>
<tr>
<th>Title</th>
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<tr>
<td>Unconditional Basic Income: Who gets it? Who pays for it? A social Accounting Approach to Distribution</td>
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Santos, S., Reich, U.P.  

Tracking the relationship between euro area equities and sovereign bonds  
I. Cabral and J. Nicolau  

Student’s access and performance in the Portuguese Higher Education: Issues of gender, age, socio-cultural background, expectations, and program choice  
M. E. Ferrão and L. S. Almeida  

Ruin probabilities and capital requirement for open automobile portfolios with a bonus-malus system based on claim counts  
L. B. Afonso, R. M. Cardoso, A. D. Egidio dos Reis and G. R. Gracinda  

Production processes with different levels of risk: addressing the replacement option  
F. S. de Almeida, C. Nunes and C. Oliveira  

Option Pricing Under a Jump-Telegraph Diffusion Model with Jumps of Random size  
J. Janela, J. M. E. Guerra and G. S. Silva  

Children’s Sleep Habits Questionnaire in Two Subpopulations from Cape Verde and Mozambique: Exploratory and Regression Analysis  
I. M. Carneiro, P. M. T. Fonseca and R. Ferreira  

Bayesian selection of technology assumptions for the transformation from supply-use to input-output tables  
J. F. Rodrigues, A. F. Amores and R. Paulo  

A cross-sectional application of the Nelson-Siegel-Svensson model to several negative yield cases  
Garcia, M., Carvalho, V.  

The impact of international migration on the public pension system: The case of Portugal  
Garcia, M., Alves, J., Craveiro, D., Albuquerque, P.  

Determinants of banks’ profitability in Angola  
Garcia, M.T., Trindade; M.J.  
Economic growth, the high-tech sector, and the high-skilled: theory and quantitative implications
Brito, P., Gil, P., Afonso, O.

On the sources of information about latent variables in DSGE models
Iskrev, N.

Recent challenges of the European integration: an introduction
Ferreira, C., Turcu, C.

The impact of tax structure on investment: an empirical assessment for OECD countries
Alves, J.

Sovereign Indebtedness and Financial and Fiscal Conditions
Afonso, A., Jalles, J.

Sovereign Ratings and Finance Ministers' Characteristics
Afonso, A., Jalles, J.

The Euro at Twenty: Follies of Youth?
Louçã, F., Cabral, R.

Cross-country Evidence on the Determinants of Inclusive Growth Episodes
Jalles, J., de Mello, Luiz

Wagner and the Fading Voracity Effect: Short vs. Long-Run Effects in a Panel of Developing Countries
Jalles, J.

Do IMF Forecasts respect the Okun’s Law? Evidence for Advanced and Developing Economies
Jalles, J., Laurence Ball, Zidong An, Prakash Loungani

An Assessment of IMF’s Unemployment Forecasts
Jalles, J., Prakash Loungani, Zidong An
Decoupling of Emissions and GDP: Evidence from Aggregate and Provincial Chinese Data
Jalles, J., Ricardo Marto, Prakash Loungani, Gail Cohen, Gewei Wang

Taxes and Economic Activity in Asia: Short versus Long-Run Estimates
Jalles, J.

On the Time-Varying Relationship between Unemployment and Output: What shapes it
Jalles, J.

How do Macroeconomic Fundamentals Affect Sovereign Yields? New Evidence from European Forecasts
Jalles, J.

Fiscal Counter-cyclical and Productive Investment: Evidence from Advanced Economies
Jalles, J., Furceri, D.

Crises and Emissions: New Empirical Evidence from a Large Sample
Jalles, J.

Wagner’s Law and the Functions of Government: Granularity Matters
Jalles, J.

How biased is the behavior of the individual investor in warrants?
Abreu, M.
*Research in International Business and Finance*, 47, 139-149 (2019).

Business Models and Firm Performance
Opromolla, L.

The Economics of the European Deposit Insurance Scheme
Panetti, E.

Individual Satisfaction and Economic Growth in an Agent-Based Economy
Araújo, T., Silvestre, J., St. Aubyn, M.
The Maximum l-Triangle k-Club Problem: complexity, properties, and algorithms
Almeida, Maria T.; Brás, R.

Non-base wage components as a source of wage adaptability to shocks: evidence from European firms, 2010–2013
Martins, F., Babecky, Jan, Fadejeva, L., Lamo, Ana, Marotzke, P., Strzelecki, Pawel

Monetary Aggregates and Macroeconomic Performance: the Portuguese Escudo, 1911-1999
Jalles, J.

The Value of Information: The Impact of European Union Bank Stress Tests on Stock Markets
Borges, R., Mendes, J.M., Pereira, A.

Reframing the S&P 500 network of stocks along the 21st century
Araújo, T., Gobel, M.

Exchange-traded Funds as an Alternative Investment Option: a Case Study
Afonso, A., Cardoso, P.

Optimal Tax Structure for Consumption and Income Inequality: an Empirical Assessment
Afonso, A., Alves, J.

Fiscal Multipliers in the Eurozone: A SVAR Analysis
Afonso, A., Leal, F.

Private Saving Determinants in Portugal
Garcia, M., Nunes, F., Rodrigues, P.

Static versus Dynamic Deferred Acceptance in School Choice: Theory and Experiment
Pais, J., Klijn, F., Vorsatz,M.

On a nonlinear Schrödinger system arising in quadratic media
Oliveira, F., Corcho, A., Correia, S., Silva, J.
*Communications in Mathematical Sciences*, 17(4), 969-987 (2019).
On the product formula and convolution associated with the index Whittaker transform
Guerra, M.; Sousa, R.; Yakubovich, S.

Fiscal Reaction functions Across the World: a Battle of Statistical (In-)Significance
Afonso, A., Jalles, J.
*FinanzArchiv*, 75(3), 207-228 (2019).

Interactions between Monetary and Fiscal Policies
Afonso, A., Alves, J., Balhote, R.

The Fiscal Consequences of Deflation: Evidence from the Golden Age of Globalization
Afonso, A., Jalles, J.

Assessing the Sustainability of External Imbalances in the European Union
Afonso, A., Huart, F., Jalles, J., Stanek, P.

Fiscal Rules and Government Financing Costs
Afonso, A., Jalles, J.

Short and long-term interest rate risk: The Sovereign Balance-Sheet Nexus
Afonso, A., Alves, J.

Decomposing and Analysing the Determinants of Current Accounts’ Cyclicality: Evidence from the Euro Area
Afonso, A., Jalles, J.

Quantitative Easing and sovereign Yield spreads: Euro-Area Time-Varying Evidence
Afonso, A., Jalles, J.

Economic Growth, Public, and Private Investment Returns in 17 OECD Economies
Afonso, A., St. Aubyn, M.

The inversion of the spatial lag operator in binary choice models: Fast computation and a closed formula approximation
Proença, I., Silveira Santos, L.

What to expect when you’re calibrating: Measuring the effect of calibration on the estimation of macroeconomic models
Iskrev, Nikolay

Inflation dynamics and adaptive expectations in an estimated DSGE model
Iskrev, N., Gelain, P., Lansing, Kevin J., Mendicino, C.

Exploring the implications of different loan-to-value macroprudential policy designs
Gomes, S., Basto, R., Lima, D.

On a coupled system of a Ginzburg-Landau equation with a quasilinear conservation law
F. Oliveira, H. Tavares and J. Dias
*Communications in Contemporary Mathematics*, 2019 (2019).

Linearization of Gevrey flows on T<sup>d</sup>T<sup>d</sup> with a Brjuno type arithmetical condition
J. Lopes Dias and J. P. Gaivão

Identifying the long-term care beneficiaries: Differences between risk factors of nursing homes and community-based services admissions
H. Lopes, C. Mateus and N. Rosati

Dynamic Vector Mode Regression
Parente, P.M.D.C., Kemp, G.C.R., Santos Silva, J.M.C.

Analysis of Grade Repetition through Multilevel Models: A study from Portugal
Bastos, A., Ferrão, M.E.

Estimating the long-run metro demand elasticities for Lisbon: A time-varying approach
P. C. Melo, N. Sobreira and P. Goulart

Non-ignorable Attrition in Multi-wave Panel Data with Refreshment Samples
Hoonhout, P., Ridder, G.

Multinomial method for option pricing under Variance Gamma
Cantarutti, N. Guerra, J.

Differential effect of university entrance score on first-year students’ academic performance in Portugal
<table>
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<th>Author(s) &amp; Title</th>
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In 2020, several papers have already been published as well.

**Do Individual Investors Trade Differently in Different Financial Markets?**
Abreu, M., Mendes, V.

Productivity and Organization in Portuguese Firms
Opramolla, L., Caliendo, L., Mion, G., Rossi-Hansberg, E.

The effects of official and unofficial information on tax compliance
Opramolla, L., Garcia, F., Marques, R., Vezzulli, A.

Optimal reinsurance of dependent risks
A. Moura and M. L. Centeno

**Combinatorics of jenga**
A. Carvalho, J. P. Neto and C. P. Santos

**The Profitability in the FTSE 100 Index: a New Markov Chain Approach**
F. I. Riedlinger and J. Nicolau

**The attractor of piecewise expanding maps of the interval**
G. Del Magno, J. Lopes Dias, P. Duarte and J. P. Gaivão
*Stochastics and Dynamics*, 20(2), 2050009 (2020).

**Risk-Neutral Densities: Advanced Methods of Estimating Non-Normal Option's Underlying Asset Prices and Returns**
A. Santos and J. M. E. Guerra

**Ratings matter: announcements in times of crisis and the dynamics of stock markets**
N. Rosati, M. Bellia, P. Verga Matos and V. Oliveira

**Option pricing in exponential Lévy models with transaction costs**
N. Cantarutti, M. Guerra, J. M. E. Guerra and M. R. Grossinho
Do Individual Investors Trade Differently in Different Financial Markets?
Abreu, M., Mendes, V.

Productivity and Organization in Portuguese Firms
Opromolla, L., Caliendo, L., Mion, G., Rossi-Hansberg, E.

The effects of official and unofficial information on tax compliance
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Optimal stopping of one-dimensional diffusions with integral criteria  
M. Guerra, C. Nunes and C. Oliveira  

Optimal investment decision under switching regimes of subsidy support  
C. Oliveira and N. Perkowski  

A note on the spatial approximation of PDEs with unbounded coefficients - The special one-dimensional case  
F. F. Gonçalves, M. R. Grossinho and E. Morais  

Evaluation of volatility models for forecasting Value-at-Risk and Expected Shortfall in the Portuguese stock market
A fragmented-periodogram approach for clustering big data time series
Caiado, J.; Crato, N.; Poncela, P.
Advances in Data Analysis and Classification, 14, 117-146 (2020).

Labour content of International Trade in Intermediates: the case for Portugal
Fontoura, P., Galán, E.

Measuring the Gender Disparities in Unemployment Dynamics during the Recession: Evidence from Portugal
Passinhas J. and Proença, I.

Stock Flow Adjustments: The role of Fiscal Frameworks
Jalles, J., Afonso, A.

Long-run relationship between exports and imports: current account sustainability tests for the EU
Afonso, A., Huart, F., Jalles, J., Stanek, P.

How "Big" Should Government Be?
Afonso, A., Schuknecht, L.

The Macroeconomic Effects of Public Debt: An Empirical Analysis of Mozambique
Afonso, A., Ibraimo, Y.

Pension plan funding and market value of the firm: the Portuguese case
Garcia, M., Domingos, J.

Local Territorial Reform and Regional Spending Efficiency
Afonso, A., Venâncio, A.

European Commission’s Fiscal Forecasts in CEE countries: a Thorough Assessment
Jalles, J.
Decentralized Matching Markets With(out) Frictions: A Laboratory Experiment
Pais, J., Pintér, A., Veszteg, R.

Jalles, J.

The Impact of Financial Crises on the Environment in Developing Countries
Jalles, J.

Emissions and Growth: Trends and Cycles in a Globalized World
Jalles, J., Ricardo Marto, Prakash Loungani, Gail Cohen

Emissions and Economic Growth in Commodity Exporting Countries
Jalles, J., Jun Ge

Fixed Exchange Rates and Fiscal Performance: Can Strong Politics Make a Difference?
Jalles, J., Jose Tavares, Carlos Mulas Granados

On the Performance of US Fiscal Forecasts: Government vs. Private Information
Jalles, J., Prakash Loungani, Zidong An

The Volatility Impact of Social Expenditure’s cyclicality: Evidence from Advanced Economies
Jalles, J.

Tax Capacity and Growth in the Asia-Pacific Region
Jalles, J.

Explaining Africa’s Public Consumption Procyclicality: Revisiting Old Evidence
Jalles, J.

Jalles, J., Prakash Loungani, Davide Furceri
Job Protection Deregulation in Good and Bad Times
Jalles, J., Romain Duval, Davide Furceri

The Global Crisis and Intergovernmental Relations: Centralisation vs. Decentralisation Ten Years On
Jalles, J., de Mello, Luiz

Economic Volatility and Sovereign Yields' Determinants: a Time-Varying Approach
Afonso, A., Jalles, J.

A note on Inflation Dynamics, Price Volatility and Fiscal Activism
Afonso, A., Jalles, J.

The Policy Mix in the US and EMU: Evidence from a SVAR Analysis
Afonso, A., Gonçalves, L.

Stock flow adjustments in sovereign debt dynamics: The role of fiscal frameworks
Afonso, A., Jalles, J.T.

Emissions and economic development in commodity exporting countries
Jalles, J.T., Ge, J.

Asymptotic Poincaré maps along the edges of polytopes
Hassan Najafi Alishah, Pedro Duarte, Telmo Peixe
b) Working papers


REM WPs are indexed in IDEAS/EconPapers: [https://ideas.repec.org/s/ise/remwps.html](https://ideas.repec.org/s/ise/remwps.html)

### Access Statistics for Working Paper Series

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There are currently 121 items in this series, of which 121 are downloadable.

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4. Conferences, seminars and workshops


Seminars


URL: http://cemapre.iseg.ulisboa.pt/seminars/cemapre/poster.php?id=544

URL: http://cemapre.iseg.ulisboa.pt/seminars/cemapre/poster.php?id=547


URL: http://cemapre.iseg.ulisboa.pt/seminars/cemapre/poster.php?id=551

URL: http://cemapre.iseg.ulisboa.pt/seminars/cemapre/poster.php?id=545

**Workshops**

URL: https://6th.iwsea.pt/

5. **Ph.D. programs**

REM currently hosts together with ISEG several Doctoral programs, notably: Economics; Applied Mathematics for Economics and Management; and Development Studies.

The Coordination of these three programs is done by REM members while the teaching of the first two programmes is also mainly done by REM members. In addition, REM is also linked to the Ph.D. in Management and to the Ph.D. in Economic and Social History as one of the host institutions.

All the Ph.D. courses have been accredited again in 2015, for six years by the Portuguese national agency A3ES (“Agência de Avaliação e Acreditação do Ensino Superior”, Agency for Assessment and Accreditation of Higher Education - A3ES).

**Ph.D. in Economics**

The Ph.D. in Economics is designed for those who are looking for an advanced education and wish to carry out research in Economics, Macro or Micro related, in preparation for a highly
qualified role in the public or private sector, university teaching and research, the leadership and management of national and international organizations, consulting, training, and research projects and studies. It is a research-focused plan that prepares for a profession that demands a high level of technical and scientific qualification, enabling graduates notably to pursue an international career.

Ph.D. in Applied Mathematics for Economics and Management

The Ph.D. in Applied Mathematics for Economics and Management is designed to meet the needs of those who wish to enhance their proficiency of mathematical methods and techniques in order to make original contributions in the fields within the scope of knowledge of this Ph.D. Programme or to develop and implement solutions for problems in the areas of Economics and Management. It targets both those who want to pursue an academic career and professionals who want to develop the skills to devise and implement innovative quantitative approaches for real-world problems.

Ph.D. in Development Studies

The Ph.D. in Development Studies is a research-focused program in the interdisciplinary area of the process of economic, social and political changes in modern societies. This program, originally hosted by ISEG, became a joint venture of ISEG, ICS (Institute of Social Sciences), IGOT (Institute of Geographic and Spatial Planning) and ISA (School of Agriculture) of Universidade de Lisboa.

6. Recent funded research projects

FCT research projects in REM

UECE as Principal Organization

- **PTDC/IIM-ECO/4546/2014 - Theory and Experiments in Matching Markets**
  Mar 15, 2016 - Set 14, 2019, Principal Researcher Joana Pais. Funding €57.210,00
  Joana Pais (ISEG/UECE), Filomena Garcia (ISEG/UECE), Flip Klijn (IAE-CSIC), László Kóczy (Budapest University of Technology and Economics), Marc Vorsatz (UNED), Peter Biró, Sofia Franco (NOVA SBE and UECE)

  Apr 11, 2016 - Out 10, 2019, Principal Researcher Luca Opromolla. Funding €65.928,00
  Luca Opromolla (UECE and BdP), Alfonso Irarrazabal (BI Norwegian Business School), Elena Mattana(Aarhus University), Ettore Panetti(UECE and BdP), Filomena Garcia(ISEG/UECE), Luca Deidda (Università degli Studi di Sassari)

- **PTDC/EGE-ECO/28814/2017 - Markups, Fluctuations, and Financial Frictions**
  Oct 1, 2018 - Sep 30, 2021, Principal Researcher Luís Costa. Funding €239,543,00
  Luís Costa (UECE) - PI, Paulo Brito (UECE) - Co-PI, Carlos Santos (Nova SBE), Cláudia Custódio (Imperial College B.S.), Huw Dixon (Cardiff B.S.)

- **PTDC/EGE-ECO/28805/2017 - Transport Infrastructure and Urban Spatial Structure: Economic, Social and Environmental Effects**
ANNUAL RESEARCH ACTIVITY REPORT 2019
APRIL 2020

Oct 1, 2018 - Sep 30, 2021, Principal Researcher Patrícia Melo. Funding €229.539.27
Patrícia Melo (UECE) - PI, João de Abreu e Silva (IST-ID) - Co-PI, Sofia Franco (UECE and NOVA SBE), Marcos Correia (IST-ID)

- **PTDC/EGE-IND/31081/2017 - Firms, competition and social welfare in a global economy**
  Oct 1, 2018 - Sep 30, 2021, Principal Researcher Filomena Garcia. Funding €239.990,02
  Filomena Garcia (UECE) - PI, Gustavo Torrens (Indiana University) - Co-PI, Jose Manuel Paz y Mino (Indiana University), Cecilia Vergari (Università di Bologna), Joana Resende (FEUP), Muxin Li (Indiana University)

  Manuel Mira Godinho (UECE) - PI, Sandro Mendonça (ISCTE-IUL and UECE) - Co-PI, Rui Cartaxo (ISEG), Vítor Ferreira, Hugo Confraria(UNU-MERIT), Pedro Lages, Kelyane da Silva

UECE as Participating Organization

- **PTDC/ATP-DEM/0441/2014 - Portugal: Regional Integration of Demography and Economy**
  Jul 1, 2016 - Mar 31, 2020. Principal Researcher Eduardo Castro (Universidade de Aveiro). Funding €58.038,00
  Eduardo Anselmo Moreira Fernandes Castro (Universidade de Aveiro), Alina Isabel Pereira Esteves, Anabela Botelho Veloso, Arnab Bhattacharjee, Diogo Abreu, Gonçalo Alves de Sousa Santinha, João Carlos Lopes (UECE), Joao Marques, João Ferreira do Amaral (UECE), José Manuel Gaspar Martins, Maria Cristina do Nascimento Rodrigues, Madeira de Almeida de Sousa Gomes, Maria Lucinda Cruz dos Santos Fonseca, Marta Sofia Magalhães Marques, Pedro G Carvalho, Vítor Escária (UECE), José Carlos Coelho (UECE - BI)

- **Project N° 029365 Welfare Intervention by the State and Economic Resilience in Portugal**
  15 Out 2018 – 14 Out 2021. Principal Researcher Marta Simões. Funding €8762,50
  Marta Simões (Universidade de Coimbra) - PI, Co-PI - Adelaide Duarte (Universidade de Coimbra); João de Sousa Andrade (Universidade de Coimbra); Silvia Sousa (Universidade do Minho); Maria Teresa Garcia (UECE)

CEMAPRE as Participating Organization

- **PTDC/MAT-PUR/29126/2017 – ExLy: New trends in Lyapunov exponents**
  Sep 1, 2018 - Aug 31, 2021. Principal Researcher Pedro Miguel Nunes da Rosa Dias Duarte (FCiências ID). Funding €231.546,68
  Pedro Miguel Duarte (FCiências ID) – PI, Co-PI - João Lopes Dias (CEMAPRE-ISEG/ULISBOA), Universidade da Beira Interior (UBI), Universidade do Minho (UM).

- **POCI-01-0145-FEDER-028234 – VOLANTIS: Advances in Nonlinear Time Series Econometric Modelling and Applications**
7. REM Award

REM – Research in Economics and Mathematics, launched in 2019 the REM Young Researcher Award, with a monetary value of 1000 EUR. The prize awards the best Master thesis defended at ISEG, in the period October 2018 – December 2019, and whose supervisor is a member of REM in one ISEG Master courses. A jury set up for the purpose will make the selection. The members of the jury are a member of REM, who will preside, and two other researchers from other Universities.

2019 Award recipients
8. Staff

Research members

Executive board

**António Afonso**, Principal Researcher, President of REM, and President of UECE

**Isabel Proença**, Board member of REM, and President of CEMAPRE

**Joana Pais**, Board member of REM and UECE

Members

**Agnieszka Bergel**
Doutoramento em Matemática Aplicada à Economia e Gestão, Universidade de Lisboa, Portugal (2013)
*Actuarial science, statistics, risk theory, financial mathematics*

**Alda Carvalho**
Doutoramento em Matemática Aplicada à Economia e Gestão, Universidade Técnica de Lisboa, Portugal (2010)
*Time series*

**Alexandra Moura**
Dottore di Ricerca in Mathematical Engineering, Politecnico di Milano, Italy (2007)
*Applied Mathematics, Mathematical Engineering, Numerical Analysis, Statistics and Actuarial Sciences*

**Alfredo D Egídio dos Reis**
Ph.D. in Actuarial Mathematics and Statistics, Heriot-Watt University, UK (1994)
*Actuarial science, risk theory, credibility theory, ruin theory*

**Álvaro Novo**
Ph.D. in Economics, University of Illinois at Urbana-Champaign, USA (2001)
*Labor economics*

**Álvaro Manuel Pina**
Ph.D. in Economics, European University Institute, Italy (2001)
*Fiscal policy in the European Monetary Union, Fiscal rules and institutions, Monetary integration and business cycles, macroeconomic modelling*
Amélia Bastos  
Doutoramento em Economia, Universidade Técnica de Lisboa, Portugal (1999)  
Social economics, poverty and social exclusion, child poverty

António Afonso  
Doutoramento em Economia, Universidade Técnica de Lisboa, Portugal (2002)  
Applied Economics, Public Finances, Financial Economics, Fiscal Policy

Bruno T. da Rocha  
PhD in Economics, University of Essex (2013)  
Transport infrastructure and economic geography, systemic banking crises, quantitative economic history, comparative economics

Cândida Ferreira  
Doutoramento em Economia, Universidade Técnica de Lisboa, Portugal (1996)  
Monetary and Financial Economics, Financial Markets and the Macroeconomy, Financial Integration

Carlos Farinha Rodrigues  
Doutoramento em Economia, Universidade Técnica de Lisboa, Portugal (2005)  
Distribuição do Rendimento, Desigualdade e Pobreza; Política Social, Avaliação de Políticas Públicas, Redistribuição do Rendimento, Microsimulação de Políticas Sociais e Fiscais.

Carlos Oliveira  
Doutoramento em Estatística e Processos Estocásticos, Instituto Superior Técnico, Portugal (2018)  
Real Options Valuation, Optimal Stopping, Stochastic Optimal Control, Statistics and Actuarial Sciences

Caterina Mendicino  
Ph.D. in Economics, Stockholm School of Economics, Sweden (2006)  
Macro-Financial Linkages, Monetary and Macro-Prudential Policy, General equilibrium models of banks and of the credit channel transmission mechanism

Esmeralda A Ramalho  
Ph.D. in Economics, University of Bristol, UK (2002)  
Microeconometrics
Eugenio Rodriguez Martinez  
Doutoramento em Matemática Aplicada à Economia e Gestão, Universidade de Lisboa, Portugal (2017)  
*Actuarial sciences*

Ettore Panetti  
Ph.D. in Economics, IIES-Stockholm University, Sweden (2013)  
*Macroeconomics, Banking, Financial stability, Economic growth*

Fernando F Gonçalves  
Ph.D. in Mathematics and Statistics, University of Edinburgh, UK (2007)  
*Financial mathematics and applied econometrics*

Fernando Martins  
Doutoramento em Economia, Universidade de Lisboa, Portugal (2015)  
*Microeconomics*

Filipe Oliveira  
Docteur en Mathématiques, Université Paris XI, France (2001)  
*Partial Differential Equations*

Filomena Garcia  
Docteur en Sciences Économiques, Université Catholique de Louvain, Belgium (2006)  
*Industrial Organization, Game Theory, Matching, Networks, Banking, Economics of Education*

Francisco Louçã  
Doutoramento em Economia, Universidade Técnica de Lisboa, Portugal (1996)  
*Macroeconomic dynamics, Complexity, Evolutionary economics, History of economic thought*

Francisco Nunes  
Doutoramento em Economia, Universidade Técnica de Lisboa, Portugal (2005)  
*Pobreza e Exclusão Social, Sistemas de Segurança Social, Solidariedade e Acção Social, Protecção Social, Rendimento Mínimo Garantido*
Gianluigi Del Magno  
PhD in Mathematics, Georgia Institute of Technology, USA (2002)  
*Dynamical systems, hyperbolic billiards, random systems and filtering*

Graça Leão Fernandes  
Doutoramento em Economia, Universidade Técnica de Lisboa, Portugal (1992)  
*Labour market*

Isabel Proença  
Docteur en Sciences Économiques, Université Catholique de Louvain, Belgium (1995)  
*Nonlinear Models with unobserved heterogeneity, Empirical Applications, Semiparametric Methods, Spatial Econometrics*

Joana Pais  
Doctor en Economia, Universitat Autonoma de Barcelona, Spain (2005)  
*Game theory, Matching theory, Auction theory*

João Andrade e Silva  
Doutoramento em Economia, Universidade Técnica de Lisboa, Portugal (1991)  
*Actuarial science*

João Dias  
Doutoramento em Economia, Universidade Técnica de Lisboa, Portugal (1993)  
*Statistics, econometrics*

João Ferreira do Amaral  
Doutoramento em Economia, Universidade Técnica de Lisboa, Portugal (1984)  
*Macroeconomics, Leontief theory, input/output, Information*

João Janela  
Doutoramento em Matemática, Universidade Técnica de Lisboa, Portugal (2008)  
*Numerical analysis*
João Carlos Lopes  
Doutoramento em Economia, Universidade Técnica de Lisboa, Portugal (1996)  
*Input-Output Analysis and Portuguese Economy*

João Lopes Dias  
Ph.D. in Mathematics, University of Cambridge, UK (2002)  
*Dynamical systems, renormalisation, generic conservative dynamics*

João Nicolau  
Doutoramento em Matemática Aplicada à Economia e Gestão, Universidade Técnica de Lisboa, Portugal (2001)  
*Estimation of stochastic differential equations, volatility of financial time series, non-linear time series*

João M E Guerra  
Doctor en Matemàtiques, Universitat de Barcelona, Spain (2009)  
*Stochastic Analysis and Mathematical Finance*

João Tovar Jalles  
Ph.D. in Economics (2011), University of Cambridge  
*Macroeconomics, applied econometrics, public finance, structural reforms, forecasting, energy economics*

Jorge Caiado  
Doutoramento em Matemática Aplicada à Economia e Gestão, Universidade Técnica de Lisboa, Portugal (2006)  
*Time series, forecasting methods, applied econometrics*

Jorge Santos  
Ph.D. in Economics, University of Kent, UK (1984)  
*Macroeconomics*

José Alves  
PhD in Economics, Lisbon School of Economics and Management - University of Lisbon, Portugal (2019)  
*Macroeconomics, Public Finances, Fiscal Policy*
José Passos
Ph.D. in Economics, University of Bristol, UK (1997)
Microeconometrics, data analysis

José Pedro Gaivão
Ph.D. in Mathematics, University of Warwick, UK (2010)
Dynamical systems, Hamiltonian dynamics

José Pedro Pontes
Doutoramento em Economia, Universidade Técnica de Lisboa, Portugal (1987)
Regional and Urban Economics, International Economics, Industrial Organization, Non-cooperative Game Theory

Leonor S Pinto
Operational research, combinatorial optimization

Luca David Opromolla
Ph.D. in Economics, New York University, USA (2006)
International Trade, Industrial Organization, Labor Economics

Luis Catão
Ph.D. in Economics, University of Cambridge, UK (1992)
International finance and open economy macroeconomics

Luís Costa
Ph.D. in Economics, University of York, UK (2001)
Dynamic general-equilibrium models, Fiscal policy, Business cycles, Industrial organisation-macroeconomics interactions, Open-economy macroeconomics

Manuel Guerra
Doutoramento em Matemática, Universidade de Aveiro, Portugal (2001)
Control theory

Manuel M. Godinho
Ph.D. in Science and Technology Policy, University of Sussex, UK (1995)
research interests
Margarida Abreu
Docteur en Sciences Economiques, Universite Paris-Nanterre, France (1997)
*Behavioral Finance, Financial Economics, Financial Markets, Investors Behavior, Monetary Integration, European Monetary Union*

Maria de Fátima Fabião Ribeiro
Doutoramento em Matemática Aplicada à Economia e Gestão, Universidade Técnica de Lisboa, Portugal (2005)
*Financial mathematics, delay differential equations*

Maria de Lourdes Centeno
Ph.D. in Actuarial Science, Heriot-Watt University, UK (1985)
*Reinsurance, credibility theory, bonus systems, loss reserving, ruin theory*

Maria do Rosário Grossinho
Doutoramento em Matemática, Universidade de Lisboa, Portugal (1988)
*Differential equations and financial mathematics*

Maria Eugénia Ferrão
Doutoramento em Teoria de Controle e Estatística, Pontifícia Universidade Católica do Rio de Janeiro, Brazil (1999)
*Social Statistics*

Mário Centeno
Ph.D. in Economics, Harvard University, USA (2000)
*Microeconomics*

Miguel St. Aubyn
Ph.D. in Economics, University of London, UK (1995)
*Applied Macroeconomics, Budgetary Policy, Economic Growth, Efficiency Measurement*

Nicoletta Rosati
Dottore di Ricerca in Statistica Applicata, Università degli Studi di Padova, Italy (2001)
*Econometrics of panels and pseudo-panels, non-linear microeconometric models, health and medical statistics.*
Nikolay Iskrev
Ph.D. in Economics, University of Michigan, USA (2008)
*Econometrics, macroeconomics, monetary policy*

Nuno Crato
Ph.D. in Applied Mathematics, University of Delaware, USA (1992)
*Time series, stochastic processes*

Nuno Sobreira
Doutoramento em Economia, Nova School of Business and Economics, Portugal (2012)
*Structural breaks, economic forecasting, realized and stochastic volatility, unit roots, cointegration, long memory*

Onofre Simões
Doutoramento em Organização e Gestão de Empresas, Universidade Técnica de Lisboa, Portugal (1997)
*Actuarial science, financial mathematics*

Patricia Melo
Ph.D. in Economics, Imperial College London, UK (2010)
*Economic geography*

Paula Fontoura
Doutoramento em Economia, Universidade Técnica de Lisboa, Portugal (1990)
*International Trade, Economic Geography, Foreign Direct Investment*

Paulo Bastos
PhD in Economics, University of Nottingham, United Kingdom (2007)
*International Economics, Development Economics, Labor Economics, Industrial Organization, Applied Microeconomics*

Paulo Brito
Doutoramento em Economia, Universidade Técnica de Lisboa, Portugal (1995)
*Macroeconomics*
Paulo Parente  
Ph.D. in Economics, University of Warwick, UK (2007)  
Econometric theory

Paulo Trigo Pereira  
Ph.D. in Economics, University of Leicester, UK (1994)  
Acção colectiva, Economia das instituições, Economia experimental, Finanças locais, Escolha pública

Pedro Leão  
Doutoramento em Economia, Universidade Técnica de Lisboa, Portugal (1998)  
Macroeconomics, International Economics

Pierre Hoonhout  
Ph.D. in Economics, University College London, UK (2011)  
Econometrics

Raúl Brás  
Doutoramento em Matemática Aplicada à Economia e à Gestão, Universidade Técnica de Lisboa, Portugal (2013)  
Combinatorial optimization, computer science

Raquel M Gaspar  
Ph.D. in Finance, Stockholm School of Economics, Sweden (2006)  
Mathematical finance, Term Structure Models, Interest rate & Credit Risk Models, Convexity Adjustments, Structured Products

Rosa Borges  
Doutoramento em Economia, Universidade Técnica de Lisboa, Portugal (2001)  

Rui Paulo  
Bayesian Inference, statistical analysis of computer models, Bayesian computation

Sandra Gomes  
Doutoramento em Economia (2014), ISEG  
Research interests: International Economics, Monetary Economics, DSGE modelling, Bayesian estimation
Sandra Maximiano
Ph.D. in Economics, University of Amsterdam, The Netherlands (2007)
Behavioral Economics, Experimental Economics, Public Economics, Economics of
Gender, Organizational and Personal Economics, Economics of Piracy

Sofia Franco
Ph.D. in Environmental Science and Management, University of California in
Santa Barbara, USA (2007)
Urban Economics, Land Use, Spatial and Dynamic Modelling, Transportation

Sudipto Karmakar
Ph.D. in Economics, Boston University, USA (2013)
Macroeconomics, Macroprudential regulation and Real-financial Sector Linkages

Susana Santos
Doutoramento em Economia, Universidade Técnica de Lisboa, Portugal (1999)
Social and National Accounting, SAM-based Macro-modelling, Sustainable
Development

Tanya Araujo
Doutoramento em Matemática Aplicada, Universidade Técnica de Lisboa,
Portugal (1995)
Computational Economics and Finance, Agent-based Modeling, Network structure and
dynamics

Telmo Peixe
Doutoramento em Matemática, Universidade de Lisboa, Portugal (2015)
Hamiltonian Dynamics, Game Theory, Lotka-Volterra Systems, Replicator Equation

Teresa Garcia
Doutoramento em Economia, Universidade Técnica de Lisboa, Portugal (2001)
Pension economics and finance, applied economics, microeconomics and financial
economics

Management Support

Sandra Araújo
Andreyna Caires