APPLIED MATHEMATICS FOR ECONOMICS AND MANAGEMENT

Scientific Board

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Teresa Chaves de Almeida (Coordinator)
Full Professor

João Lopes Dias
Associate Professor

Rui Paulo
Assistant Professor

This programme prepares students to carry out research work worthy of publication in scientific journals with a peer-review system. It aims to develop the skills needed to devise and implement new mathematical methods that could be used to tackle problems in the areas of Economics and Management.

TARGET

The PhD Programme in MAEG (Applied Mathematics for Economics and Management) is designed to meet the needs of those who wish to enhance their knowledge of mathematical methods and techniques in order to make original contributions in a particular field or to develop and implement solutions for problems in the areas of Economics and Management.

STRUCTURE OF THE PROGRAM

The PhD Programme spans over a total of three years. The first year is devoted to coursework, and includes the preparation, presentation and defense before an evaluation committee of the student's thesis research project. Please note that if there are any non-Portuguese speakers registered in a course, the lectures will be taught in English.

The following two years are dedicated to research, leading to the design, writing and defense of an original dissertation in an area of Applied Mathematics for Economics or Management.

STUDY TOPICS

The research topics are the following:

> Actuarial Science;
> Dynamical Systems;
> Financial Econometrics;
> Financial Mathematics;
> Macro and Micro-econometrics;
> Mathematical Analysis;
> Operational Research;
> Statistics;
> Time Series.

ENTRY CONDITIONS AND SELECTION CRITERIA

The entry requirements are an MSc or BSc degree (with a curriculum of four years or more) in Mathematics, Statistics, Economics, Finance, Management, Physics or Engineering. The degree curriculum and the marks obtained must provide evidence that the applicant has a strong background in Mathematics.

Applicants who have not yet completed the degree may be accepted conditionally if they expect to do so before the beginning of the Program.

Applicants who do not hold any of the degrees listed above may also be accepted, provided that the CV is deemed suitable for the Program.

Agnieszka Izabella Bergel

PhD in Applied Mathematics for Economics and Management, 2013
Assistant Professor at ISEG

It has been a great opportunity for me to study for my PhD at ISEG. I have been able to expand my knowledge beyond my previous background. Working as a researcher in the Department of Mathematics is interesting and challenging and allows me to interact with colleagues from all over the world. To add, Lisbon is actually a really nice place to live in.

FACULTY AND SUBJECT AREAS

ALEXANDRA MOURA
PhD Politecnico di Milano, Italy
Numerical Analysis, Statistics, and Actuarial Sciences

ALFREDO EGÍDIO DOS REIS
PhD Heriot-Watt University, Edinburgh, UK
Actuarial Science

AMÉLIA BASTOS
PhD ISEG, Universidade Técnica de Lisboa
Economics and Statistics

ANA MARGARIDA NETO
PhD Faculdade de Ciências, Universidade de Lisboa
Mathematics – Algebra

ARTUR DA SILVA LOPES
PhD ISEG, Universidade Técnica de Lisboa
Macroeconometrics

CARLOS SILVA RIBEIRO
PhD Université Paris X, France
Economics and Econometrics

FERNANDO GONÇALVES
PhD University of Edinburgh, UK
Mathematical Finance and Numerical Analysis

FILIPA DUARTE DE CARVALHO
PhD ISEG, Universidade Técnica de Lisboa
Operational Research

GRAÇA LEÃO FERNANDES
PhD ISEG, Universidade Técnica de Lisboa
Economics of Education

ISABEL PROENÇA
PhD Université Catholique de Louvain, Belgium
Applied Micro-econometrics and Panel Data

JOÃO ANDRADE E SILVA
PhD ISEG, Universidade Técnica de Lisboa
Actuarial Science

JOÃO DIAS
PhD ISEG, Universidade Técnica de Lisboa
Econophysics, Statistics, and International Economics

JOÃO GUERRA
PhD Universidad de Barcelona, Spain
Stochastic Analysis and Mathematical Finance

JOÃO JANELA
PhD IST, Universidade Técnica de Lisboa
Numerical Analysis

JOÃO LOPES DIAS
PhD Cambridge University, UK
Dynamical Systems

JOÃO NICOLAU
PhD ISEG, Universidade Técnica de Lisboa
Financial Econometrics

JORGE CAIADO
PhD ISEG, Universidade Técnica de Lisboa
Econometrics and Forecasting

JOSÉ PASSOS
PhD University of Bristol, UK
Micro-econometrics

JOSÉ PEDRO GAIVÃO
PhD University of Warwick, UK
Dinamical Systems

LEONOR SANTIAGO PINTO
PhD ISEG, Universidade Técnica de Lisboa
Operational Research

LÍGIA AMADO
PhD ISEG, Universidade Técnica de Lisboa
Operational Research

MANUEL CASTRO GUERRA
PhD Universidade de Aveiro
Optimisation and Control Theory

MARGARIDA MOZ
PhD ISEG, Universidade Técnica de Lisboa
Operational Research

MARGARIDA VAZ PATO
PhD Faculdade de Ciências, Universidade de Lisboa
Operational Research

MARIA CÂNDIDA MOURÃO
PhD ISEG, Universidade Técnica de Lisboa
Operational Research

MARIA DE FÁTIMA FABIÃO
PhD ISEG, Universidade Técnica de Lisboa
Mathematical Finance and Differential Equations

MARIA DE LOURDES CENTENO
PhD Heriot-Watt University, UK
Actuarial Sciences

MARIA DO ROSÁRIO GROSSINHO
PhD Faculdade de Ciências, Universidade de Lisboa
Mathematical Finance and Differential Equations

MARIA TERESA ALMEIDA
PhD LSE, University of London, UK
Operational Research

NICOLETTA ROSATI
PhD Università di Padova, Italy
Econometrics and Panel Data

NUNO CRATO
PhD University of Delaware, USA
Econometrics and Time Series

NUNO SOBREIRA
PhD Universidade Nova de Lisboa
Econometrics and Time Series

ONOFRE SIMÕES
PhD ISEG, Universidade Técnica de Lisboa
Actuarial Sciences

PIERRE HOONHOUT
PhD University College London, UK
Econometrics and Panel Data

RAÚL BRAS
PhD ISEG, Universidade Técnica de Lisboa
Operational Research

RUI PAULO
PhD Duke University, USA
Statistics

TELMO PEIXE
PhD Faculdade de Ciências, Universidade de Lisboa
Dynamical Systems

DETAILS AND STUDY PLAN

SCHEDULE:
EVENING LECTURES

PARTICIPATING CENTRES:
APPLIED MATHEMATICS (CEMAPRE), ECONOMICS (UECE).

START DATE:
SEPTEMBER

TUITION FEES:
€3,000€ - 1ST YEAR; €2,000 – 2ND - 3RD YEARS; €1,000 - 4th - 6th YEARS

YEAR 1	COURSE UNITS	PROFESSOR	CREDITS	SEMESTER
	ADVANCED TOPICS OF ECONOMETRICS*	JOSÉ PASSOS	10.0	1
	ADVANCED TOPICS OF STATISTICS*	RUI PAULO	10.0	1
	ANALYSIS AND OPTIMISATION*	MANUEL CASTRO GUERRA	10.0	1
	COMPUTATIONAL MATHEMATICS*	JOÃO JANELA	10.0	1
	ELECTIVE	-	6.0	1
	SEMINAR I	JOÃO LOPES DIAS	4.0	1
	ELECTIVE	-	6.0	2
	PREPARATION OF THE THESIS PROJECT	RUI PAULO	24.0	2

YEAR 2	COURSE UNITS		CREDITS	SEMESTER
	THESIS	-	60.0	-

YEAR 3	COURSE UNITS		CREDITS	SEMESTER
	THESIS	-	60.0	-

ELECTIVES	COURSE UNITS	PROFESSOR
	ADVANCED RISK THEORY	ALFREDO EGÍDIO DOS REIS
	FINANCIAL ECONOMETRICS	JOÃO NICOLAU
	MACROECONOMETRICS	ARTUR DA SILVA LOPES
	MATHEMATICAL METHODS FOR FINANCE	JOÃO GUERRA
	OPERATIONAL RESEARCH	TERESA CHAVES DE ALMEIDA
	PANEL DATA	ISABEL PROENÇA
	TIME SERIES ANALYSIS AND FORECASTING	JORGE CAIADO

*The Scientific Board of the PhD chooses two out of the four course units for each student.