Antonios Meimaris

Ph.D. Candidate & Teaching Associate - Monash University
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Personal Details

Citizenship: Greek

Languages: English, Greek, Russian

Short Term Academic Appointments

CE Lecturer - University of Liverpool, Liverpool, UK November, 2017

Lecture Topic: *History of Probability & Randomness*

Visiting Scholar - Columbia University, New York, USA May - June, 2017

Visiting Scholar - Columbia University, New York, USA November - December, 2016

Collaborations

Stochastic Engineering Dynamics Lab, Columbia University 2015 - present

Education

Monash University, Melbourne, Australia

Doctor of Philosophy, Econometrics & Business Statistics, *Expected award date:* 2019
Fully funded by Monash University (Fees and Stipend)

- Thesis: *Closed form path integral based approximate solutions of stochastic differential equations*
- Advisors: Athanasios A. Pantelous, Ph.D (Monash University, Australia),
  Dan Zhu, Ph.D (Monash University, Australia) and
  Ioannis A. Kougioumtzoglou, Ph.D (Columbia University, USA)

University of Liverpool, Liverpool, United Kingdom

Doctor of Philosophy, Mathematics, *Started:* October 2016, *Cont. at Monash Univeristy*
Fully funded by EPRSC Doctoral Training Grant (Fees and Stipend)

- Thesis Topic: *Path integral techniques to stochastic modelling and options pricing*
- Advisors: Athanasios A. Pantelous, Ph.D (University of Liverpool, UK) and
  Ioannis A. Kougioumtzoglou, Ph.D (Columbia University, USA)

Master by Research, Decision Making Under Risk & Uncertainty, 2016
Fully funded by EPRSC Doctoral Training Grant (Fees and Stipend)

- *Awarded with distinction*
- Topic: *Some observations on the approximations of the Wiener path integral technique*
- Advisors: Athanasios A. Pantelous, Ph.D (University of Liverpool, UK) and
  Ioannis A. Kougioumtzoglou, Ph.D (Columbia University, USA)

University of Athens, Athens, Greece

Diploma, Mathematics, 2015

- *Four-year program*
- Directions: Pure & Applied Mathematics
- Specializations: Computational Mathematics
  Statistics and Operations Research

Publications

Published

- Konstantinos Liaskos, Athanasios Pantelous, Ioannis Kougioumtzoglou and **Antonios Meimaris**, "Implicit analytic solutions for the linear stochastic partial differential beam equation with fractional derivative terms", Systems & Control Letters 121, (2018): 38-49.
- **Antonios Meimaris**, Ioannis Kougioumtzoglou and Athanasios Pantelous, "Approximate analytical solutions for a class of nonlinear stochastic differential equations", European Journal of Applied Mathematics, (2018): 1-17.
- **Antonios Meimaris**, Ioannis Kougioumtzoglou and Athanasios Pantelous, "A closed form approximation and error quantification for the response transition probability density function of a class of stochastic differential equations", Probabilistic Engineering Mechanics 54 (2018): 87-94.
- **Antonios Meimaris**, Ioannis Kougioumtzoglou and Athanasios Pantelous, "Some observations on the approximations of the Wiener path integral technique", Meccanica dei Materiali e delle Strutture Vol. VI, no.1, (2016): 195-202.

Submitted

- **Antonios Meimaris**, Ioannis Kougioumtzoglou and Athanasios Pantelous, "Approximate transition probability density functions for a class of coupled nonlinear stochastic differential equations", 8^{th} CSM conference proceedings, (2018), Under Review.
- **Antonios Meimaris**, Ioannis Kougioumtzoglou and Athanasios Pantelous, "Closed-form approximate solutions for a class of coupled nonlinear stochastic differential equations", Applied Mathematics and Computation, (2018), Under Review.

In preparation

- **Antonios Meimaris**, Vasileios Kontosakos, Athanasios Pantelous and Ioannis Kougioumtzoglou, "Analytical closed-form approximations for continuous time interest rate dynamics", (2019).
- **Antonios Meimaris**, Ioannis Kougioumtzoglou, Athanasios Pantelous and Antonina Pirrotta, "Closed-form approximate analytical solutions for time-homogeneous nonlinear stochastic differential equations", (2019).

Preprints

Antonios Meimaris, "On the additive persistence of a number in base p", (2015).

Awards

Teaching Excellence Award, February 2019

from the Director of Education, Associate Professor Vasilis Sarafidis, including monetary prize, for my teaching at Monash University.

Teaching Award, December 2018

from the Head of Department, Professor Heather Anderson, including monetary prize, for my teaching at Monash University during the academic year 2018.

Monash Graduate Scholarship (MGS), Autumn 2017

Postgraduate Research Studentship (2018-2021).

Monash International Tuition Scholarship (MITS), Autumn 2017

Postgraduate International Tuition Studentship (2018-2021).

EPSRC Centre for Doctoral Training (CDT): Award, Summer 2017

including monetary prize, for a proposed solution to a statistical problem (estimators of unknown quantities and uncertainty quantification).

EPSRC Centre for Doctoral Training (CDT): Studentship, Summer 2015
Postgraduate Research Studentship (2015-2019).

Informatics Commendation Award of Athens College, Summer 2011
for excellence in information technology.

Commendation, on a national level, Summer 2011
for participating in the third and final stage of the 23rd Panhellenic Informatics Competition.

Commendation, on a national level, Summer 2010
for participating in the third and final stage of the 22rd Panhellenic Informatics Competition.

Commendation, on an international level, Winter 2009
for participating in the XVII International Space Olympics (ISO), Korolev City Moscow, Russia.

Professional Development

I have presented in the following events:

Monash Business School Doctoral Colloquium November 2018
State Library Victoria, Melbourne, Australia
"Approximate analytical solutions for a class of nonlinear stochastic differential equations"

8^{th} *International Conference On Computational Stochastic Mechanics (CSM 8)* June 2018
Paros, Greece
"Approximate transition probability density functions for a class of coupled nonlinear stochastic differential equations"

2018 EMI Conference June 2018
Massachusetts Institute of Technology (MIT), Boston, MA, USA
"Approximate transition probability density functions for a class of nonlinear stochastic differential equations"

2017 EMI Conference June 2017
San Diego, CA, USA
"Assessing the accuracy of the Wiener Path Integral technique for a class of stochastic differential equations"

2016 EMI International Conference October 2016
University of Lorraine (Université de Lorraine), Metz, France
"Some observations on the approximations of the Wiener path integral technique"
*Here I was a keynote speaker

Annual Showcase Conference September 2016
Rhodes, Greece; organised by University of Liverpool, Liverpool, United Kingdom
"Some observations on the approximations of the Wiener path integral technique"
*Here I also presented a poster "Path integral techniques: Applications to financial modelling and options pricing"

2nd Symposium on Quantitative Finance and Risk Analysis (QFRA 2016) June 2016
University of Liverpool, Liverpool, United Kingdom
"Some observations on the approximations of the Wiener path integral technique"

I have attended the following events:

CDT Easter School 2017
University of Liverpool, Liverpool, United Kingdom April 2017

NATCOR: Forecasting and Predictive Analytics
Lancaster University, Lancaster, United Kingdom — September 2016

3rd BCN(Barcelona) Summer School on Stochastic Analysis
Centre de Recerca Matemàtica, Bellaterra, Barcelona, Spain — June-July 2016

NATCOR: Convex Optimization
University of Edinburgh, Edinburgh, United Kingdom — June 2016

MIGSAA graduate course on stochastic pathwise integration and stochastic particle systems
University of Edinburgh, Edinburgh, United Kingdom — April 2016

CDT Easter School 2016
University of Liverpool, Liverpool, United Kingdom — April 2016

13th International Probabilistic Workshop (IPW2015)
University of Liverpool, Liverpool, United Kingdom — November 2015

9th Panhellenic Logic Symposium
National Technical University of Athens, Athens, Greece — June 2013

Teaching Experience

Currently, I am a teaching associate for the postgraduate unit ETC4130, a course with advanced stochastic calculus elements, and ETC3430 & ETC3530, two applied probability & statistics undergraduate units at Monash University.

In addition, I was a teaching and marking assistant for MATH367, an advanced graph theory course and a TA for MATH480, an advanced measure-theoretic probability theory course, at the University of Liverpool (2016-2017). I also was a marking assistant for MATH367, in the previous year at the University of Liverpool.

I was a teacher for a two month period in 2015 at Varvakios Pilot School, Greece, organized by the University of Athens, Greece. This placement provides useful experience since it helps prepare the student for teaching large classes, organizing a course, and also gives the student an opportunity to teach a few lectures.

I have been a TA regularly since February 2014, in mathematics, with experience TA'ing the subjects of (stochastic) calculus, probability & statistics, network theory with applications, algorithms and programming. A full list of courses that I have TA'ed is below.

Monash University

ETC4130 - Asset liability management (Stochastic Calculus)

ETC3530 - Contingencies in insurance and pensions (Probability & Statistics)

ETC3430 - Financial mathematics under uncertainty (Probability & Statistics)

University of Liverpool

MATH480 - Probability Essentials for Financial Calculus

MATH367 - Networks in Theory and Practice

University of Athens

MATH141 - Computer Science I (MATLAB)

MATH101 - Calculus I

Other Work Experience and Skills

I was an analyst and facilitator for the Bayesian Argumentation via Delphi (BARD), a multi-year project funded by IARPA, organized by Monash University during July-August 2018. BARDs principal investigators include experts in Delphi from the University of Strathclyde and experts in the psychology of causal reasoning from Birkbeck College London and University College London.

I received the Computer Literacy Certificate from the University of Athens, Greece, based on the number of Information Technology modules successfully passed.

I was a programmer responsible with developing Web-based software at Converge - ICT Solutions & Services, Greece during the summer of 2009.

During these years, I have acquired the following technical skills

- **Programming:** LaTeX, MATLAB, Mathematica and others.
- **Operating Systems:** Apple Mac OS X, Linux, Microsoft Windows, Oracle Solaris and others.
- **Application Software:** Microsoft Office, OpenOffice, TeamViewer and others.

Visits to International Research Centers

Hartree Centre, Science and Technology Facilities Council, UK	May 2016
European Organization for Nuclear Research (CERN), Switzerland	October 2010
Cosmonaut Preparation Center in Korolev City, Russia	October 2009

Volunteer Service

Member of the organizing team of the CDT Easter School 2017, University of Liverpool, Liverpool, UK. 2016 - 2017

Member of the organizing team of the forum of Department of Mathematics, University of Athens, Athens, Greece. 2013 - present

Member of a number of Mathematics study groups (with a variety of subjects) and organizer of one, as a student at the University of Athens, Athens, Greece. 2013 - 2015

References

Dr Athanasios Pantelous, Associate Professor
Monash University, Melbourne, Australia
✉Email: Athanasios.Pantelous@monash.edu

Dr Ioannis Kougioumtzoglou, Assistant Professor
Columbia University, New York, USA
✉Email: ikougioum@columbia.edu