Antonios Meimaris

Ph.D. Candidate & Teaching Associate - Monash University
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Education

Monash University, Melbourne, Australia

Doctor of Philosophy, Econometrics & Business Statistics, *Current; Ready to Submit*
Fully funded by Monash University (Fees and Stipend)

- *Coursework passed with High Distinction (highest achievable grade)*
- 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 (highest achievable grade)*
- *Highlight: In "Probability Essentials for Financial Calculus" achieved 100/100 mark*
- 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

Teaching Experience

Teaching Associate - Monash University, Melbourne, Australia 2018 - present
Responsible with teaching, marking and other administrative duties for the units:

ETC2430 - Actuarial statistics	ETC3530 - Contingencies in insurance and pensions
ETC4130 - Asset liability management	ETC3420 - Applied insurance methods

Teaching Assistant - University of Liverpool, Liverpool, United Kingdom 2016 - 2018

Responsible with teaching, marking and other administrative duties for the units:

MATH480 - Probability Essentials for Financial Calculus (Stochastic Calculus)
MATH367 - Networks in Theory and Practice (Graph Theory)

Teaching Assistant - University of Athens, Athens, Greece 2014 - 2015

Responsible with teaching, marking and other administrative duties for the units:

MATH141 - Computer Science I (Algorithms with MATLAB applications)
MATH101 - Calculus I (Real Analysis)

Teacher - Varvakios Pilot School, Athens, Greece February - April 2015

Organized by the University of Athens, Athens, Greece. Responsible with teaching a number of large classes, organizing the course, and also had the opportunity to discuss with more experienced teachers about teaching approaches.

Other Work Experience and Skills

Analyst & Facilitator - BARD - Monash University, Melbourne, Australia July - August 2018

Funded by IARPA. Responsible with analyzing problems and transmitting information regarding Bayesian Argumentation via Delphi (BARD) to a variety of backgrounds.

- **Computer Literacy Certificate** - University of Athens, Greece 2014
  Awarded based on the number of Information Technology modules successfully passed. (e.g. Algorithm Development & Analysis, Numerical Analysis and Programming in MATLAB, R and Java)
- **Languages:** English, Greek, Russian

Short Term Academic Appointments

CE Lecturer - University of Liverpool, Liverpool, United Kingdom 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, New York, USA 2015 - present

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Committees

I participated in the Probabilistic Methods Committee, June, 2019
California Institute of Technology (Caltech), Pasadena, CA, USA

Purpose: to promote and foster research in uncertainty analysis, model validation methods and risk-informed decision-making, and to stimulate its understanding and use in science and engineering applications to benefit society.

Awards

Econometric Game, Finalist Award (Top 10), April 2019

for participating in the final stage of the 2019 Econometric Game, developing stochastic models for CO_2 emissions; organized by the Actuarial Science, Econometrics and Operational Research Management (VSAE), University of Amsterdam, Amsterdam, Netherlands.

*Here I was the captain of the Monash University team.

Teaching Excellence Award (Best Ph.D. Teaching Associate), February 2019

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

Teaching Award, December 2018

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

Monash Graduate Scholarship (MGS) Grant, October 2017

Postgraduate Research Studentship (2018-2021).

Monash International Tuition Scholarship (MITS) Grant, October 2017

Postgraduate International Tuition Studentship (2018-2021).

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

including monetary prize, for a proposed solution to an uncertainty quantification problem (See Page 7).

EPSRC Centre for Doctoral Training (CDT): Studentship Grant, July 2015

Postgraduate Research Studentship (2015-2019).

Publications

Published & Accepted

- **Antonios Meimaris**, Ioannis Kougioumtzoglou, Athanasios Pantelous and Antonina Pirrotta, "An approximate technique for determining in closed-form the response transition probability density function of diverse nonlinear/hysteretic oscillators", Nonlinear Dynamics, (2019), Accepted.
- **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, (2019), Accepted.
- 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, "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, "Approximate closed-form solutions for continuous time derivative pricing", (2019).
- Konstantinos Liaskos, Athanasios Pantelous, Ioannis Kougioumtzoglou and **Antonios Meimaris**, "Implicit analytic solutions for the nonlinear partial differential beam equation with fractional derivative terms", (2019).

Preprints

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

Conferences & Colloquiums

I have presented in the following events:

5th Symposium on Quantitative Finance and Risk Analysis (QFRA 2019) June 2019
Kos Island, Greece; organised by Monash University, Melbourne, Australia
"Approximate closed-form solutions for continuous time derivative pricing"

2019 EMI Conference June 2019
California Institute of Technology (Caltech), Pasadena, CA, USA
"Approximate closed-form solutions for a class of nonlinear stochastic differential equations with applications in engineering dynamics"
*Here I also participated in the Probabilistic Methods Committee.

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

8th *International Conference On Computational Stochastic Mechanics (CSM 8)* June 2018
Paros, Greece; organised by Rice University, Houston, TX, USA
"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
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
Rhodes, Greece; organised by University of Liverpool, Liverpool, United Kingdom
"Some observations on the approximations of the Wiener path integral technique"

Professional Development

I have attended the following events:

CDT Easter School 2017
University of Liverpool, Liverpool, United Kingdom April 2017
*Here I was a member of the organizing team

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

Volunteer Service

Captain of the Monash University Econometric Game 2019 team, — 2018 - 2019
Monash University, Melbourne, Australia.

Member of the organizing team of the CDT Easter School 2017, — 2016 - 2017
University of Liverpool, Liverpool, United Kingdom.

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

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

Additional references available upon request