

ANTONIOS MEIMARIS

Ph.D. Candidate & Teaching Associate - Monash University

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EDUCATION

Monash University, Melbourne, Australia

Doctor of Philosophy, **Econometrics & Business Statistics**, *Expected award date: 2019*

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. Kougiumtzoglou, 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 EPSRC 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. Kougiumtzoglou, Ph.D (Columbia University, USA)

Master by Research, **Decision Making Under Risk & Uncertainty**, 2016

Fully funded by EPSRC 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. Kougiumtzoglou, 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
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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 2015 - 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.

- o **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)
- o **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

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 CO₂ 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), from the Director of Education, Associate Professor Vasilis Sarafidis, including monetary prize, for my teaching at Monash University, Melbourne, Australia.	February 2019
Teaching Award, from the Head of Department, Professor Heather Anderson, including monetary prize, for my teaching at Monash University, Melbourne, Australia, during the academic year 2018.	December 2018
Monash Graduate Scholarship (MGS) Grant, Postgraduate Research Studentship (2018-2021).	October 2017
Monash International Tuition Scholarship (MITS) Grant, Postgraduate International Tuition Studentship (2018-2021).	October 2017
EPSRC Centre for Doctoral Training (CDT): Award, including monetary prize, for a proposed solution to an uncertainty quantification problem (See Page 7).	May 2017
EPSRC Centre for Doctoral Training (CDT): Studentship Grant, Postgraduate Research Studentship (2015-2019).	July 2015

PUBLICATIONS

Published & Accepted

- o **Antonios Meimaris**, Ioannis Kougiumtzoglou, 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.
- o **Antonios Meimaris**, Ioannis Kougiumtzoglou and Athanasios Pantelous, “Approximate transition probability density functions for a class of coupled nonlinear stochastic differential equations”, 8th CSM conference proceedings, (2019), Accepted.
- o Konstantinos Liaskos, Athanasios Pantelous, Ioannis Kougiumtzoglou 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.
- o **Antonios Meimaris**, Ioannis Kougiumtzoglou and Athanasios Pantelous, “Approximate analytical solutions for a class of nonlinear stochastic differential equations”, *European Journal of Applied Mathematics*, (2018): 1-17.
- o **Antonios Meimaris**, Ioannis Kougiumtzoglou 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.
- o **Antonios Meimaris**, Ioannis Kougiumtzoglou 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

- o **Antonios Meimaris**, Ioannis Kougiumtzoglou 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

- o **Antonios Meimaris**, Vasileios Kontosakos, Athanasios Pantelous and Ioannis Kougiumtzoglou, “Approximate closed-form solutions for continuous time derivative pricing”, (2019).
- o Konstantinos Liaskos, Athanasios Pantelous, Ioannis Kougiumtzoglou 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

<i>3rd BCN(Barcelona) Summer School on Stochastic Analysis</i> Centre de Recerca Matemàtica, Bellaterra, Barcelona, Spain	June-July 2016
<i>NATCOR: Convex Optimization</i> University of Edinburgh, Edinburgh, United Kingdom	June 2016
<i>MIGSAA graduate course on stochastic pathwise integration and stochastic particle systems</i> University of Edinburgh, Edinburgh, United Kingdom	April 2016
<i>CDT Easter School 2016</i> University of Liverpool, Liverpool, United Kingdom	April 2016
<i>13th International Probabilistic Workshop (IPW2015)</i> University of Liverpool, Liverpool, United Kingdom	November 2015
<i>9th Panhellenic Logic Symposium</i> National Technical University of Athens, Athens, Greece	June 2013

VOLUNTEER SERVICE

Captain of the Monash University Econometric Game 2019 team, Monash University, Melbourne, Australia.	2018 - 2019
Member of the organizing team of the CDT Easter School 2017, University of Liverpool, Liverpool, United Kingdom.	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 Kougiumtzoglou, Assistant Professor Columbia University, New York, USA ✉Email: ikougium@columbia.edu
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Additional references available upon request