Curriculum Vitae

Athanasios N. Yannacopoulos

Personal

Name: Athanasios N. Yannacopoulos

Nationality :   Hellenic

Work Address: Department of Statistics
         Athens University Economics and Business
         Patision 76
         Athens, 10434 Greece
         email: ayannaco@aueb.gr

Date of Birth: 4 March 1968

National Service: 5/2000-1/2002 (National Meteorological Office)

Current Occupation.

Professor of Applied Stochastic Analysis, Department of Statistics, AUEB

Director of Stochastic Modelling and Applications Research Laboratory, Department of Statistics, AUEB

Director of the MSc Program on Quantitative Methods in Actuarial and Financial Risk Management, AUEB

Research interests.

Applied stochastic analysis

Stochastic modelling with applications in economics and modern technologies

Mathematical Finance and Risk Management

Mathematical economics, game theory and decision making.

Current research focuses on (a) stochastic modelling with various applications in economics, risk management and modern technologies (b) stochastic PDEs and stochastic control and optimization under model uncertainty with applications in economics, finance and risk management (c) variational methods for the study of functional data and problems in economics and finance and (d) nonlocal operators and related stochastic processes.

Academic Record.

2011-	Professor	Department of Statistics, Athens University of Economics and Business
2007-2011	Associate Professor	Department of Statistics, Athens University of Economics and Business
2003-2007	Associate Professor	Department of Statistics, and Actuarial- Financial Mathematics Univ. Aegean
2002- 2003	Assistant Professor	Department of Statistics, and Actuarial- Financial Mathematics Univ. Aegean
Feb. 2002-Jul. 2002	Associate Professor (Adj. fac.)	Department of Applied, Mathematics University of Crete
1997- 2000	Lecturer	School of Mathematics and Statistics, University of Birmingham, UK
1995 - 97	Research Fellow	Mathematics Institute and Physics Department, University of Warwick, UK
1993 - 95	Research Fellow	Department of Applied Mathematics and School of Chemistry University of Leeds, UK

Administration (selected)

- 2019-   Director of the MSc course on Quantitative Methods for Actuarial and Financial Risk Management, Dept. of Statistics and Dept. of Accounting and Finance, AUEB.

- 2017-   Director of the Research Laboratory for Stochastic Modelling and Applications, Dept. of Statistics, AUEB

- 2014- 2020   Member of the Comittee for the Management of the Assets and Property of AUEB.

- 2014-2016   Deputy Chair of the Department of Statistics, AUEB.

- 2007-2013   Scientific Director of the Full Time MSC Program in Statistics, Department of Statistics, AUEB.

- 2008-2010   Deputy Chair of the Department of Statistics, AUEB.

- 3/2004 - 4/2007   Acting Chair, Department of Statistics and Actuarial-Financial Mathematics, Univ. of the Aegean.

- 9/2004 - 4/2007   Director of Postgraduate Studies Program, Department of Statistics and Actuarial-Financial Mathematics, Univ. of the Aegean.

- 1/1/2005 - 4/2007   Director of the Research Laboratory of Finance and Actuarial Studies, Department of Statistics and Actuarial-Financial Mathematics, Univ. of the Aegean.

- 3/2004 - 12/2004   Member of the Central Research Comittee, University of the Aegean.

Studies.

1989 - 93	Ph.D.	University of Warwick, UK
		Statistical Theory of Dynamical Systems
		Thesis Title: Diffusion in strongly chaotic
		Hamiltonian systems.
		Advisor: Prof. G. Rowlands
1985-89	Ptycheion	University of Athens
		Physics, Distinction (85/100)

Grants

PhD Scholarship from the Hellenic Scholarship Foundation (IKY).

PROJECTS (Selected)

1. AWESOME, Prima H2020, Member of the research group of Prof. P. Kountouri.

2. DRASI II 2018-2020 (AUEB) Credit risk modelling using evolutionary alogrithms, (PI)

3. DRASI II 2014-2016 (AUEB) Robust control with applications in Resource Economics, (PI)

4. MULTI-INSULARITY 2013 (University of the Aegean) Establishing a migration database: Migration on Greek islands, PI. Assist. Prof. E. V. Petracou

5. ARISTEIA 2012 (European Union and National Hellenic sources) Spatio-temporal dynamics in Economics, Coordinator for the AUEB Research Team, PI: Prof. A. Xepapadeas

6. THALES 2011 (European Union and National Hellenic sources) Optimal control of dynamical systems in the economy and the environment, Coordinator for the AUEB Research Team, PI: Prof. A. Xepapadeas

7. THALES 2011 (European Union and National Hellenic sources) Analysis, Modeling and Simulations of Complex and Stochastic Systems, Coordinator of the AUEB Research Team, PI: Prof. M. Katsoulakis

8. Fundamental Research Grants (AUEB): FBSDEs With Random Coefficients, Connections With SPDEs And Applications To Stochastic Control (PI).

9. Hellenic Scholarship Foundation: Supervision of postdoctoral research fellow Dr. N. Englezos, on backward SPDEs.

10. EPEAEK Pythagoras I: Stochastic integrodifferential equations and applications (PI).

11. Gulbenkian Foundation, Portugal: Contingent claims pricing in incomplete markets. Supervision of Postdoctoral Fellow Dr. D. Pinheiro in collaboration with Prof. A. A. Pinto

12. Karatheodory (NTUA): Nonlinear PDEs and applications in games theory. (PI: Prof. Kravvaritis) member of research team.

13. 2001-2002 Postdoctoral grant in the Department of Mathematics on the Mathematical Modelling of Complex Media (Hellenic Scholarship Foundation) (Supervised by Prof. I. G. Stratis)

14. 'Mixing with chaos' University of Warwick EPSERC 1995-1997

15. 'Dynamical systems techniques in the simplification of complex chemical schemes' University of Leeds SERC 1993-1995

Supervision of Postdoctoral fellows

1. Dr. K. Georgiou, with Dr Georgiou we are working on deep learning architectures for PDEs, with applications in finance.

2. Dr. P. Papaioannou, with Dr Papaioannou we are working on stochastic processes on manifolds and their applications in learning.

3. Dr. P. Lappas (completed) (AUEB DRASI II supported research fellow). With Dr. Lappas we are working on credit risk modelling using machine learning techniques. He is currently Assistant Professor at the University of the Aegean, and also an Artificial Intelligence (AI) Solutions Architect at EXUS AI Labs and associated researcher with the Stochastic Modelling and Applications Laboratory of the Department of Statistics, AUEB.

4. Dr. I. Baltas (completed) (AUEB DRASI II supported research fellow). With Dr. Baltas we have worked on viscosity solutions for robust control problems and stochastic differential games. He is currently Assistant Professor in the Department of Financial Engineering at the University of the Aegean and associated researcher with the Stochastic Modelling and Applications Laboratory of the Department of Statistics, AUEB.

5. Dr. A. Ioannidis (completed) (ARISTEIA supported research fellow, co-supervised with Prof. A. Xepapadeas). With Dr. Ioannidis we have worked on spatial optimal control problems in economics. He is currently into education.

6. Dr. E. Kalpinelli (completed) (THALES supported research fellow). With Dr. Kalpinelli we have worked on the implementation of Wiener chaos for the solution of stochastic partial differential equations with particular focus on the wave equation and the Heath-Jarrow-Morton equation. She is with the (ex) Greek Public Employees Provident Fund.

7. Dr. D. Pinheiro (completed) (Gulbenkian fellow, co- supervised with Prof. A. A. Pinto). With Dr Pinheiro we have worked on a dynamical systems approach on bargaining and asset pricing in incomplete markets. He is currently Associate Professor at Brooklin College, New York City University.

8. Dr. N. Englezos (completed) (National Scholarship Foundation - IKY). With Dr Englezos we have worked on forward and backward stochastic partial differential equations with random coefficients. He is currently Lecturer in the Department of Banking and Finance, University of Peiraias.

Supervision of PhD Theses (completed)

1. K. Georghiou, Department of Statistics, AUEB, Topic: Modelling credit risk using Levy processes (completed)

2. G. Papagiannis, Department of Statistics, AUEB Topic: Convex analysis in robust statistics and risk measurement (Completed, Dr Papagiannis is currently Assistant Professor at the Department of Statistics and Insurance Science, Univ. of Peiraeus)

3. M. Loizides, Department of Statistics, AUEB Topic: Stochastic Models in Credit Risk (Completed, Dr Loizidis is currently in the banking sector)

4. X. Kartala, Department of Statistics, AUEB Topic: Forward backward stochastic differential equations with random coefficients and applications (Completed). She is currently Senior Researcher in ICRE8 (International Center for Research on the Environment and the Economy)

5. I. Baltas, Department of Statistics, AUEB Topic: Stochastic control and stochastic differential games: Applications in insurance (Completed), Dr Baltas is currently Assistant Professor in the Department of Financial Engineering at the University of the Aegean)

Supervision of PhD Theses (in progress)

1. J. Kladas , Department of Statistics, AUEB, Topic: Manifold learning techniques in finance.

2. M. Nikolouzos, Department of Statistics, AUEB, Topic: Nonlocal elliptic operators and connections with Levy processes (in progress)

3. C. Kaskouras, Department of Statistics, AUEB, Topic: Stochastic modelling of the electricity energy market.

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Participation in Advisory Phd Comittees (selected)

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1. A. Pasiouras, Department of Mathematics, NKUA, Topic: Bayesian methods in inverse problems, Supervisor: Professor A. Bournetas.

2. S. Psifis, Department of Geography, University of the Aegean, Topic: Supervisor: Assoc. Prof. E. V. Petracou

3. A. Raptis, Department of Digital Systems, University of Peiraias, Topic: Game theoretic and optimal stopping techniques in computer security. Supervisor: Prof. S. Gritzalis

4. K. Vasiliadis, Department of Accounting and Finance, AUEB Topic: Multiscale volatility and homogenization theory, Supervisor: Assoc. Prof. A. Tsekrekos

5. K. Liaskos, Department of Mathematics, University of Athens Topic: Deterministic and Stochastic Sobolev Type equations, Supervisor: Prof. I. G. Stratis (PhD awarded)

6. E. Kalpineli, Department of Statistics, AUEB Topic: Stochastic partial differential equations and applications, Supervisor: Prof.N. E. Frangos (PhD awarded)

7. F. Xanthos, School of Mathematics and Physical Sciences, National Technical University of Athens, Topic: Ordered spaces and Economics, Supervisor: Prof. I. Polyrakis (PhD awarded)

8. E. Argyropoulou, Department of Mathematics, University of Athens Topic: Homogenization theory, Supervisor: Prof. I. G. Stratis

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Participation in PhD Examination boards (selected)

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1. P. Papaioannou, Department of Mathematics and Applications, "Renato Cacciopoli", Forecasting using manifold learning (tentative), Supervisor Prof. C. Siettos

2. M. Leung, Monash Business School, Australia, Topic: Actuarial modelling and longevity risk, Supervisor Prof. A. Pantelous

3. A. Doumas, School of Mathematics and Physical Sciences, National Technical University of Athens, Topic: The coupon collector problem, Supervisor Prof. V. Papanicolaou

4. E. Kyriakopoulou, Department of International and European Economic Studies, AUEB, Topic: Environmental Policy and the Spatial Structure of Economic Activity in New Economic Geography , Supervisor Prof. A. Xepapadeas

5. A. Damialis, Department of Mathematics, University of Athens, Topic: Mathematical modeling of phase transitions, Supervisor Prof. N. Alikakos

6. I Kamarianakis, Department of Economics, University of Crete, Topic: Stochastic optimal control in economics, Supervisor Prof. A. Xepapadeas

7. B. Oliveira, Department of Pure Mathematics, University of Porto, Portugal, Topic: Game theory, Supervisor Prof. A. A. Pinto

8. F. Ferreira, Department of Applied Mathematics, University of Porto, Portugal, Topic: Game theory, Supervisor Prof. A. A. Pinto

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MSc Theses supervised

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Over 40 MSc theses supervised at AUEB and at the University of Athens, or the National Technical University of Athens.

Teaching

A large variety of undergraduate and postgraduate courses on Analysis, Measure and Probability, Stochastic Analysis, Partial Differential Equations, Stochastic Processes, Mathematical Finance, Numerical Methods in Mathematical Finance.

Undergraduate Courses

Athens University of Economics and Business

1. Introduction to Mathematical Analysis, Department of Statistics AUEB, 2007–

2. Calculus II, Department of Statistics AUEB, 2007–

3. Numerical methods in statistics, Department of Statistics AUEB, 2019–

4. Stochastic Finance (Short Course) Department of Statistics AUEB, 2009–2015

5. Stochastic Processes, Department of Statistics AUEB, 2008 , 2015–2021

6. Introduction to Measure Theory and Applications, Department of Statistics AUEB, 2007–2015

7. Calculus III, Department of Statistics AUEB, 2008

8. Quantitative methods for Economics and Management, Department of Management Science, AUEB, 2014–2017

   University of the Aegean

9. • Stochastic Processes II, • Financial Mathematics I, • Financial Mathematics III, Department of Statistics and Actuarial-Financial Mathematics, University of the Aegean, 2001-2007.

   University of Crete

10. • Linear Algebra II, Department of Applied Mathematics and Department of Mathematics 2001-2002 University of Crete.

    University of Birmingham

11. • Stochastic differential equations and partial differential equations, • The Mathematics of Finance, • Vector Calculus, • Boundary value problems in Physics and Chemistry, University of Birmingham, School of Mathematics and Statistics, 1997-2000

Postgraduate Courses

Athens University of Economics and Business

1. Optimization, Department of Statistics, AUEB, 2020–

2. Financial Mathematics with Matlab and Python, MSC in Applied Statistics, Department of Statistics, AUEB, 2020–

3. Stochastic Processes and Derivative Products, MSC in Quantitative Actuarial and Financial Risk Management, Department of Statistics, AUEB, 2020–

4. Probability with computational applications, MSC in Quantitative Actuarial and Financial Risk Management, Department of Statistics, AUEB, 2020–

5. Stochastic Modelling in Finance, MCS in Statistics, Department of Statistics, AUEB, 2015–

6. Probability and Inference, MCS in Statistics, Department of Statistics, AUEB, 2019–2021

7. Advanced Stochastic Processes, PhD Course, Department of Statistics, AUEB, 2015–2021

8. Measure theory and Integration, MSC in Statistics, Department of Statistics, AUEB, 2009–2015

9. Financial Mathematics, MSC in Quantitative methods in Decision Making, Department of Statistics, AUEB, 2005– 2019

10. Numerical Methods in Financial Mathematics, MSC in Quantitative methods in Decision Making, Department of Statistics, AUEB, 2007– 2015

    University of Thesally

11. Stochastic Finance, MSC Course, Department of Economics, 2019–2020 (by invitation)

    National and Kapodistrian University of Athens

12. Stochastic Differential Equations and Applications, MSC Course, Department of Mathematics, University of Athens, 2002-2003, 2004-2005, 2006-2007, 2008-2009 (by invitation by the Section of Mathematical Analysis).

13. Partial Differential Equations I, MSC Course, Department of Mathematics, University of Athens, 2010-2011 (by invitation by the Section of Mathematical Analysis) (with G. Barbatis).

14. Partial Differential Equations II (Nonlinear Theory), MSC Course, Department of Mathematics, University of Athens, 2011-2012 (by invitation by the Section of Mathematical Analysis) (with I. G. Stratis).

    National Technical University of Athens

15. Asset pricing and portfolio optimization in incomplete markets, MSC Course, in MSC in Mathematical modelling, School of Applied Mathematics and Physical Sciences, National Technical University of Athens, 2008, (by invitation).

    University of the Aegean

16. Mathematical Models in Economics, MSC Course, Department of Mathematics, University of the Aegean, 2001-2004, (by invitation).

17. • Financial Mathematics, • Derivatives, • Dynamics Programming and Stochastic Control Theory, MSC Courses, Department of Statistics and Actuarial-Financial Mathematics, University of the Aegean 2004-2007.

Professional Trainng

2017 – Seminars delivered on Quantitative Methods in Actuarial Risk Management (comissioned by the Hellenic Actuarial Society as part of the procedure of obtaining the certification of HAS member). Participation in the design of the relevant examination paper.

Editorial - Refereeing activities and Memberships

1. Associate editor in Journal of Dynamics and Games, American Institute of Mathematical Sciences.

2. Associate editor of Numerical Algebra Control and Optimization, American Institute of Mathematical Sciences.

3. Associate editor of Journal of Industrial and Management Optimization, American Institute of Mathematical Sciences.

4. Associate editor of Fixed Point Theory and Algorithms for Sciences and Engineering, Springer.

5. Topics board editor (Financial Mathematics), Mathematics, MDPI.

6. Member of the **London Mathematical Society**.

7. Member of the **American Mathematical Society**.

8. Reviewer for **Mathematical Reviews** since 1993.

9. Reviewer for **Zentralblatt Mathematik** since 2007.

10. Referee for **Physica D**, **Physics of Fluids**, **Journal of Mathematical Modelling and Algorithms**, **International Journal of Theoretical and Applied Finance**, **Asian Pacific Journal of Operations Research**, **Carpathian Journal of Mathematics**, **Scandinavian Actuarial Journal**, **Extremes**, **Statistics**, **Mathematical Methods in the Applied Sciences**, **Journal of Physics A**, **Bulletin of the Greek Mathematical Society**, **Journal of Physics A.**, **IMA J. Math. Control and Automation**, **Journal of Economic Asymmetries**, **Zeit. fur Angew. Math. und Phys.**, **Journal of Games and Dynamics (AIMS)**, **Discrete Dynamics in Nature and Society**, **Insurance Mathematics and Economics**, **Absract and Applied Analysis**, **IMA Management Mathematics**, **European Journal of Operations Research**, **Journal of Applied Mathematics**, **European Journal of Control**, **Annals of Operations Research**, **Mathematics of Operations Research**, **SIAM Journal on Control and Optimization**, **Transactions of the American Mathematical Society**, **Journal of Mathematical Economics**, **Optimization**.

Publications

(a) Books

1. D. Kravvaritis and A. N. Yannacopoulos, Variational Methods in Nonlinear Analysis: with applications in optimization and partial differential equations, 2020, De Gruyter.

2. G. Roach, I. G. Stratis and A. N. Yannacopoulos, Mathematical analysis of deterministic and stochastic electromagnetic fields in complex media, 2012, Series in Applied Mathematics, Princeton University Press .

(b) Edited Volumes

1. E. Accineli, D. Gamba, A. A. Pinto and A. N. Yannacopoulos, Trends in Mathematical Economics I, 2016, Springer

(c) Refereed Journals

1. Koundouri, P., Papayiannis, G. I., Vassilopoulos, A., & Yannacopoulos, A. N. (2024). Probabilistic scenario-based assessment of national food security risks with application to Egypt and Ethiopia. Journal of the Royal Statistical Society Series A: Statistics in Society, qnae046.

2. Georgiou, K., & Yannacopoulos, A. N. (2024). Deep neural networks for probability of default modelling. Journal of Industrial and Management Optimization, 0-0.

3. Koundouri, P., Papayiannis, G. I., Petracou, E. V., & Yannacopoulos, A. N. (2024). Consensus group decision making under model uncertainty with a view towards environmental policy making. Environmental and Resource Economics, 1-39.

4. Calvia, A., Gozzi, F., Leocata, M., Papayiannis, G. I., Xepapadeas, A., & Yannacopoulos, A. N. (2024). An optimal control problem with state constraints in a spatio-temporal economic growth model on networks. Journal of Mathematical Economics, 102991.

5. Kanakoudis, G., Lallas, K.G., Sevroglou, V. and Yannacopoulos, A.N., 2023, April. Stochastic Boundary Value Problems via Wiener Chaos Expansion. In Computer Sciences & Mathematics Forum (Vol. 7, No. 1, p. 34). MDPI.

6. Pasiouras, A.M., Burnetas, A.N. and Yannacopoulos, A.N., 2023. Bayesian inversion techniques for stochastic partial differential equations. Journal of Industrial and Management Optimization, pp.0-0.

7. Sartzetakis, Eftichios, Anastasios Xepapadeas, and Athanasios N. Yannacopoulos. "Environmental regulation with preferences for social status." Ecological Economics 209 (2023): 107834.

8. Xepapadeas, A., & Yannacopoulos, A. N. (2023). Spatial growth theory: Optimality and spatial heterogeneity. Journal of Economic Dynamics and Control, 146, 104584.

9. Louloudis, E., Zimbidis, A., & Yannacopoulos, A. (2022). Stochastic assessment of seismic risk using faults to address the incomplete information in historical catalogues. European Actuarial Journal, 1-23.

10. Bisiotis, K., Psarakis, S., & Yannacopoulos, A. N. (2022). Affine Term Structure Models: Applications in Portfolio Optimization and Change Point Detection. Mathematics, 10(21), 4094.

11. Baltas, I., Dopierala, L., Kolodziejczyk, K., Szczepański, M., Weber, G. W., & Yannacopoulos, A. N. (2021). Optimal management of defined contribution pension funds under the effect of inflation, mortality and uncertainty. European Journal of Operational Research.

12. V. C. Pezoulas, O. Hazapis, N. Lagopati, T. P. Exarchos, A. V. Goules, A. G. Tzioufas, D. I. Fotiadis, I. G. Stratis, A. N. Yannacopoulos and V. G. Gorgoulis, Machine Learning Approaches on High Throughput NGS Data to Unveil Mechanisms of Function in Biology and Disease, Cancer Genomics and Proteomics, 2021 (in press)

13. K. Bisiotis, S. Psarakis and A. N. Yannacopoulos, Control charts in financial applications: An overview, Quality and Reliability Engineering International, 2021 (in press)

14. PZ Lappas, AN Yannacopoulos, A machine learning approach combining expert knowledge with genetic algorithms in feature selection for credit risk assessment, Applied Soft Computing 107 (2021) https://doi.org/10.1016/j.asoc.2021.107391

15. G. I. Papayiannis, G. N. Domazakis, D. Drivaliaris, S. Koukoulas, A. E. Tsekrekos and A. N. Yannacopoulos, On clustering uncertain and structured data with Wasserstein barycenters and a geodesic criterion for the number of clusters, Journal of Statistical Computation and Simulation (2021) https://doi.org/10.1080/00949655.2021.1903463

16. E. V. Petracou, A. Xepapadeas and A. N. Yannacopoulos, Decision making under model uncertainty: Frechet-Wasserstein mean preferences, Management Science (2021) doi.org/10.1287/mnsc.2021.3961

17. K. Georgiou, GN Domazakis, D Pappas, AN Yannacopoulos, Markov chain lumpability and applications to credit risk modelling in compliance with the International Financial Reporting Standard 9 framework, European Journal of Operation Research (2021) Volume 292, Issue 3, pp. 1146-1164, https://doi.org/10.1016/j.ejor.2020.11.014

18. X. I. Kartala, N. Englezos and A. N. Yannacopoulos, Future Expectations Modeling, Random Coefficient Forward-Backward Stochastic Differential Equations, and Stochastic Viscosity Solutions, Mathematics of Operations Research, (2020) https://doi.org/10.1287/moor.2018.0981

19. F. Santambroggio, A. Xepapadeas and A. N. Yannacopoulos, Rational expectations equilibria in a Ramsey model of optimal growth with non-local spatial externalities, Journal de Mathḿatiques Pures et Appliqués, (2020), https://doi.org/10.1016/j.matpur.2020.01.007

20. N. Kampelis, G. I. Papayiannis, D. Kolokotsa, G. N. Galanis, D. Isidori, C. Kristalli and A. N. Yannacopoulos, An Integrated Energy Simulation Model for Buildings, Energies, 13, 5, 1170 (2020); https://doi.org/10.3390/en13051170

21. G. Kristensson, I. G. Stratis, N. Wellander and A. N. Yannacopoulos, The exterior Calderón operator for non spherical objects, SN Partial Differential Equations and Applications, 1, 6 (2020). https://doi.org/10.1007/s42985-019-0005-x

22. Petracou E. V., G. Domazakis, G. I. Papayiannis and A. N. Yannacopoulos, Towards a Common European Space for Asylum, Sustainability, 2018, 10, 2961; doi:10.3390/su10092961

23. I. Baltas, A. Xepapadeas and A. N. Yannacopoulos, Robust control of parabolic stochastic partial differential equations under model uncertainty, European Journal of Control, 2018, (doi.org/10.1016/j.ejcon.2018.04.004)

24. G. I. Papayiannis and A. N. Yannacopoulos, Convex risk measures for the aggregation of multiple information sources and applications in insurance, Scandinavian Actuarial Journal, 2018, (doi.org/10.1080/03461238.2018.1461129)

25. Papayiannis, G. I., Galanis G. N., and A. N. Yannacopoulos, Model aggregation using optimal transport and applications in wind speed forecasting, Environmetrics, 2018, (DOI: 10.1002/env.2531), pp. 1-19

26. Baltas, I., A. Xepapadeas and A. N. Yannacopoulos, Robust portfolio decisions for financial institutions, Journal of Dynamics and Games, 2018, (in press)

27. N. Azeveido, D. Pinheiro, S. Xanthopoulos and A. N. Yannacopoulos, Who would invest only in the risk free asset? International Journal of Financial Engineering, 2018 (in press)

28. Papayiannis, G. I., Giakoumakis, E. A., Manios, E. D., Moulopoulos, S. D., Stamatelopoulos, K. S., Toumanidis, S. T., Yannacopoulos, A. N. (2017). A functional supervised learning approach to the study of blood pressure data. Statistics in medicine.

29. Baltas, I., Yannacopoulos, A. N. (2017). Portfolio management in a stochastic factor model under the existence of private information. IMA Journal of Management Mathematics + electronic supplement

30. EV Petracou, A Xepapadeas, AN Yannacopoulos, "Climate Change and Environmentally Induced Migration Across Regions: Cooperative and Non-cooperative Solutions", Homo Oeconomicus, DOI: 10.1007/s41412-017-0038-3, pp. 1-28, 2017

31. A Xepapadeas and A.N. Yannacopoulos, "Spatial growth with exogenous saving rates", Journal of Mathematical Economics, 67, 125-137, 2016.

32. A.E. Tsekrekos, and A.N. Yannacopoulos, "Optimal switching decisions under stochastic volatility with fast mean reversion" European Journal of Operational Research, 251(1), 148-157, 2016

33. G. I. Papayiannis and A. N. Yannacopoulos, "Numerical computation of convex risk measures", Annals of Operations Research, doi:10.1007/s10479-016-2284-3, pp.1-19, 2016

34. G. I. Papayiannis and A. N. Yannacopoulos, "A learning algorithm for source aggregation", Mathematical Methods in the Applied Sciences, doi: 10.1002/mma.4086, 2016

35. I. Baltas and A. N. Yannacopoulos, "Uncertainty and inside information" Journal of Dynamics and Games, 2016

36. N Azevedo, D Pinheiro, SZ Xanthopoulos and A. N. Yannacopoulos, "Contingent claim pricing through a continuous time variational bargaining scheme", Annals of Operations Research, pp. 1-18, doi:10.1007/s10479-015-2089-9, 2015

37. Cano J., Moguerza J. M, Psarakis S and A. N. Yannacopoulos, "Using statistical shape theory for the monitoring of nonlinear profiles" Applied Stochastic Models in Business and Industry, 2015 (in press)

38. Stratis I. G. and A. N. Yannacopoulos, "Some remarks on a class of inverse problems related to the parabolic approximation to the Maxwell equations: a controllability approach" Mathematical Methods in the Applied Sciences, 2015 (in press)

39. Barbatis, G. Stratis I. G. and A. N. Yannacopoulos, "Homogenization of random elliptic systems with an application to Maxwell's equations" Mathematical Models and Methods in the Applied Sciences, 2015 (in press)

40. I G. Stratis and A. N. Yannacopoulos, A Bayesian approach to the inverse source problem for the parabolic approximation to the Maxwell equations, Bulletin of the Greek Mathematical Society, (2015) **58**, 43-66.

41. Brock, W. A., A. Xepapadeas and A. N. Yannacopoulos,"Optimal agglomerations in dynamic economics" Journal of Mathematical Economics, Vol. 53, pp. 1-15, 2014.

42. Brock, W. A., A. Xepapadeas and A. N. Yannacopoulos,"Spatial Externalities and Agglomeration in a Competitive Industry" Journal of Economic Dynamics and Control, Vol. 43, pp. 143-174, 2014.

43. Brock, W. A., A. Xepapadeas and A. N. Yannacopoulos, "Robust control and hot spot formation in spatiotemporal economic systems" Dynamic Games and Applications, 2014, in press.

44. Brock, W. A., A. Xepapadeas and A. N. Yannacopoulos, "Optimal Control in Space and Time and the Management of Environmental Resource" Annual Review in Resource Economics, Vol. 6, 2014

45. Kalpinelli, E, N. E. Frangos and A. N. Yannacopoulos, "Numerical methods for hyperbolic SPDEs: a Wiener chaos approach" Stochastic Partial Differential Equations: Analysis and Computations, Volume 1, Issue 4, pp 606-633, 2013

46. Azevedo, N and Pinheiro, D and Xanthopoulos, SZ and Yannacopoulos, AN, "On a variational sequential bargaining pricing scheme", Optimization, 2013, (in press) DOI: 10.1080/02331934.2013.801475

47. M . Anthropelos, N. E. Frangos, s. Z. Xanthopoulos and A. N. Yannacopoulos, "Contract pricing and utility sharing", IMA Journal of Management Mathematics, (in press) doi: 10.1093/imaman/dpt011

48. N. Englezos, N. E. Frangos, X. I. Kartala, and A. N. Yannacopoulos, 'Stochastic Burgers Equation and a Generalization of the Cole-Hopf Transformation', Stochastic Processes and Applications, **123**, No. 8, pp. 3239–3272, 2013

49. D. Pinheiro, A. A. Pinto, S. Z. Xanthopoulos and A. N. Yannacopoulos, 'A projected gradient dynamical system modeling the dynamics of bargaining', Journal of Difference Equations and Applications, **19**, no. 1, pp. 59–95, 2013.

50. I.G. Stratis and A.N. Yannacopoulos, 'Homogenisation theory for deterministic and random bianisotropic media', Composites B, **43**, 2513–2520, 2012

51. M. I. Loizides and A. N. Yannacopoulos, 'Lumpable Markov chains in risk management', Optimization Letters, DOI: 10.1007/s11590-010-0275-x, 2011.

52. I. D. Baltas, N. E. Frangos and A. N. Yannacopoulos, 'Optimal investment and reinsurance policies in insurance markets under the effect of inside information' Applied Stochastic Models in Business and Industry, **28**, no. 6, pp. 506-528, 2012

53. A. A. Pinto, M. Ferreira, B. F. Finkenstadt, B. Oliveira and A. N. Yannacopoulos, 'On the convergence to Walrasian prices in random matching Edgeworthian economies', Central European Journal of Operations Research, **20**, no. 3, pp. 485-495, 2012.

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(d) Book chapters and conference proceedings

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2. Koundouri, P., G. I. Papayiannis, and A. N. Yannacopoulos. "Optimal Control Approaches to Sustainability Under Uncertainty." SDGs in the European Region. 2023. 1-30.

3. Hazapi O, Lagopati N, Pezoulas VC, Papayiannis GI, Fotiadis DI, Skaltsas D, Vergetis V, Tsirigos A, Stratis IG, Yannacopoulos AN, Gorgoulis VG. Machine Learning: A Tool to Shape the Future of Medicine. InHandbook of Machine Learning Applications for Genomics 2022 Jun 24 (pp. 177-218). Singapore: Springer Nature Singapore.

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20. A. N. Yannacopoulos, S. Katsikas, C. Labrinoudakis, S. Gritzalis and S. Z. Xanthopoulos, "A risk model for privacy insurance", in Digital Privacy: Theory, Technologies and Practices, Edited by A. Acquisti, S. Gritzalis, C. Lambrinoudakis and S. De Capitani di Vimercati, Auerbach Publications, Taylor and Francis, New York, London, 2008

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27. A. N. Yannacopoulos 'Interaction of advection and diffusion in 3D flows' Proceedings of the 13th Hellenic Conference on Nolinear systems in memory of C. Polymilis (2003).

28. D. J. Frantzeskakis, I. G. Stratis and A. N. Yannacopoulos, 'Mathematical modelling of time dispersive nonlinear chiral media' Proceedings of the 5th International Workshop on Mathematical Methods in Scattering Theory and Biomedical Technology' Contokali Bay, Corfu 18-19 October 2001, Greece, edited by World Scientific Publishing Company.

29. A. N. Yannacopoulos 'Mixing and transport caused by chaos in 3D Navier-Stokes flows' Proceedings of the 12th Hellenic Conference on Nolinear systems in honour of G. Nikolis (2000).

Lecture notes (unpublished).

1. A. N. Yannacopoulos, *Stochastic Finance*, AUEB (in Greek).

2. A. N. Yannacopoulos, *Introduction to mathematical analysis - with applications in probability and statistics*, AUEB, (in Greek).

3. A. N. . Yannacopoulos, *Introduction to Measure and Integration – with applications in probability and statistics*, AUEB, (in Greek).

4. A. N. Yannacopoulos *Introduction to Mathematical Finance* Univ. Aegean (in Greek)

5. A. N. Yannacopoulos *Introduction to Stochastic Analysis* Univ. Aegean (in Greek)

6. A. N. Yannacopoulos, *Fourier series and linear boundary value problems.* Lecture notes Birmingham 1997

7. A. N. Yannacopoulos, *Vector Analysis.* Lecture notes Birmingham 1998

8. A. N. Yannacopoulos, *Stochastic differential equations and partial differential equations.* Lecture notes Birmingham 1998

9. A. N. Yannacopoulos, *Stochastic differential equations and selected applications in mathematical finance.* Lecture notes Birmingham 1999

Conferences (Selected)

1. A. N. Yannacopoulos, 2022, Decision under model uncertainty with applications in finance and insurance, (Keynote speaker), EURO 2022, Espoo, Finland, July 3-6

2. A. N. Yannacopoulos, 2013, Interest rate models and stochastic PDEs, (4 hour invited short course) 2nd Winter School in Stochastic Dynamics and Control in Finance and Economics, ISEG, Lisbon.

3. A. N. Yannacopoulos, 2012, Risk Measures - Subjectivity, Robustness and Decision Making, (invited), 1st European Society of Actuaries Conference, Brussels.

4. A. N. Yannacopoulos, 2012, Aspects of Stochastic Control in Finance and Economics, (6 hour invited short course) 1st Winter School in Stochastic Dynamics and Control in Finance and Economics, ISEG, Lisbon.

5. A. N. Yannacopoulos, 2011, Backward stochastic evolution equations - A Wiener chaos approach, (invited) ACMAC Workshop on Stochastic PDEs, Crete.

6. A. N. Yannacopoulos, 2010, Stochastic saddle paths, backward stochastic differential equations and economic dynamics, 2010, (invited), Dynamics 2010, Samos, Greece.

7. A. N. Yannacopoulos, 2010, Convex risk measures: The return of the subjective. (invited) Summer school of the Group Consultatif, Samos.

8. A. N. Yannacopoulos, 2008, On the effect of expectations in economic dynamics, (invited) Dynamics and Applications, in honour of M. Peixoto and D. Rand, Braga, Portugal.

9. A. N. Yannacopoulos, 2008, Utility pricing in incomplete markets, International Workshop in Applied Probability, Compeigne, 2008, (with N. E. Frangos, M. Anthropelos and S. Xanthopoulos)

10. A. N. Yannacopoulos 'Wiener chaos solutions for linear forward backward stochastic differential equations' International Congress of Mathematicians, Madrid 2006, (with N. E. Frangos).

11. A. N. Yannacopoulos, 'Currency Areas, Economic Asymmetries, and the Dynamics of Economic Integration', "Asymmetries in Trade and Currency Arrangements in the 21st Century", Athenian Policy Forum, Deutches Bundensbank, Frankfurt, July 28-31, 2004. (with G. D. Demopoulos and N. A. Yannacopoulos)

12. A. N. Yannacopoulos, 'Insurance control with liabilities of the fractional Brownian motion type', 3rd International Conference on Actuarial Science and Finance, Samos, September 2004 (with N. E. Frangos and S. D. Vrontos)

13. A. N. Yannacopoulos, 'A novel approach to exchange rate control using controlled stochastic differential equations' 8th Conference on Macroeconomic Policy and International Finance, Rethymno 27-29 May 2004

14. A. N. Yannacopoulos, 'Forward-backward stochastic differential equations in economics: applications in economic policy' 7th International Conference on Macroeconomic Analysis and International Finance, University of Crete, Rethymno May 2003

15. A. N. Yannacopoulos, 'Spectral methods for the valuation of barrier options' 2nd International conference on Actuarial Science and Finance on Samos, September 2002

16. A. N. Yannacopoulos, 'Mathematical modelling of time dispersive nonlinear chiral media' (talk) 5th International Workshop on Mathematical Methods in Scattering Theory and Biomedical Technology' Contokali Bay, Corfu 18-19 October 2001, Greece (with D. J. Frantzeskakis, I. G. Stratis).

17. A. N. Yannacopoulos, 'Chaotic advection in biophysical flows' International Conference of Industrial and Applied Mathematics, (invited talk in the Chaotic Advection mini-symposium) Edinburgh 1999

18. A. N. Yannacopoulos, 'I. Motion of swimmers in flows exhibiting chaotic advection and II. Some global long-time behaviour on a model for bioconvection.' Invited presentation in the workshop on the 'Modelling of Plankton Dynamics' Newton Institute, Cambridge, August 1996.

19. A. N. Yannacopoulos 'A Kinetic Description of Anomalous Particle Transport by Travelling Waves' Presentation in the ESF Study Centre on'Dynamics of Transport in Fluids, Plasmas and Charged Beams' Torino, July 1994 (with G. Rowlands)

20. A. N. Yannacopoulos, 'Modelling Chaos with Diffusion Processes' Short talk presented in Chaotic Advection, Tracer Dynamics and Turbulent Dispersion, NATO ARW, May 24-28 1993, Italy (with G. Rowlands).

Conferences organized.

1. 1st - 20th Summer Schools in Risk Finance and Stochastics, co-organized by AUEB and the Univ. Aegean, July 2003-today.

2. 3rd, 4th, 5th International Conference on Modern Mathematical Methods in Science and Technology, (M3ST 2012), Kalamata 2012, 2015, 2018 Member of scientific commitee.

3. 2nd International Conference on Modern Mathematical Methods in Science and Technology, (M3ST 2009), Poros 2009, Member of organizing commitee.

4. Dynamics and Applications 2008 (in honour of M. Peixoto and D. Rand), Braga, Portugal, Member of Scientific Commitee.

5. Mixing with Chaos, Mathematics Institute, University of Warwick, 8 March 1999 (with G. P.King)

6. Low dimensional dynamics of complex systems, University of Leeds, 15 May 1995 with J. Brindley and A. Fordy)

7. Applied Nonlinear Dynamics, University of Leeds, 16th December 1994 with A. Fordy and M. Nelson)

Seminars organized.

Since 2007 I have organized and run a weekly seminar on Stochastic Analysis and Applied Probability in the Department of Statistics, AUEB. The seminar in open to staff, post-docs and PhD students and concentrates on thematics that change every semester. Previous thematics included Malliavin Calculus and Applications, Infinite Dimensional Stochastic Analysis, Semigroup Theory and Markov Processes, Optimal stopping and variational inequalities with applications, Optimal transportation theory and applications etc.