# Curriculum Vitae

***Athanasios N. Yannacopoulos***

### Personal

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| Name: | Athanasios N. Yannacopoulos |
| Nationality : | Hellenic |
| Work Address: | Department of Statistics<br>Athens University Economics and Business<br>Patision 76<br>Athens, 10434 Greece<br>email: ayannaco@aueb.gr |
| Date of Birth: | 4 March 1968 |
| National Service: | 5/2000-1/2002 (National Meteorological Office) |

### Current Occupation.

Professor, Department of Statistics, AUEB.

### Research interests.

Stochastic analysis and modelling with applications in economics and modern technologies,

Mathematical Finance and Risk Management

(Random) dynamical systems,

Mathematical economics, game theory and decision making.

**Academic Record.**

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| 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**

- 2014- 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.

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

## Grants

PhD Scholarship from the Hellenic Scholarship Foundation (IKY).

## PROJECTS (Selected)

1. DRASI II 2014-2016 (AUEB) Robust control with applications in Resource Economics, (PI)
2. MULTI-INSULARITY 2013 (University of the Aegean) Establishing a migration database: Migration on Greek islands, PI. Assist. Prof. E. V. Petracou
3. ARISTEIA 2012 (European Union and National Hellenic sources) Spatio-temporal dynamics in Economics, Coordinator for the AUEB Research Team, PI: Prof. A. Xepapadeas
4. 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
5. 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
6. Fundamental Research Grants (AUEB): FBSDEs With Random Coefficients, Connections With SPDEs And Applications To Stochastic Control (PI).
7. Hellenic Scholarship Foundation: Supervision of postdoctoral research fellow Dr. N. Englezos, on backward SPDEs.
8. EPEAEK Pythagoras I: Stochastic integrodifferential equations and applications (PI).
9. Gulbenkian Foundation, Portugal: Contingent claims pricing in incomplete markets. Supervision of Postdoctoral Fellow Dr. D. Pinheiro in collaboration with Prof. A. A. Pinto
10. Karatheodory (NTUA): Nonlinear PDEs and applications in games theory. (PI: Prof. Kravvaritis) member of research team.
11. 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)
12. 'Mixing with chaos' University of Warwick EPSERC 1995-1997
13. 'Dynamical systems techniques in the simplification of complex chemical schemes' University of Leeds SERC 1993-1995

## Supervision of Postdoctoral fellows

1. Dr. I. Baltas (completed). With Dr. Baltas we are working on viscosity solutions for robust control problems and stochastic differential games.

2. Dr. A. Ioannidis (completed) (ARISTEIA supported research fellow, co-supervised with Prof. A. Xepapadeas). With Dr. Ioannidis we are working on spatial optimal control problems in economics.

3. Dr. E. Kalpinelli (completed) (THALES supported research fellow). With Dr. Kalpinelli we are working 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.

4. 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.

5. 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**

1. G. Papagiannis, Department of Statistics, AUEB Topic: Convex analysis in robust statistics and risk measurement (Completed)

2. M. Loizides, Department of Statistics, AUEB Topic: Stochastic Models in Credit Risk (Completed )

3. X. Kartala, Department of Statistics, AUEB Topic: Forward backward stochastic differential equations with random coefficients and applications (Completed)

4. I. Baltas, Department of Statistics, AUEB Topic: Stochastic control and stochastic differential games: Applications in insurance (Completed)

**Participation in Advisory Phd Comittees (selected)**

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

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

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

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

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

**Participation in PhD Examination boards (selected)**

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

2. 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

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

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

5. B. Oliveira, Department of Pure Mathematics, University of Porto, Portugal, Topic: Game theory, Supervisor Prof. A. A. Pinto
6. F. Ferreira, Department of Applied Mathematics, University of Porto, Portugal, Topic: Game theory, Supervisor Prof. A. A. Pinto

## MSc Theses supervised

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

1. Introduction to Mathematical Analysis, Department of Statistics AUEB, 2007–
2. Introduction to Measure Theory and Applications, Department of Statistics AUEB, 2007–2015
3. Calculus II, Department of Statistics AUEB, 2007–
4. Stochastic Finance (Short Course) Department of Statistics AUEB, 2009–2015
5. Stochastic Processes, Department of Statistics AUEB, 2008 , 2015–
6. Calculus III, Department of Statistics AUEB, 2008
7. Quantitative methods for Economics and Management, Department of Management Science, AUEB, 2014–
8. • Stochastic Processes II, • Financial Mathematics I, • Financial Mathematics III, Department of Statistics and Actuarial-Financial Mathematics, University of the Aegean, 2001-2007.
9. • Linear Algebra II, Department of Applied Mathematics and Department of Mathematics 2001-2002 University of Crete.
10. • 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

1. Advanced Stochastic Processes, PhD Course, Department of Statistics, AUEB, 2015–
2. Stochastic Modelling in Finance, MCS in Statistics, Department of Statistics, AUEB, 2015–
3. Measure theory and Integration, MSC in Statistics, Department of Statistics, AUEB, 2009–2015
4. Financial Mathematics, MSC in Quantitative methods in Decision Making, Department of Statistics, AUEB, 2005–
5. Numerical Methods in Financial Mathematics, MSC in Quantitative methods in Decision Making, Department of Statistics, AUEB, 2007– 2015
6. 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).

7. 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).
8. 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).
9. 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).
10. Mathematical Models in Economics, MSC Course, Department of Mathematics, University of the Aegean, 2001-2004, (by invitation).
11. • Financial Mathematics, • Derivatives, • Dynamics Programming and Stochastic Control Theory, MSC Courses, Department of Statistics and Actuarial-Financial Mathematics, University of the Aegean 2004-2007.

### 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. Member of the **London Mathematical Society**.
4. Member of the **American Mathematical Society**.
5. Reviewer for **Mathematical Reviews** since 1993.
6. Reviewer for **Zentralblatt Mathematik** since 2007.
7. 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

### Monographs

Mathematical analysis of deterministic and stochastic electromagnetic fields in complex media, (with I. G. Stratis and G. Roach) 2012 Series in Applied Mathematics, Princeton University Press

### Edited Volumes

Trends in Mathematical Economics I, (with E. Accineli, D. Gamba and A. A. Pinto) 2016, Springer

### (a) Journals

1. 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

2. 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)

3. 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)

4. 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

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

6. 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)

7. 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.

8. 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

9. 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

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

11. 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

12. 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

13. 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

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

15. 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

16. 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)

17. 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)
18. 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)
19. Brock, W. A., A. Xepapadeas and A. N. Yannacopoulos,“Optimal agglomerations in dynamic economics” Journal of Mathematical Economics, Vol. 53, pp. 1-15, 2014.
20. 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.
21. 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.
22. 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
23. 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
24. 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
25. 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
26. 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
27. 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.
28. I.G. Stratis and A.N. Yannacopoulos, ‘Homogenisation theory for deterministic and random bianisotropic media’, Composites B, **43**, 2513–2520, 2012
29. M. I. Loizides and A. N. Yannacopoulos, ‘Lumpable Markov chains in risk management’, Optimization Letters, DOI: 10.1007/s11590-010-0275-x, 2011.
30. 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
31. A. A. Pinto, M. Ferreira, B. F. Finkenstddt, 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.
32. E. Panas and A. N. Yannacopoulos, ‘Itô meets Laibson meets Ramsey: Effects of hyperbolic discounting on stochastic growth’ Journal of Economic Asymmetries, **9**, No. 1, 52-66, 2012.
33. A. N. Yannacopoulos, N. E. Frangos and I. Karatzas, ‘Wiener chaos solutions for linear backward stochastic evolution equations’, SIAM Math. Analysis, **43** 68-113, 2011.
34. E. Kalpineli, N. E. Frangos and A. N. Yannacopoulos, ‘Wiener chaos solutions for stochastic hyperbolic equations and applications’, Stoch. Anal. and Applications, **29**, no. 2, pp. 237•258, 2011.

35. L. Boukas, D. Pinheiro, A. A. Pinto, S. Z. Xanthopoulos and A. N. Yannacopoulos, 'Behavioural and Dynamical Scenarios for Contingent Claims Valuation in Incomplete Markets' J. of Difference Eq. and Appl. Vol. 17, (2011) 1065-1084.

36. D. Kravvaritis, V. Papanikolaou, A. Xepapadeas and A. N. Yannacopoulos, 'On a class of operator equations arising in infinite dimensional replicator dynamics' Nonlinear Analysis, Real World Applications, (2010) Vol. 11, 2537-2556

37. T. Horsin, I. G. Stratis and A.N. Yannacopoulos, 'On the approximate controllability of the stochastic Maxwell equations' IMA Journal of Mathematical Control and Information, (2010) Vol 27, 103-118

38. K. B. Liaskos, I. Stratis and A. N. Yannacopoulos, 'Stochastic integrodifferential equations and applications in electromagnetics' Journal of Integral Equations and Applications, **22**, 559-590, (2010) (accepted 2008).

39. C. Nikolopoulos and A. N. Yannacopoulos, 'A model for optimal stopping in advertisement' Nonlinear Analysis: Real World Applications, (2010), Vol. 11 1129-1242.

40. K. B. Liaskos, I. Stratis and A. N. Yannacopoulos, 'A priori estimates for a singular limit approximation of the constitutive laws for chiral media in the time domain' J. Math. Anal. Appl. (2009) Vol 35, 288-305.

41. I. E. Nikolaou and A. N. Yannacopoulos, 'The effect of environmental accounting on financial risk management of firms via insurance' International Journal of Monetary Economics and Finance (2009) **2**, 1–15

42. A. N. Yannacopoulos, C. Lambrinoudakis, S. Gritzalis, S. Z. Xanthopoulos and S. N. Katsikas, 'Modelling privacy insurance contracts and their utilization in the risk management of ICT firms' ESORICS 2008, Lecture Notes in Computer Science 5283, 207–222, (2008)

43. S. Xanthopoulos and A. N. Yannacopoulos, 'Scenarios for price determination in incomplete markets' International Journal of Theoretical and Applied Finance, **11**, 415–445, (2008)

44. K. B. Liaskos, I. Stratis and A. N. Yannacopoulos, 'Pseudoparabolic equations with additive noise and applications' Mathematical Methods in the Applied Sciences, **32**, 963–985 (2008)

45. D. Kravvaritis, V. Papanicolaou and A. N. Yannacopoulos, 'Similarity solutions for a replicator dynamics equation' Indiana University Mathematics Journal, **57**, 1929–1946, (2008)

46. A. Katsis, S. Martzoukos and A. N. Yannacopoulos, 'Expert opinion elicitation in option pricing: A bayesian approach' (2008), Journal of Statistical Theory and Applications, **7**, 33–50

47. A. N. Yannacopoulos, 'Rational expectations models, An approach using forward backward stochastic differential equations' Journal of Mathematical Economics, (2008), **44**, 251–276

48. S. Gritzalis, A. N. Yannacopoulos, C. Lambrinoudakis, P. Hatzopoulos and S. K. Katsikas, 'A probabilistic model for optimal insurance contracts against security risks and privacy violation in IT outsourcing environments' Int. Journal of Information Security, **6**, 197–211, (2007)

49. N. E. Frangos, S. D. Vrontos and A. N. Yannacopoulos, 'Reinsurance control in a model with liabilities of the fractional Brownian motion type" Applied Stochastic Models in Business and Industry, **23**, 403-428, (2007)

50. N. I. Karachalios and A. N. Yannacopoulos, 'Global existence and global attractors or the discrete nonlinear Schrodinger equation II' Proc. Roy. Soc. Edin. A. Mathematics, (2007), **137**, 63–76

51. D. Tsitakis, S. Xanthopoulos and A. N. Yannacopoulos, 'A closed form solution for the price of cross commodity electricity derivatives' *Physica A: Econophysics Section* **371** (2006) 543-551

52. E. Akylas, A. D. Koussis and A. N. Yannacopoulos, 'Analytical solution of transient flow in a sloping soil layer with recharge' *Hydrological Sciences Journal* , **51**, (2006) 626-641

53. N. I. Karachalios, H. E. Nistazakis and A. N. Yannacopoulos, 'Asymptotic behavior of soltions of complex discrete evolution equations; the discrete Ginzburg-Landau equation' Discrete and Continuous Dynamical Systems, **19**, 711–736 (2007)

54. N. I. Karachalios and A. N. Yannacopoulos, 'Global existence and global attractors or the discrete nonlinear Schrodinger equation' Journal of Differential Equations, **217**, 88–123 (2005)

55. A. N. Yannacopoulos, 'A novel approach to exchange rate control using controlled backward stochastic differential equations' Ekonomia **8** (2005)

56. N. Frangos, S. Vrontos and A. N. Yannacopoulos, 'Ruin probability for a model with liabilities of the fractional Brownian motion type: A partial differential equation approach' Scandinavian Actuarial Journal, **4** 285–308, (2005)

57. N. Karachalios, H. E. Nistazakis and A. N. Yannacopoulos, 'Remarks on the asymptotic behaviour of solutions of complex discrete Ginzburg-Landau equations' Discrete and continuous dynamical systems, Suppl. 476–486 (2005)

58. C. Lambrinoudakis, S. Gritzalis, P. Hatzopoulos, A. N. Yannacopoulos and S. Katsikas, 'A formal model for pricing information systems insurance contracts' Computers Standards and Interfaces, **27**, 521–532 (2005)

59. S. Hatzispyros and A. N. Yannacopoulos, 'A random dynamical systems model for a stylized equity market', *Physica A: Econophysics Section* **347** (2005) 583-612

60. G. Kossioris, M. Plexousakis and A. N. Yannacopoulos, 'A Hamilton-Jacobi-Belman approach to the control of trapping time of a soliton in an external potential', *Quarterly of Applied Mathematics* **63** (2005), no. 2, 309–324.

61. G. Flessas, P. Leach and A. N. Yannacopoulos, 'Stochastic effects on the nonlinear Schrödinger equation', *Journal of Optics B* **6** S161-S168 (2004) (review paper)

62. E. Panas and A. N. Yannacopoulos, 'Stochastic models for the lexical richness of a text: Qualitative results' *Journal of Quantitative Linguistics* **11** 252-273 (2004)

63. D. J. Frantzeskakis, I. G. Stratis and A. N. Yannacopoulos, 'On equilibria of the two fluid model in magnetohydrodynamics' *Mathematical Physics: Geometry and Analysis* **7** 97-117 (2004)

64. I. G. Stratis and A. N. Yannacopoulos, 'Electromagnetic fields in linear and nonlinear chiral media: a time-domain analysis' *Abstract and Applied Analysis* **6** 471-486 2004 (review paper)

65. D. J. Frantzeskakis, A. Ioannidis, G. Roach, I. G. Stratis and A. N. Yannacopoulos, 'On the error of the optical response approximation in chiral media' *Applicable Analysis* **82** 839-856 (2003)

66. D. J. Frantzeskakis, I. G. Stratis and A. N. Yannacopoulos, 'Bright-dark vector solitons in chiral media' *Physica Scripta* **66** 280-283 (2002)

67. I. E. Papacharalampous, H. E. Nistazakis, P. G. Kevrekidis, A. N. Yannacopoulos, D. J. Frantzeskakis and B. A. Malomed, 'Two dimensional solitons and their interactions on a continuous wave background' *Physica Scripta* **66** 367-375 (2002)

68. B. A. Malomed, P. G. Kevrekidis, D. J. Frantzeskakis, H. E. Nistazakis and A. N. Yannacopoulos, 'One and two dimensional solitons in second harmonic generating lattices' *Physical Review E* **65** 05606 1-12 (2002)

69. A. N. Yannacopoulos, G. Rowlands and G. P. King, 'A Melnikov function for the break-up of closed streamlines in steady Navier-Stokes flows' *Physics of Fluids* **14** 1572-1579 (2002)

70. N. A. Yannacopoulos and A. N. Yannacopoulos 'Spatio-temporal dynamics and coupling in a macroeconomic model' *Economia* **5** 110-129 (2001)

71. A. N. Yannacopoulos, D. J. Frantzeskakis, C. Polymilis and K. Hizanidis ‘Motion of 2D Schrödinger solitary waves in the presence of random external potentials’ *Physica Scripta* **65** 365-368 (2002)

72. B. A. Malomed, D. J. Frantzeskakis, H. E. Nistazakis, A. N. Yannacopoulos and P. Kevrekidis ‘Pulled fronts in the Cahn-Hilliard equation’ *Physics Letters A* **295** 267-272 (2002)

73. G. P. King, G. Rowlands, M. Rudman and A. N. Yannacopoulos, ‘Predicting chaotic dispersion with Eulerian symmetry measures: Wavy Taylor-vortex flow’ *Physics of Fluids* **13** 2522-2528 (2001)

74. S. R. Otto, A. N. Yannacopoulos and J. R. Blake, ‘Transport and mixing in Stokes flow: The effect of chaotic dynamics on the blinking stokeslet’ *Journal of Fluid Mechanics* **430** 1-26 (2001).

75. C. Polymilis, D. J. Frantzeskakis, A. N. Yannacopoulos, K. Hizanidis and G. Rowlands, ‘Optical stripes and bullets for a modified nonlinear Schrödinger equation’ *Journal of the Optical Society of America B* **18** 75-80 (2001)

76. A. N. Yannacopoulos, D. J. Frantzeskakis, C. Polymilis and K. Hizanidis, ‘Conditions for soliton trapping in random potentials using Lyapunov exponents of stochastic ODEs’ *Physics Letters A* **271** 334-340 (2000)

77. A. N. Yannacopoulos and G. Rowlands, ‘Effective drift velocities and effective diffusivities of swimming microorganisms in external flows’ *Journal of Mathematical Biology* **39** 172-192 (1999)

78. A. N. Yannacopoulos, G. Rowlands and G. P. King, ‘Axial dispersion in the Taylor vortex: An approach using the slaving principle’ *J. Phys A: Math. and Gen.* **31** 3777-3790 (1998)

79. C. Polymilis, G. Rowlands and A. N. Yannacopoulos, ‘A Method for locating Singularities in the Complex Time Domain for Integrable Dynamical Systems’ *Celestial Mechanics and Dynamical Astronomy* **68** (1998) 273-281.

80. A. N. Yannacopoulos, I. Mezic, G. Rowlands and G. P. King, ‘Eulerian Diagnostics for Lagrangian Chaos in Three Dimensional Navier-Stokes Flows’ *Phys. Rev. E* **57**, 482-490 (1998)

81. A. N. Yannacopoulos, G. Rowlands and G. P. King, ‘Influence of particle inertia and Basset force on tracer dynamics: Analytic results in the small inertia limit’. *Phys. Rev. E* **55**, 4148–4157 (1997).

82. A. N. Yannacopoulos and G. Rowlands, ‘Local Transport Coefficients for Chaotic Systems.’ *Journal of physics A: Mathematical and General* **30**, 1503-1525 (1997)

83. A. N. Yannacopoulos, J. Brindley, J. H. Merkin and M. J. Pilling, ‘Approximation of Attractors Using Chebyshev Polynomials - An Application to the 3D BZ System’ *Physica D* **99** 162-174 (1996)

84. A. N. Yannacopoulos, A. S. Tomlin, J. Brindley, J. H. Merkin and M. J. Pilling, ‘Error Propagation in Approximations to Reaction-Diffusion-Advection Equations’ *Physics Letters A* **223** 82-90 (1996)

85. A. N. Yannacopoulos, A. S. Tomlin, J. Brindley, J. H. Merkin and M. J. Pilling, ‘The Error of the Quasi Steady State Approximation in Spatially Extended Systems’ *Chem Phys Lett* **248** 63-70 (1995)

86. A. N. Yannacopoulos, A. S. Tomlin, J. Brindley, J. H. Merkin and M. J. Pilling, ‘The use of Algebraic Sets in the Approximation of Inertial Manifolds and Lumping in Chemical Kinetic Systems’ *Physica D* **83** 421 (1995)

87. A. N. Yannacopoulos and G. Rowlands, ‘A Kinetic Description of Anomalous Particle Transport by Travelling Waves’ *Physica D* **76** ,216 (1994)

88. A. N. Yannacopoulos and G. Rowlands, ‘A Model for the Coexistence of Diffusion and Accelerator Modes in Chaotic Area Preserving Maps’ *J.Phys.A* **26** 6231 (1993)

89. A. N. Yannacopoulos and G. Rowlands, ‘Calculation of Diffusion Coefficients for Chaotic Maps’ *Physica D* **65** 71-85 (1993)

90. A. N. Yannacopoulos and G. Rowlands, 'Diffusion Coefficients for Higher Dimensional Symplectic Maps of the Cylinder' *Physica D* **57** 355-374 (1992)

91. A. N. Yannacopoulos and G. Rowlands, 'Diffusion Coefficients for the Web Map' *Physics Letters A* **155** 133-136 (1991)

92. G. P. Triberis, X. Zianni, A. N. Yannacopoulos and V. C. Karavolas, 'The Effect of the Density of States on the Conductivity of the Small-Polaron Hopping Regime in Disordered Systems' *J.Phys.Condens.Matter* **3** 337-346 (1991)

**(b) Book chapters and conference proceedings**

1. E. V. Petracou and A. N. Yannacopoulos, A Framework for Reaching Consensus Under Uncertainty in Multi-Agent Negotiations, in Handbook of Research on Policies and Practices for Sustainable Economic Growth and Regional Development, DOI: 10.4018/978-1-5225-2458-8.ch030, IGI Global, 2017.

2. A.E. Tsekrekos, and A.N. Yannacopoulos, Approximation of Optimal Stopping Problems and Variational Inequalities Involving Multiple Scales in Economics and Finance, in Accineli, Pinto, Gamba, Yannacopoulos (Eds) Trends in Mathematical Economics. Springer International Publishing, 2016. p. 317-329.

3. W. A. Brock, A. Xepapadeas and A. N. Yannacopoulos, Robust control of a spatially distributed commercial fishery, in V. Veliov, Dynamic optimization in environmental economics, Springer, 2013 (in press) (also appears as Enrico Mattei Nota di Lavoro 11.2013)

4. E. V. Petracou, A. Xepapadeas and A. N. Yannacopoulos, The bioeconomics of migration: A selective review towards a modelling perspective, in A. A. Pinto and D. Zilberman, Modeling, Optimization, Dynamics and Bioeconomy, Springer, 2013 (in press)

5. E. V. Petracou and A. N. Yannacopoulos, Decision theory under risk and applications in the social sciences I: Individual decision making, in Mathematical Modeling with Interdisciplinary Applications, X. S. Yang (ed) Wiley and Sons 2013

6. E. V. Petracou and A. N. Yannacopoulos, Decision theory under risk and applications in the social sciences II: Game Theory, in Mathematical Modeling with Interdisciplinary Applications, X. S. Yang (ed) Wiley and Sons 2013

7. L. A. Boukas, K. I. Vasileiadis, S. Xanthopoulos and A. N. Yannacopoulos, Linear and Nonlinear Parabolic Partial Diffferential Equations in Financial Engineering in Mathematical Modeling with Interdisciplinary Applications, X. S. Yang (ed) Wiley and Sons 2013

8. A. N. Yannacopoulos, 'Stochastic saddle points and the modeling of expectations in economic dynamics' Dynamics, Games and Science II, A. A. Pinto, M. Peixoto and D. Rand (eds) Springer 2011

9. C. Kountzakis, S. Z. Xanthopoulos and A. N. Yannacopoulos, 'Minimum Regret Pricing of Contingent Claims in Incomplete Markets' Dynamics, Games and Science I, A. A. Pinto, M. Peixoto and D. Rand (eds) Springer 2011

10. M. Ferreira, B. Finkenstädt, B. M. P. M. Oliveira, Alberto A. Pinto and A. N. Yannacopoulos, 'Bargaining Skills in an Edgeworthian Economy', Dynamics, Games and Science I, A. A. Pinto, M. Peixoto and D. Rand (eds) Springer 2011

11. D. Kravvaritis, V. Papanicolaou, T. Xepapadeas and A. N. Yannacopoulos, 'A Class of Infinite Dimensional Replicator Dynamics', Dynamics, Games and Science I, A. A. Pinto, M. Peixoto and D. Rand (eds) Springer 2011

12. Boukas, L. and Pinheiro, D. and Pinto, AA and Xanthopoulos, SZ and Yannacopoulos, AN, 'Three Behavioural Scenarios for Contingent Claims Valuation in Incomplete Markets', in Nonlinear Science and Complexity, J.A.T. Machado et al (eds) Springer 2010

13. G. Demopoulos, N. A. Yannacopoulos, A. N. Yannacopoulos and S. A. Warren, (2009), 'Neo-Wicksellian Monetary Policy and Monetary Unions' The Global Economics of a Changing Environment, edited by J. A. Brox and N. C. Baltas, North Waterloo Academic Press, The Athenian Policy Forum.

14. 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. Lambrinoudakisand S. De Capitani di Vimercati, Auerbach Publications, Taylor and Francis, New York, London, 2008

15. D. Pinheiro, A. A. Pinto, S. Z. Xanthopoulos, and A. N. Yannacopoulos, 'A short overview of some behavioural scenarios for derivative pricing in incomplete markets' Proceedings in Applied Mathematics and Mechanics, **7**, 1060309•1060310, 2007, Wiley.

16. Liaskos, K. B.; Stratis, I. G.; Yannacopoulos, A. N. A time domain analysis for chiral deterministic and random media in electromagnetics. Advanced topics in scattering and biomedical engineering, 171–179, World Sci. Publ., Hackensack, NJ, 2008.

17. Liaskos, K. B.; Stratis, I. G.; Yannacopoulos, A. N. Well posedness of the stochastic Drude-Born-Fedorov model in electromagnetics. Bull. Greek Math. Soc. 54 (2007), 207–220. (special issue)

18. S. Katsikas, A. N. Yannacopoulos, S. Gritzalis, C. Lambrinoudakis and P. Hatzopoulos, "How much should we pay for security?" in Security Management, Integrity, and Internal Control in Information Systems, Springer, Boston, 2006

19. Liaskos, K. B.; Stratis, I. G.; Yannacopoulos, A. N. Stochastic differential equations of Sobolev type in infinite dimensional Hilbert spaces. Mathematical methods in scattering theory and biomedical engineering, 191–199, World Sci. Publ., Hackensack, NJ, 2006.

20. A. D. Ioannidis, I. G. Stratis and A. N. Yannacopoulos 'Electromagnetic fields in chiral media' Influence of traditional mathematics and mechanics on modern science and technology,Eds. G.S. Sih and C. P. Spyropoulos, Proceedings, May 24-28, 2004, Messini Greece

21. A. D. Ioannidis, I. G. Stratis and A. N. Yannacopoulos, 'Electromagnetic wave propagation in dispersive bianisotropic media' in Mathematical methods in scattering theory and biomedical engineering, D. Fotiadis and C. Massalas (Eds) World Scientific, Singapore 2004 in press

22. 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).

23. 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.

24. 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).

**(c) Lecture notes.**

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

2. A. N. Yannacopoulos, *Introduction to mathematical analysis – with applications in probability and statistics*, AUEB.

3. A. N. Yannacopoulos, *Introduction to Measure and Integration – with applicatins 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, 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.

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

3. 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.

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

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

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

7. 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.

8. 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)

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

10. 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)

11. 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)

12. 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

13. 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

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

15. 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).
16. 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
17. 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.
18. 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)
19. 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. Applied Nonlinear Dynamics, University of Leeds, 16th December 1994 with A. Fordy and M. Nelson)
2. Low dimensional dynamics of complex systems, University of Leeds, 15 May 1995 with J. Brindley and A. Fordy)
3. Mixing with Chaos, Mathematics Institute, University of Warwick, 8 March 1999 (with G. P.King)
4. 1st - 14th Summer Schools in Stochastic Finance, AUEB and Univ. Aegean, July 2003-today.
5. 2nd International Conference on Modern Mathematical Methods in Science and Technology, (M3ST 2009), Poros 2009, Member of organizing commitee.
6. Dynamics and Applications 2008 (in honour of M. Peixoto and D. Rand), Braga, Portugal, Member of Scientific Commitee.
7. 3rd, 4th, 5th International Conference on Modern Mathematical Methods in Science and Technology, (M3ST 2012), Kalamata 2012, 2015, 2018 Member of scientific commitee.

**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 etc.