Curriculum Vitae of Vassili (Vasily) N. Kolokoltsov

1. GENERAL INFORMATION

Present Position: Professor

Address: Department of Statistics, University of Warwick, CV4 7AL, UK

email: v.kolokoltsov@warwick.ac.uk

Date of birth: 8th August 1959, place of birth: Peking, China

Nationality: Russian

Married, with four children

Languages: English (fluent), German, French, Spanish (small talk), Russian (native)

Membership in Professional Bodies and Professional Associations:

Member of the New York Academy of Sciences (1995-)

Member of the London Mathematical Society (2000-)

Associate member in IPI RAN (Institute of Problems of Informatics of the Russian Academy of Science) (2011-)

Associate member in HSE (Higher School of Economics), Moscow (2018-)

Associate member in St. Petersburg University (2018-)

2. ACADEMIC QUALIFICATIONS

Full Doctor in Mathematics and Physics from the Steklov Mathematical Institute of the Russian Academy of Science

Graduation date: July 1993

Ph.D in Mathematics from Moscow State University

Graduation date: March 1985

University Diploma with distinction in Mathematics (M.Sc-level) from Moscow State University, Faculty of Mechanics and Mathematics

Graduation date: June 1981

3. EMPLOYMENT HISTORY

June 2006-	Reader in Probability (from June 2012 Professor) at the University of Warwick, Department of Statistics
Jan.-Jun. 2006	Visiting Professor at INRIA Rocquencourt, France
Autumn 2004	Visiting Professor at Universidad Autonoma Metropolitana (UAM), Mexico
2004-2010	(honorary position) Professor at Moscow Economic Institute
2002-2004	(part-time position) Leading researcher at the Institute of the Information Transmission Problems of the Russian Academy of Sciences
2001-2005	Professor in Applied Mathematics in the Nottingham Trent University, UK

1996-2001 Reader in Mathematics in the Nottingham Trent University, UK

1995-1996 Research Fellow at Ruhr University Bochum, Germany

1995-1995 Research Fellow, Ecole des Mines de Nantes, Dep. Automatic Control, France

1994-2002 (part-time position) Major Researcher, Moscow Institute of New Technologies, Mathematical Modeling Department, Moscow, Russia

1993-1994 Alexander v. Humboldt Research Fellow, Mathematical Institute, Ruhr University Bochum, Germany

1988-1994 Associate professor, Moscow Institute of Electronics and Mathematics (MIEM), Applied Mathematics Department, Moscow, Russia

1984-1988 Scientific researcher, Inst. of Physical and Technical Problems, Moscow, Russia

4. TEACHING and ADMINISTRATION

(a) (1988-1993) Moscow Institute of Electronic Machine Design and Moscow State University: 'Optimization Theory', 'Mathematical Models in Economics and Biology', 'Equations of Mathematical Physics', 'Asymptotic Methods for Partial Differential Equations', 'Numerical Methods', and also supervised MSc-project students in Applied Mathematics

(b) (1996-2005) Nottingham Trent University: 'Mathematics and Statistics' for HND/HNC Electrical and Electronic Engineering and B.Eng Civil Engineering, 'Information Theory and Stochastic Processes', 'Information Technology', 'Mathematical Methods' and 'Game Theory' for B.Sc in Mathematics for Information Technology

(c) (fall 2004) - Universidad Autonoma Metropolitana, Mexico: 'Functional Analysis': a semester course for postgraduates (in Spanish)

(d) (2006-) - University of Warwick: '*Brownian motion*', '*Mathematical methods in finances*' and '*Dynamic Stochastic Control*' for the fourth year (integrated masters), '*Advanced Probability*' and 'Life Contingencies' for the third year and '*Probability AB*' (introductory module for the first year) on Math, MORSE and MathStats degrees; I have supervised lots (more than 30 in Warwick alone) of Master's dissertations from the MMORSE degree, MSc in Statistics, MSc in Financial Mathematics, MSc in Complexity Science, and in particular, group projects in financial statistics.

(e) I gave several invited short courses for students of various universities including 'Introduction to Financial Mathematics' (March 2012) and 'Advanced Financial Mathematics' (March 2013) in the Petrozavodsk University (Korelia, Russia), 'Introduction to nonlinear Markov processes' (May 2012) in Linnaeus University (Växjö, Sweden), 'Introduction to Financial Mathematics' (June 2014) in the Yakutsk University (Yakutia, Russia), 'Continuous time Random Walks (CTRW) and Fractional Calculus' (November 2014) in Bilbao University (Spain), 'Brownian motion' (March 2017, Torino), 'Brownian motion and Markov processes' (March 2018, Torino), 'Nonlinear Markov processes and games' (June 2018) in Wuhan, China, Game Theory (March 2017 and March 2019) in

Warwick, 'Introduction to Financial Mathematics' (November 2018 and November 2019) in the HSE, Moscow, 'Information systems' (October 2018 and October 2019) in St. Petersburg University, 'Probabilistic methods for solving fractional PDEs' (May 2018) in the Summer school and conference on nonlocal operators, Bilbao, and (May 2019) on the Joint CDT Colloquium, Warwick.

(f) My administration experience in Warwick includes: 1) The Director of Post Graduate Studies (2019-2020) 2) The Deputy Head of Research in the Department of Statistics (2014 -2018) 3) The chair of the Departmental Research Committee (2010-2012), 4) Course leader and admission tutor of the Warwick MSc in Statistics degree (2006-2007), 5) Senior associate (co-director) of the Warwick Complexity Doctoral Training Center (2006-2013), 6) Dealing with undergraduate publicity and undergraduate handbook (2006-2008), 7) Organizing final year research projects for MMORSE students, including the moderation of assessment, 8) Organizing Probability at Warwick (PaW) research seminar 'Midlands Probability Theory Seminar', 9) Acting as invigilator and senior invigilator on the exams, 10) Member of the departmental promotion committee (2012-), 11) Reviewer for staff on the Annual Academic Review (Performance - Development Review), 12) Organizing open days for prospective students, 13) Editing the Departmental Newsletter

5. RESEARCH

My general interests lie in probability and stochastic processes, mathematical physics, differential equations and analysis, optimization and games with applications to business, biology and finances.

(a) **Monographs**:

[1] V. P. Maslov, V. N. Kolokoltsov. *Idempotent analysis and its application to Optimal control* (in Russian). Moscow, Nauka, 1994.

[2] V. N. Kolokoltsov, V. P. Maslov. *Idempotent analysis and its applications.* Kluwer Publishing House, 1997.

[3] V. N. Kolokoltsov. *Semiclassical Analysis for Diffusions and Stochastic Processes.* Springer Lecture Notes Math., v. 1724, Springer 2000.

[4] V. N. Kolokoltsov, O. A. Malafeyev. *Introduction to the analysis of many agent systems of competition and cooperation* (in Russian). St. Petersburg Univ. Press, 2007. Sec Ed. 'Lan' Publisher, St. Petersburg, 2012.

[5] V. N. Kolokoltsov, O. A. Malafeyev. *Understanding Game Theory.* World Scientific 2010. Second Edition to appear in 2020.

[6] V. N. Kolokoltsov. *Nonlinear Markov processes and kinetic equations.* Cambridge Tracks in Mathematics 182, Cambridge Univ. Press, 2010. See the review of Prof. D. Applebaum in Bull. London Math. Soc. (2011) 43(6): 1245-1247.

[7] V. N. Kolokoltsov. *Mathematical Analysis of Financial Markets. Probability Theory and Financial Mathematics. A brief introduction.* (In two languages: English and Russian). Moscow Economic Institute, Moscow 2010. ISBN 978-5-904073-03-9.

[8] V. N. Kolokoltsov. *Markov processes, semigroups and generators.* DeGruyter Studies in Mathematics v. 38, DeGruyter, 2011.

[9] P. Bernhard, J. Engwerda, B. Roorda, J.M. Schumacher, V. N. Kolokoltsov, P. Saint-Pierre and J.-P. Aubin. The Interval Market Model in Mathematical Finance: Game-Theoretic Methods. Birkhäuser, 2012. My contribution is Part 4: Game-theoretic analysis of rainbow options in incomplete markets, p. 217-290.

[10] V. N. Kolokoltsov and O. A. Malafeyev. *Many Agent Games in Socio-economic Systems: Corruption, Inspection, Coalition Building, Network Growth, Security*. Springer Series in Operations Research and Financial Engineering, Springer Nature, 2019.

[11] V. N. Kolokoltsov. *Differential equations on measures and functional spaces.* Birkhäuser Advanced Texts, Birkhäuser, 2019.

[12] O. A. Malafeyev and V. N. Kolokoltsov. Mathematical and computer analysis of game-theoretic models of project investment with possible corruption taken into account (in Russian). Sankt-Petersburg, 2019. ISBN 978-5-9651-1243-2.

(b) **Edited volumes:**

R. Ball, V. Kolokoltsov and R. MacKay (Eds.). Complexity Science. The Warwick Master's Course. London Mathematical Society Lecture Notes Series, v. 408, Cambridge University Press, 2013 (446 pp). My personal part: Chapter 6. Stochastic Methods in Economics and Finance, p. 316-386.

(c) **Main Papers**:

[1] V.N. Kolokoltsov. *Geodesic flows on two-dimensional manifolds with additional quadratic in velocity integral.* Izv. Akad. Nauk USSR, **46** (1982), 994-1010.

[2] V.N. Kolokoltsov. *New examples of manifolds all of whose geodesics are closed.* Vestnik Moskovskogo Universiteta, **4** (1984), 80-82.

[3] V.N. Kolokoltsov, V.P. Maslov. *The general form of the endomorphisms in the space of continuous functions with values in a numerical semiring.* Sov. Math. Dokl. **36** (1988), 55-59.

[4] V.N. Kolokoltsov, V.P. Maslov. *The Cauchy problem for the homogeneous Bellman equation.* Sov. Math. Dokl. **36** (1988), 326-330.

[5] V.N. Kolokoltsov, D.R. Lebedev. *Infinite series of local conservation laws of Miura type for higher Benny equations.* Uspekhi Mat. Nauk **43** (1988), 193-194. Engl. transl. in Sov. Math. Surveys.

[6] V.N. Kolokoltsov, V.P. Maslov. *Idempotent analysis as an apparatus of optimal control theory 1.* Funkz. Anal. i Pril. **23:1** (1989), 1-14. Engl. transl. in Functional Analysis and Appl.

[7] V.N. Kolokoltsov, V.P. Maslov. *Idempotent analysis as an apparatus of optimal control theory 2.* Funkz. Anal. i Pril. **23:4** (1989), 53-56. Engl. transl. in Functional Analysis and Appl.

[8] V.N. Kolokoltsov. *Turnpikes and infinite extremals in Markovian decision processes.* Matemat. Zametki (in Russian) **46:4** (1989), 118-120.

[9] V.N. Kolokoltsov. *Maslov's index in infinite-dimensional symplectic geometry.* Matemat. Zametki (in Russian) **48:6** (1990), 64-68.

[10] V.N. Kolokoltsov. *Maslov's arithmetic in general topology.* In: V.V. Fedorchuk et al. (Eds.) "Geometry, Topology and Applications" (in Russian), Moscow Inst. of Instrument Making, Moscow (1990), 64-68.

[11] S.Yu. Dobrokhotov, V.N. Kolokoltsov, V.P. Maslov. *The splitting of the low lying energy levels of the Schrödinger operator and the asymptotics of the fundamental solution of the equation* $hu_t = (h^2\Delta/2 - V(x))u$. Teoret. i Mat. Fizika **87:3** (1991), 323-375. Engl. transl. in Theor. Math. Physics.

[12] V.P. Belavkin, V.N. Kolokoltsov. *Quasyclassical asymptotics of quantum stochastic equations.* Teoret. i Matem. Fizika **89:2** (1991), 163-177. Engl. transl. in Theor. Math. Physics.

[13] V.N. Kolokoltsov. *Quasyclassical solutions of the Belavkin quantum filtering equation.* Matem. Zametki **50:5** (1991), 153-156. Engl. transl. in Mathematical Notes.

[14] V.N. Kolokoltsov. *Introduction of a new Maslov-type currency (coupons) as a means of solving a market game under non-equilibrium prices.* DAN 320:6 (1991), 1310-1314. Engl. Transl. Sov. Math. Dokl. **44:2** (1992), 624-629.

[15] V.N. Kolokoltsov. *The stochastic Bellman equation as a nonlinear equation in Maslov spaces. Perturbation theory.* Dokl. Akad. Nauk **323:2** (1992), 223-228. Engl. transl. in Sov. Math. Dokl. **45:2** (1992), 294-300.

[16] V.N. Kolokoltsov, V.P. Maslov. *The differential Bellman equation and the Pontriagin maximum principle for multicriterial optimization problem .* Dokl. Akad. Nauk **324:1** (1992), 29-34. Engl. transl. in Sov. Math. Dokl.

[17] S.Yu. Dobrokhotov, V.N. Kolokoltsov, V.P. Maslov. *Quantization of the Bellman Equation, Exponential Asymptotics and Tunneling .* Advances in Soviet Mathematics **13** (1992), Idempotent Analysis, Ed. V.P. Maslov, S.N. Samborski, 1-46.

[18] V.N. Kolokoltsov. *On linear, Additive, and Homogeneous Operators in Idempotent Analysis .* Advances in Soviet Mathematics **13** (1992), Idempotent Analysis, Ed. V.P.Maslov et S.N. Samborski, 87-101.

[19] V.N. Kolokoltsov. *On the asymptotics of the low lying eigenvalues and eigenfunctions of the Schrödinger operator.* Dokl. Akad. Nauk **328:6** (1993), 649-653. Engl. transl. in Sov. Math. Dokl.

[20] S.Yu. Dobrokhotov, V.N. Kolokoltsov. *Splitting amplitudes of the lowest energy levels of the Schrdinger operator with double-well potential.* Teoret. i Matem. Fizika **94:3** (1993), 426-434. Engl. transl. in Theor. Math. Phys.

[21] V.N. Kolokoltsov. *Estimates of exactness for Laplace Integrals.* Trudy Steklov Mat. Inst. **203** (1994) "Chosen questions of Math. Phys. and Analysis", 113-115.

[22] S.Yu. Dobrokhotov, V.N. Kolokoltsov, V.M. Olive. *Quasimodes of the diffusion operator* $-\epsilon\Delta + V(x)\frac{\partial}{\partial x}$*, corresponding to asymptotically stable limit cycles of the field*

$V(x)$. Aportaciones Matema'ticas. Serie Notas de Investigaci'on **11**. III Simposio de Probabilidaa y Procesos Estoca'sticos. Sociedad Matema'tica Mexicana (1994), 81-89.

[23] V.N. Kolokoltsov. *Long time behavior of the solutions of the Belavkin quantum filtering equation.* Proc. Intern. Workshop on Quantum Communications and measurement, Nottingham, 11-16 July 1994 (Eds. V.P. Belavkin, O. Hirota, R.L. Hudson). Plenum Press, N.Y. 1995, 429-439.

[24] S. Yu. Dobrokhotov, V.N. Kolokoltsov. *Double-well Splitting of the Low Energy Levels of the Schrödinger Operator for Multidimensional ϕ^4-models on Tori.* Journ. Math. Phys. **36:3** (1995), 1038-1053.

[25] V.N. Kolokoltsov. *Scattering theory for the Belavkin equation describing a quantum particle with continuously observed coordinate.* Journ. Math.Phys. **36:6** (1995), 2741-2760.

[26] S.Yu. Dobrokhotov, V.N. Kolokoltsov, V.M. Olive. *Asymptotic stable invariant manifolds of the vector field $V(x)$ and quasimodes of the operator $V(x)\nabla - \epsilon\Delta$.* Matem. Zametki **58:2** (1995), 301-306. Engl. transl. in Math. Notes.

[27] V.N. Kolokoltsov, K. Makarov. *Asymptotic Spectral Analysis of the Small Diffusion Operator and Life Times of the Diffusion Process .* Russian Journal Math. Phys. **4:3** (1996), 341-360.

[28] V.N. Kolokoltsov. *Stochastic Hamilton-Jacobi-Bellman equation and stochastic Hamiltonian systems.* Journ. Contr. and Dynamic systems, **2:3** (1996), 299-319.

[29] S. Albeverio, V.N. Kolokoltsov, O.G. Smolyanov. *Reprèsentation des solutions de l'èquation de Belavkin pour la mesure quantique par une version rigoureuse de la formule d'integration fonctionelle de Menski.* C.R. Acad. Sci. Paris, ser.1 **323:6** (1996), 661-664.

[30] V.N. Kolokoltsov. *A note on the long time asymptotics of the Brownian motion with application to the theory of quantum measurement.* Potential Analysis, **7** (1997), 759-764.

[31] S. Albeverio, A. Hilbert, V.N. Kolokoltsov. *Transience for stochastically perturbed Newton systems.* Stochastics and Stochastic reports, **60** (1997), 41-55.

[32] S. Albeverio, V.N. Kolokoltsov. *The rate of escape for some Gaussian processes and the scattering theory for their small perturbations.* Stochastic Processes and their Applications, **67** (1997), 139-159.

[33] S.Albeverio, V.N. Kolokoltsov, O.G. Smolyanov. *Continuous quantum measurement: local and global approaches.* Rev. Math. Phys. **9:8** (1997), 907-920.

[34] V.N. Kolokoltsov. *Localization and analytic properties of the simplest quantum filtering equation.* Rev. Math. Phys. **10: 6** (1998), 801-828.

[35] V.N. Kolokoltsov. *Non expansive maps and option pricing theory.* Kibernetica **34:6** (1998), 713-724.

[36] S. Albeverio, A. Hilbert, V.N. Kolokoltsov. *Estimates uniform in time for the transition probability of diffusion with small drift and for stochastically perturbed Newton equations.* J. Theor. Probability **12:3** (1999), 293-300.

[37] V.N. Kolokoltsov. *Stochastic Hamilton-Jacoby-Bellman equation and Stochastic method WKB.* Proc. Intern. Workshop "Idempotency", Bristol, October 1994 (Ed. J Gunawardena), Cambridge Univ. Press 1998, 285-302.

[38] V.N. Kolokoltsov, V.P. Maslov. *New differential equation for the dynamics of the Pareto sets.* Proc. Intern. Workshop "Idempotency", Bristol, October 1994 (Ed. J. Gunawardena), Cambridge Univ. Press 1998, 322-330.

[39] V.N. Kolokoltsov. *Long time behavior of continuously observed and controlled quantum systems (a study of the Belavkin quantum filtering equation).* In: Quantum Probability Communications, QP-PQ, V. 10, Ed. R.L. Hudson, J.M. Lindsay, World Scientific, Singapore (1998), 229-243.

[40] V.N. Kolokoltsov, O.A. Malafeev. *A turnpike theorem in conflict-control processes with many participants.* In: O.Malafeev (Ed.) Conflict Models in Economics and Finances. St. Petersburg Univ. Press, 1997 (in Russian), 57-62.

[41] V.N. Kolokoltsov. *Idempotent Structures in Optimisation.* Proc. Intern. Conf. devoted to the 90-th anniversary of L.S. Pontryagin, v. 4, VINITI, Moscow (1999), 118-174. Engl. transl. J. Math. Sci., NY **104:1** (2001), 847-880.

[42] V.N. Kolokoltsov. *Complex measures on path space: an introduction to the Feynman integral applied to the Schrödinger equation.* Methodology and Computing in Applied Probability **1:3** (1999), 349-365.

[43] V.N. Kolokoltsov. *Symmetric Stable Laws and Stable-like Jump-Diffusions.* Proc. London Math. Soc. **3 (80)** (2000), 725-768.

[44] S. Albeverio, A. Hilbert and V. Kolokoltsov. *Sur le Comportement Asymptotique du Noyau Associé á une Diffusion Dégénéré.* C.R. Math. Rep. Acad. Sci. Canada. **22:4** (2000), 151-159.

[45] V. Kolokoltsov, V. Korolev, V. Uchaikin. *Fractional Stable Distributions.* Journal of Mathematical Sciences **105:6** (2001), 2570-2577.

[46] V.N. Kolokoltsov. *Small diffusion and fast dying out asymptotics for superprocesses as non-Hamiltonian quasi-classics for evolution equations.* Electronic Journal of Probability http://www.math.washington.edu/ ejpecp/ **6** (2001), paper 21.

[47] V. N. Kolokoltsov, A. Tyukov. *The rate of escape of stable Ornstein-Uhlenbeck processes and the scattering theory for their perturbations.* Markov Processes and Related Fields **7:4** (2001), 603-626.

[48] V.P. Belavkin, V.N. Kolokoltsov. *Stochastic evolutions as boundary value problems.* In: RYMS Kokyuroku 1227 "Infinite Dimensional Analysis and Quantum Probability Theory." Kyoto, Japan (2001), 83-95.

[49] V.N. Kolokoltsov. *Mathematics of the Feynmann path integral.* Proc. of the International Mathematical conference FILOMAT 2001, University of Nis, FILOMAT **15** (2001), 293-312.

[50] V.P. Belavkin, V.N. Kolokoltsov. *Stochastic evolution as interaction representation of a boundary value problem for Dirac type equation.* Infinite Dimensional Analysis, Quantum Probability and Related Fields **5:1** (2002), 61-92.

[51] V.N. Kolokoltsov, R.L. Schilling, A.E. Tyukov. *Transience and non-explosion of certain stochastic Newtonian systems.* Electronic Journal of Probability http://www.math.washington.edu/ ejpecp/ **7** (2002), Paper 19.

[52] M. Akian, S. Gaubert, V.N. Kolokoltsov. *Invertibility of Functional Galois Connections.* C. R. Acad. Science Paris, Ser. I, **335.** (2002), 1-6.

[53] V. Kolokoltsov. *A new path integral representation for the solutions of the Schrödinger and stochastic Schrödinger equation.* Math. Proc. Cam. Phil.Soc. **132** (2002), 353-375.

[54] V.P. Belavkin, V.N. Kolokoltsov. *On general kinetic equation for many particle systems with interaction, fragmentation and coagulation.* Proc. Royal Society London A **459** (2003), issue 2031, 727-748.

[55] V. N. Kolokoltsov. *On the singular Schrödinger equations with magnetic fields.* Matem. Zbornik **194:6** (2003), 105-126 (in Russian). Engl. transl. Sbornik Mathematics, p. 897-918.

[56] V.N. Kolokoltsov, A.E. Tyukov. *Small time and semiclassical asymptotics for stochastic heat equation driven by Lévy noise.* Stochastics and Stochastics Reports **75** (1-2) (2003), 1-38.

[57] V.N. Kolokoltsov. *Measure-valued limits of interacting particle systems with k-nary interactions I. One-dimensional limits.* Probability Theory Related Fields **126** (2003), 364-394.

[58] V. Kolokoltsov. *On Extensions of Mollified Boltzmann and Smoluchovski Equations to Particle Systems with a k-nary Interaction.* Russian Journal of Mathematical Physics **10:3** (2003), 268-295.

[59] V. Bening, V. Korolev, T. Suchorukova, G. Gusarov, V. Saenko, V. Kolokoltsov. Fractionally Stable Distributions. In: V. Korolev, N. Skvortsova (Eds.) "Stochastic Models of Plasma Turbulence", Moscow State University, Moscow, 2003, p. 291-360 (in Russian). Engl. transl. in V. Korolev, N. Skvortsova (Eds.) "Stochastic Models of Structural Plasma Turbulence", VSP, Boston 2006, p.175-244.

[60] V.N. Kolokoltsov, R.L. Schilling, A.E. Tyukov. *Estimates for Multiple Stochastic Integrals and stochastic Hamilton-Jacobi equations.* Revista Matematika Iberoamerikana **20** (2004), 333-380.

[61] V.N. Kolokoltsov. *On Markov processes with decomposable pseudo-differential generators.* Stochastics and Stochastics Reports **76:1** (2004), 1-44.

[62] V. Kolokoltsov. *Measure-valued limits of interacting particle systems with k-nary interaction II. Finite-dimensional limits.* Stochastics and Stochastics Reports **76:1** (2004), 45-58.

[63] V. Kolokoltsov. *Hydrodynamic limit of coagulation-fragmentation type models of k-nary interacting particles.* Journal of Statistical Physics **115**, 5/6 (2004), 1621-1653.

[64] V.E. Bening, V.Yu. Korolev, V.N. Kolokoltsov, V.V. Saenko, V.V. Uchaikin, V.M. Zolotarev. Estimation of parameters of fractional stable distributions. J. Math. Sci. (N. Y.) **123:1** (2004), 3722–3732.

[65] M. Akian, S. Gaubert, V.N. Kolokoltsov. *Set Coverings and the Invertibility of Functional Galois Connections.* In: "Idempotent Mathematics in Mathematical Physics" (Eds. G.L. Litvinov and V.P. Maslov), Contemporary Mathematics Series v. 377, American Mathematical Society (2005), 19-51.

[66] V.N. Kolokoltsov. Path integration: connecting pure jump and Wiener processes. In: Waymire, J. Duan (Eds.). "Probability and Partial Differential Equations in Modern Applied Mathematics", The IMA Volumes in Mathematics and its Applications, v. 140 (2005), p. 163-180.

[67] V. Kolokoltsov. *On the regularity of solutions to the spatially homogeneous Boltzmann equation with polynomially growing collision kernel.* Preprint Universidad Autonoma Metropolitano, 2005, Mexico. Published in Advanced Studies in Contemporary Math. **12:1** (2006), 9-38.

[68] V.E. Bening, V. Yu. Korolev, V.N. Kolokoltsov. Limit theorems for continuous-time random walks in the double array limit scheme. Journal of Mathematical Sciences **138:1** (2006), 5348-5365.

[69] V. Kolokoltsov. *Kinetic equations for the pure jump models of k-nary interacting particle systems.* Markov Processes and Related Fields **12** (2006), 95-138.

[70] V.N. Kolokoltsov, A.E. Tyukov. *On boundary Value Problems for Hamiltonian Systems and Absolute Minimizers in Calculus of Variations.* Electronic J. Diff. Eqns. http://ejde.math.txstate.edu/ 2006 (2006), n. 90, 1-21.

[71] Z. Hucki, V. Kolokoltsov. *Pricing of rainbow options: game theoretic approach.* Preprint Nottingham Trent University 3/03, 2003. International Game Theory Review **9:2** (2007), 215-242.

[72] V.E. Bening, V. Yu. Korolev, S. Koksharov, V. N. Kolokoltsov. Limit theorems for continuous-time random walks in the double-array limit scheme. J. Math. Sci. (N. Y.) **146:4** (2007), 5959–5976.

[73] V.E. Bening, V. Yu. Korolev, S. Koksharov, V. N. Kolokoltsov. Convergence-rate estimates for superpositions of independent stochastic processes with applications to estimation of the accuracy of approximation of the distributions of continuous-time random walks by fractional stable laws. J. Math. Sci. (N. Y.) **146:4** (2007), 5950-5958.

[74] V. Kolokoltsov. *Nonlinear Markov Semigroups and Interacting Lévy Type Processes.* Journ. Stat. Physics **126:3** (2007), 585-642.

[75] V. Kolokoltsov. Generalized Continuous-Time Random Walks (CTRW), Subordination by Hitting Times and Fractional Dynamics. arXiv:0706.1928v1[math.PR] 13 June 2007. Theory of Probability and its Applications **53:4** (2009), 594-609.

[76] V. Kolokoltsov. The Central Limit Theorem for the Smoluchovski Coagulation Model. arXiv:0708.0329v1 [math.PR] 2 August 2007. Probability Theory Related Fields **146: 1** (2010), 87-153.

[77] M. Akian, S. Gaubert, V. Kolokoltsov. *The Optimal Assignment Problem for a Countable State Space.* Contemporary Mathematics (edited by AMS) **495** (2009), 39-60.

[78] V. Kolokoltsov. The Lévy-Khintchine type operators with variable Lipschitz continuous coefficients generate linear or nonlinear Markov processes and semigroups. arXiv:0911.5688 (2009). Prob. Theory Related Fields **151**(2011), 95-123.

[79] V. N. Kolokoltsov. Stochastic monotonicity and duality for one-dimensional Markov processes. arXiv:1002.4773 (2010). Mathematical Notes **89:5** (2011), 652-660.

[80] V. N. Kolokoltsov. Stochastic integrals and SDE driven by nonlinear Lévy noise. In D. Crisan (Ed.) "Stochastic Analysis in 2010", Springer 2011, p. 227-242.

[81] S. Albeverio, A. Hilbert and V. Kolokoltsov. Asymptotic Expansions for the Heat Kernel and the Trace of a Stochastic Geodesic Flow. arXiv:0912.4683. Stochastics. An International Journal of Probability and Stochastic Processes 84 (2012), no. 2-3, 315333.

[82] V. N. Kolokoltsov. Nonlinear Lévy and nonlinear Feller processes: an analytic introduction, 2011. http://arxiv.org/abs/1103.5591. In: A. V. Antoniouk and R. V. Melnik (Eds.). Mathematics and Life Sciences. De Gruyter 2013, p. 45-70.

[83] V. N. Kolokoltsov. Game theoretic analysis of incomplete markets: emergence of probabilities, nonlinear and fractional Black-Scholes equations. Risk and Decision Analysis **4** (2013), 131-161.

[84] V. N. Kolokoltsov. Nonlinear Markov games on a finite state space (mean-field and binary interactions) http://arxiv.org/abs/1105.3053. International Journal of Statistics and Probability. Canadian Center of Science and Education (Open access journal), **1:1** (2012), 77-91. http://www.ccsenet.org/journal/index.php/ijsp/article/view/16682

[85] Vassili Kolokoltsov and Wei Yang. The turnpike theorems for Markov games. Dynamic Games and Applications **2: 3** (2012), 294-312.

[86] Vassili N. Kolokoltsov. Nonlinear diffusions and stable-like processes with coefficients depending on the median or VaR. Applied Mathematics and Optimization **68:1** (2013), 85-98.

[87] Vassili Kolokoltsov and Wei Yang (2013). Existence of solutions to path-dependent kinetic equations and related forward - backward systems. Open Journal of Optimization **2:2**, 39-44 (2013), http://www.scirp.org/journal/ojop/ Also on archive http://arxiv.org/abs/1303.5467

[88] Vassili Kolokoltsov and RuiXin Lee. Stochastic duality of Markov processes: a study via generators. https://arxiv.org/abs/1304.1688 Stochastic Analysis and Applications **31 :6** (2013), 992-1023.

[89] V. Kolokoltsov, M. Troeva and W. Yang. On the rate of convergence for the mean-field approximation of controlled diffusions with large number of players. Dyn. Games Appl. 4:2 (2014), 208230.

[90] V. Kolokoltsov, M. Troeva and W. Yang. Mean field games based on the stable like processes (In Russian). Mathematical Theory of Games and its Applications 5 (2013), 3365. Engl. transl. in Journal Automation and Remote Control (2016), 77(11), 2044-2064. DOI 10.1134/S0005117916110138

[91] Jane M. Binner, Leslie R. Fletcher and Vassili Kolokoltsov. Existence and Uniqueness of Nash Equilibria in a Simple Lanchester Model of the Costs of Customer Churn.

Chapter 2 in L. Petrosjan and V. Mazalov (Eds.) 'Game Theory and Applications', v. 16, p. 19-26. Nova publishers, 2013.

[92] Jane Binner, Leslie Fletcher, Vassili Kolokoltsov, Francesco Ciardiello. External Pressure on Alliances: What Does Prisoners Dilemma Reveal? Games 2013, 4(4), 754-775; MDPI - Open Access Publishing http://www.mdpi.com/2073-4336/4/4/754

[93] Vassili Kolokoltsov. Stochastic monotonicity and duality of kth order with application to put-call symmetry of powered options. http://arxiv.org/abs/1405.3894 Journal of Applied Probability **52:1** (2015), 82-101.

[94] V. Kolokoltsov and M. Veretennikova. Fractional Hamilton Jacobi Bellman equations for scaled limits of controlled Continuous Time Random Walks. Communications in Applied and Industrial Mathematics **6:1** (2014), e-484. DOI: 10.1685/journal.caim.484 http://caim.simai.eu/index.php/caim/article/view/484/PDF

[95] V. Kolokoltsov and M. Veretennikova. Well-posedness and regularity of the Cauchy problem for nonlinear fractional in time and space equations. http://arxiv.org/abs/1402.6735. 'Fractional Differential Calculus' **4:1**(2014), 1-30, http://files.ele-math.com/articles/fdc-04-01.pdf

[96] R. Basna, A. Hilbert and V. Kolokoltsov. An epsilon-Nash equilibrium for non-linear Markov games of mean-field-type on finite spaces. Commun. Stoch. Anal. **8:4** (2014), 449 - 468.

[97] Vassili Kolokoltsov. On fully mixed and multidimensional extensions of the Caputo and Riemann-Liouville derivatives, related Markov processes and fractional differential equations. Fract. Calc. Appl. Anal. 18:4 (2015), 1039 - 1073. http://arxiv.org/abs/1501.03925.

[98] A. Gorban and V. Kolokoltsov. Generalized Mass Action Law and Thermodynamics of Nonlinear Markov Processes. Mathematical Modeling of Natural Phenomena (MMNP) 10:5 (2015), 16-46, http://www.mmnp-journal.org/ Draft available at arXiv:1504.08317 [physics.chem-ph]

[99] V. N. Kolokoltsov and O. A. Malafeyev. Mean field game model of corruption (2015). http://arxiv.org/abs/1507.03240. Dynamics Games and Applications. 7:1 (2017), 34-47. Open Access mode: Published Online 16 Nov 2015.

[100] M. E. Hernandez-Hernandez and V. N. Kolokoltsov. On the probabilistic approach to the solution of generalized fractional differential equations of Caputo and Riemann-Liouville type. Journal of Fractional Calculus and Applications 7:1 (2016), 147-175.

[101] V. N. Kolokoltsov and M Veretennikova. The fractional Hamilton-Jacobi-Bellman equation. Journal of Applied Nonlinear Dynamics 6:1 (2017), 4556.

[102] Vassili Kolokoltsov. The evolutionary game of pressure (or interference), resistance and collaboration (2014). http://arxiv.org/abs/1412.1269. MOR (Mathematics of Operations Research), 42 (2017), no. 4, 915 944.

[103] V. N. Kolokoltsov and A. Bensoussan. Mean-field-game model of botnet defence in cyber-security (2015). AMO (Applied Mathematics and Optimization) 74(3), 669-692,

[104] S. Katsikas, V. Kolokoltsov and W. Yang. Evolutionary inspection and corruption games. Games (MDPI journals) 2016, 7(4), 31; doi:10.3390/g7040031 http://www.mdpi.com/2074336/7/4/31/html

[105] M. E. Hernandez-Hernandez and V. N. Kolokoltsov. On the solution of two-sided fractional ordinary differential equations of Caputo type. Fract. Calc. Appl. Anal., 19:6 (2016), 1393 - 1413.

[106] R. Basna, A. Hilbert and V. N. Kolokoltsov. An approximate Nash equilibrium for pure jump Markov games of mean-field-type on continuous state space Stochastics 89 (2017), no. 6-7, 967993. http://arxiv.org/abs/1605.05073, 2016

[107] M. E. Hernandez-Hernandez and V. N. Kolokoltsov. Probabilistic solutions to nonlinear fractional differential equations of generalized Caputo and Riemann-Liouville type. International Journal of Probability and Stochastic Processes, v. 90:2, (2018), 224-255.

[108] M. E. Hernandez-Hernandez, V. N. Kolokoltsov and L. Toniazzi. Generalised Fractional Evolution Equations of Caputo Type. Chaos Solitons Fractals 102 (2017), 184196.

[109] A. Cecchin and V. N. Kolokoltsov. Evolutionary game of coalition building under external pressure arXiv:1705.08160. Annals of ISDG (2017), 71-106.

[110] Kolokoltsov V., Troeva M. Mean-field games with common noise based on nonlinear diffusion processes // AIP Conference Proceedings, 2017. Vol. 1907: Proceedings of the 8th International Conference on Mathematical Modeling (ICMM-2017, Yakutsk, Russia, 48 July 2017). Art. No. 030049. P. 112. doi: 10.1063/1.5012671.

[111] Kolokoltsov V., Troeva M. Regularity and sensitivity for Mckean-Vlasov SPDEs // AIP Conference Proceedings, 2017. Vol. 1907: Proceedings of the 8th International Conference on Mathematical Modeling (ICMM-2017, Yakutsk, Russia, 48 July 2017). Art. No. 030046. P. 113. doi: 10.1063/1.5012668.

[112] V. Kolokoltsov and O. Malafeyev. Corruption and botnet defense: a mean field game approach. http://arxiv.org/abs/1607.07350 International Journal of Game Theory 47:3 (2018), 977-999. Accepted 13.02.2018 DOI 10.1007/s00182-018-0614-1 Online First: http://link.springer.com/article/10.1007/s00182-018-0614-1

[113] J. M. Binner, F. Ciardiello, L. R. Fletcher, V. N. Kolokoltsov. Nash equilibria in a Duopolistic Market Share Model. International Game Theory Review (IGTR), special issue devoted to the SING13 Conference. Vol. 21, No. 2 (2019), 1940007 (20 pages).

[114] Kolokoltsov V. N., Troeva M. S. Regularity and Sensitivity for McKean-Vlasov type SPDEs generated by stable-like processes. Issues of Analysis. Vol. 7 (25), No. 2, 2018, p.69-81.

[115] V. Kolokoltsov and M. Troeva. On Mean Field Games with Common Noise based on Stable-Like Processes. SOIC 7:2 (2019), 264-276. http://www.iapress.org/index.php/soic/issue/v

[116] V. Kolokoltsov and M. Troeva. On the mean field games with common noise and the McKean-Vlasov SPDEs. arXiv:1506.04594. Stochastic Analysis and Applications. Published on-line April 2019 https://doi.org/10.1080/07362994.2019.1592690

[117] Ifan Johnston and Vassili Kolokoltsov. Green's function estimates for time fractional evolution equations. Fractal and Fractional, MDPI, 3(2), 36, July 2019.

[118] Vassili Kolokoltsov. The probabilistic point of view on the generalized fractional PDEs. FCAA 22:3 (2019), 543-600 (open access mode).

[119] Stamatios Katsikas and Vassili Kolokoltsov. Evolutionary, Mean-Field and Pressure-Resistance Game Modelling of Networks Security. Journal of Dynamics and Games 6:4 (2019), 315 - 335.

[120] V. Kolokoltsov. Mixed fractional differential equations and generalized operator-valued Mittag-Leffler functions. Mathematical Notes 106:3 (2019), 687-707.

[121] V. Kolokoltsov. Rates of convergence in Laplace's integrals and sums and conditional central limit theorems. Mathematics MDPI 8(4) (2020), 479.

[122] Vassili N. Kolokoltsov. Quantum Mean-Field Games with the Observations of Counting Type. Games (2021), 12, 7. https://doi.org/10.3390/g12010007

[123] Vassili N. Kolokoltsov. The law of large numbers for quantum stochastic filtering and control of many particle systems. To appear in Theoretical and Mathematical Physics. https://arXiv:2008.07375

[124] Vassili Kolokoltsov, Feng Lin and Aleksandar Mijatovic. Monte Carlo estimation of the solution of fractional partial differential equations. FCAA 24:1 (2021), 278-306.

[125] Vassili N. Kolokoltsov. On a probabilistic derivation of the basic particle statistics (Bose-Einstein, Fermi-Dirac, canonical, grand-canonical, intermediate) and related distributions. https://arXiv:2004.03632 To appear in Transactions of the Moscow Mathematical Society 2021, v. 82:1.

(d) Some other publications and preprints.

V. N. Kolokoltsov. *SC*-geodesic flows on a sphere with additional first integral quadratic in velocity. Manuscript (in Russian) VINITI 20.08.84, no. 5924-84, 30 pp.

V. N. Kolokoltsov. Polynomial integrals of geodesic flows on compact surfaces. Thesis of PhD dissertation (in Russian), Moscow State University, 1985, 11 pp.

V. N. Kolokoltsov and D. R. Lebedev. Quasiclassical deformation of the KP hierarchy and the long waves equations of Benny. Preprint of the Institute of Theoretical and Experimental Physics (ITEP) no. 100, 1987, 24 pp.

V. N. Kolokoltsov. Idempotent analogs of linearly equivalent spaces (in Russian). Proc. Conf. "Optimal Control, Geometry, Analysis", Kemerovo, 1988, p. 30.

S. Yu. Dobrokhotov, V. N. Kolokoltsov and V. P. Maslov. Asymptotical solution of the problem of large deviations for the equation $hu_t = (h^2\Delta/2 - V(x))u$ and the splitting of the spectrum of the operator $-h^2\Delta/2 + V(x)$ (in Russian). Proc. Conf. "Differential equations", Sept 1990, Baku, Institute of Mathematics, Azerbaidjan Academy of Science, p. 15.

V. N. Kolokoltsov and O. A. Malafeyev. Turnpikes in conflict control processes of infinite duration (in Russian). Proc. Conf. "Non-smooth and discontinuous problems of control and optimization", Vladivostok, Sept 1991, Minsk State University 1991, p. 58-59.

V. N. Kolokoltsov. Idempotent Analysis and multiplicative asymptotics. Thesis of the dissertation in the fulfillment of the requirements for the title of the full Doctor of Science in Physics and Mathematics (in Russian). Steklov Math. Inst. of the USSR Academy of Science, Moscow, 1993.

V. N. Kolokoltsov. Short Deduction and Mathematical Properties of the Main Equation of the Theory of Continuous Quantum Measurement. Proc. Intern. Colloq.on Group Theoretical Methods in Physics GROUP21, Goslar, Germany, 15-20 July 1996 (Ed. H.D. Doebner et al.), World Scientific, 1997, v. 1, 326-330.

M. Akian, S. Gaubert, V. Kolokoltsov. Solutions of max-plus linear equations and large deviations. Proc. 44th IEEE Conf. on Decision and Control and the ECC 2005, Seville, Spain, December 12-15, 2005, p. 7787-7792, see also http://arxiv.org/abs/math/0509279.

H. Al-Talibi, A. Hilbert and V. N. Kolokoltsov. Nelson-type Limit for a Particular Class of Lévy Processes. In 'Quantum Theory', American Institute of Physics Conference Proceedings, v. 1232, Melville, New York 2010, p. 189-193.

V. E. Bening, V. Yu. Korolev and V.N. Kolokoltsov. Power losses of asymptotically efficient tests for distinguishing some fractional stable distributions. Mathematics and Statistics Research Report 27/03, Nottingham Trent University, 2003.

V. E. Bening, V.Yu. Korolev and V.N. Kolokoltsov. Estimation of parameters of fractional stable distributions. II. Mathematics and Statistics Research Report 28/03, Nottingham Trent University, 2003.

Vassili N. Kolokoltsov, Jiajie Li and Wei Yang. Mean Field Games and Nonlinear Markov Processes (2011). arXiv:1112.3744

V. N. Kolokoltsov and O. A. Malafeyev. On some models of many agent systems with competition and cooperation (2012). arXiv:1201.1745

V. Kolokoltsov and M. Veretennikova. Controlled CTRW and Fractional HJB equations (2012). http://arxiv.org/abs/1203.6333

V. Kolokoltsov and W. Yang. Sensitivity analysis for HJB equations with an application to a coupled backward-forward system. arXiv:1303.6234

Vassili Kolokoltsov, Hemant Passi, Wei Yang. Inspection and crime prevention: an evolutionary perspective (2013). http://arxiv.org/abs/1306.4219

V. Kolokoltsov. Chronological operator-valued Feynman-Kac formulae for generalized fractional evolutions (2018). arXiv:1705.08157

Vassili N. Kolokoltsov and Oleg A. Malafeyev. Multi-agent interaction and nonlinear Markov games. The final draft of the Part 1 of the monograph "Many Agent Games in Socio-economic Systems: Corruption, Inspection, Coalition Building, Network Growth, Security", Springer Nature, 2019. https://arxiv.org/abs/1911.04299

Vassili N. Kolokoltsov. Quantum games: a survey for mathematicians. https://arxiv.org/abs/190

Vassili N. Kolokoltsov. Dynamic Quantum Games. https://arXiv:2002.00271

Vassili N. Kolokoltsov. Quantum mean field games. https://arxiv.org/pdf/2005.02350.pdf

Vassili N. Kolokoltsov. Continuous time random walks modeling of quantum measurement and fractional equations of quantum stochastic filtering and control. https://arXiv:2008.07355

(e) Publications with my name as a key-word in the title:

D. Yur'ev. Belavkin-Kolokoltsov watch-dog effect in interactively controlled stochastic computer-graphic dynamical systems. Theor. Math. Phys. **106:2** (1996), 276-290.

6. SUPERVISION OF RESEARCH STUDENTS AND POST-DOCS

Director of studies for PhD:

Graduated:

1. A. Tyukov. "Stochastic Equations of Mathematical Physics driven by Lévy noise" (graduated 2001, Nottingham Trent).

2. Z. Hucki. "Game Theoretic Analysis of Rainbow Options" (graduated 2005, Nottingham Trent).

3. RuiXin Lee. 'Stochastic duality of Markov processes' (start 2009- graduated 2014, Warwick)

4. Tomasz Lapinski. 'Limit theorems leading to Bose-Einstein, Maxwell-Boltzmann Statistics and Zipf-Mandelbrot Law' (start 2009 - graduated 2014, Warwick)

5. Maria Veretennikova 'Controlled Fractional Dynamics' (start 2011 - graduated 2014, Warwick)

6. Elena Hernandez-Hernandez on 'Fractional Dynamics' (2013 - graduated 2016, Warwick, viva Nov., 2016)

7. Alexei Pak on 'Nonlinear SPDEs with coefficients depending on VaR' (2012 - 2017, Warwick, viva March 2017)

8. Dialid Santiago (jointly with S. Assing) on 'Nonlinear Markov processes' (2012 - submitted 2016, graduated 2017, Warwick)

9. Stamatios Katsikas on 'Inspection-Corruption Games' (2013 -2018, viva 12 Jan 2018)

10. Lorenzo Toniazzi on 'Fractional calculus and duality' (2014 -2018, viva Nov 2018)

11. Ifan Johnston on 'Markov processes generated by pseudo-differential operators on bounded domains (2016 -2019, viva November 2019)

Current:

Howard Su and Li Zeng

Second Supervisor for PhD studies of Fuchang Tang (grad. 2000, Nottingham Trent Uni), Larisa Khodarinova (grad. 2002, Nottingham Trent Uni), Haidar Al-Talibi (grad. 2012, Linne Uni Sweden)

I have supervised the MRes dissertation of J. Li on 'Mean-field games' (graduated 2013) and more than 30 MSc final year projects, several internships for research students, like to Antoine Mouzard from the University of Rennes in June-July 2016, Alekos Cecchin from Padova (November 2016) and Xiaoyan Su from Sichuan University China in 2016-2017 (supported by the Chinese scholarship council)

I have supervised PostDoc researcher Dr. Wei Yang (2010-2012), later on a lecturer at the Strathclyde University and then quant in the Bank of England, London

7. GRANTS and AWARDS (since 1996)

St Petersburg University Research Award 2011 for the book 'Understanding Game Theory' (jointly with O. A. Malafeyev).

1998, 1999, 2000 London Math. Society grants for organising Midlands Math. Phys. seminar (joint bid of Nottingham Trent University, the University of Nottingham, and Loughborough University),

1998 Grant from The Alexander von Humboldt foundation for two months research work in Bonn University, Germany,

1998 Nottingham Trent University Research Enhancement Fund Grant for a PhD bursary, (pounds 18000)

1999-2002 Nottingham Consultancies Ltd Commercial Research Funding (pounds 18000) for a joint project (with the Nottingham Business School) on the application of game theory in management (in collaboration with BOOTs Ltd),

2002-2004 Royal Society Grant (pounds 10000) for a two year Joint Project on Probability and Statistics with a Russian group (principal investigator),

2002 London Math. Society grant for an international visitor (principal investigator)

2002-2005 EPSRC case study with BOOTs the Chemist plc (pounds 40000): "The optimization of market share in the retail sector", collaboration with Nottingham Business School

2006 Mexican grant (CIMAT) for a three year collaboration project with the probability group from CIMAT (Centro Investigaciones Matematicas, Mexico, Guanajuato)

2006, 2007 LMS grants (pounds 1200 each) for organizing short workshops on "Interaction and Non-commutativity" (joint venture with the University of Nottingham and Imperial College)

2009-2011 EPSRC grant for organising Symposium 'The Mathematics of Complexity Science and System Biology' (pounds 253000), co-investigator

2009-2012 AFOSR US research grant on 'Nonlinear Markov games' for a 3 year Post-Doc ($420000), PI

2012 Grant from the Linne University Sweden (5000 pounds) and the University of Warwick WAMP grant (2000 pound) for organizing the workshop 'From mean-field control to weak KAM dynamics' in Warwick 7-10 May 2012

2012 Grant from the Linne University Sweden (3000 pounds) and the University of Warwick WAMP grant (2500 pound) for organizing the 4th Warwick workshop on 'Control Theory and Games' in Warwick 7-10 May 2013

2013 Grant from the Linne University Sweden (3000 pounds) for organizing the 5th Warwick workshop on 'Control Theory and Games' in Warwick 29 Apr - 2 May 2014

Lots of travel grants for visiting conferences and seminars

8. ADVISORY WORK

(a) Member of the Advisory Panel of the Journal of Physics A (2011 -2012)

Member of the Editorial Boards of

The Open Journal of Optimization (OJO, 2012 -) http://www.scirp.org/journal/ojop/

Statistics, Optimization & Information Computing (SOIC, 2013 -2020) http://www.iapress.org/in

Dynamic Games and Applications (2013 -) www.springer.com/mathematics/applications/journa

Asia Pacific Journal of Mathematics (2014 -) http://apjm.apacific.org/

Fractional Differential Calculus (2014 -) http://fdc.ele-math.com/editorial

Issues of Analysis (2013 -) http://issuesofanalysis.petrsu.ru

Cogent Mathematics (2016 -2018) https://www.cogentoa.com/journal/mathematics

Fractal and Fractional (2019-) https://www.mdpi.com/journal/fractalfract/editors

Fractional Calculus and Applied Analysis FCAA (2019-)

(b) Refereeing: Physics Letters A and Journal of Physics A, The Annals of Applied Probability, The Annals of Probability, Communication of Mathematical Physics, Mathematical Notes, Theoretical Computer Science, Kybernetika, Mathematische Nachrichten, Methodology and Computing in Applied Probability, Discrete Event Dynamic Systems, Optimization, Stochastic Processes and Their Applications, Journal of Theoretical Probability, International Journal of Dynamic Games, Bernoulli, PTRF, SIAM journals, Electronic Journal of Probability, Theory of Probability and Applications, American Mathematical Monthly, Journal of Functional Analysis, IEEE Transactions on Automatic Control, IJGT, MGTA Mathematical Game Theory and Applications, Theoretical and Mathematical Physics, Moscow Mathematical Journal and many others,

(c) Reviewing books for "Mathematics Today" and London Mathematical Society (for example, "Geometric Asymptotics for Nonlinear PDE I" by V.P. Maslov and G.A. Omel'yanov (AMS 2001). Bull. London Math. Soc. **35** (2003), 142-144) as well as papers and books for the AMS "MathSciNet" (for example, two-volume monograph of Carmona and Delarue on Mean-Field games)

(d) Evaluating research proposals and results:

Member of the Board of Experts of the Committee for Research Evaluation (CIVR) of the first Italian research evaluation exercise (VTR), 2005,

Evaluation of INdAM Cofund fellowships in Mathematics and/or Applications for Experienced Researchers cofunded by Marie Curie Actions) Website http://cofund.altamatematica.it/ (Aug -Sep 2011),

External advisor for the selection committee (for Unversitätsprofessors Stochastik) of the Bergische Universität Wuppertal, Fachbereich C (Mathematik und Naturwissenschaften), 2010

Evaluating research grant proposals for the Air Force Office of Scientific Research (2010, 2011, 2012)

Evaluating research grant proposals for the Swiss National Science Foundation www.snf.ch/ (SNSF, June 2012)

Evaluating research grant proposals for EPSRC, e. g. September 2012, December 2012, September 2014, April 2015 (EP/N006984/1), March 2017, March 2019 (Space-time non-local equations and control of groundwater pollution), April 2019 (Poisson equation)

Evaluating research grant proposals for the 'Investigador FCT' (Fundacão para a Ciencia e a Tecnologia) Portugal Science Foundation (September 2012)

Peer reviewer for The National Agency for the Evaluation of Universities and Research Institutes (ANVUR) assessment of research performed in the time frame 2004-2010 by researchers of all Italian universities and research institutes: eValuation of Quality of Research (VQR 2004-2010) (Autumn 2012).

External advisor for the Promotion Committee for King Abdulaziz University, Saudi Arabia, November 2013

Evaluating research grant proposal "New Kinds of Forward-backward Stochastic Systems with Applications" for the Research Grants Council Hong Kong (April, 2017)

External advisor for the Promotion Committee for the Macau University, China, January 2019

Reviewing book proposals for Cambridge University Press (recently in Spring 2019), DeGruyter Publishing Corporation, Birkhauser US, Springer, CRC press (recently in Spring 2019 and Spring 2020 twice: the project 'Conformable Dynamic Equations on Time' and the project 'Mean-Field-Type Games Made Simple') and other

(e) External Examiner on research degrees:

"Habilitation a diriger des recherches" (French Second Degree above usual PhD) for L. Truffet, Institut de Recherche en Communications et Cybernetique de Nantes, France, December 2004,

MPhil degree for A. Aminu and Kin Po Tam at Birmingham University 2008;

PhD degree for A. Aminu: "Max-algebraic linear systems and programs". Birmingham University UK, 2009.

PhD degree for I. Papageorgiu at Imperial College 2010.

PhD degree of P. S. Straka "Continuous Time Random Walk Limit Processes". The University of South Wales, Sydney, Australia, 2011.

PhD degree of P. Poncet at École Polytechnique (Palaiseau) and INRIA (Saclay-Ile-de-France), Title: "Infinite-dimensional idempotent analysis. The role of continuous posets". France, November 2011.

PhD degree of F. Mina at Imperial College, Viva Feb. 2015.

PhD degree of Peter Helgesson, Chalmers University of technology and the University of Gothenburg, Sweden, Viva 5th June 2015

PhD degree of M. Victor Rabiet, 'A stochastic equation with censured jumps related to multi-scale Piecewise Deterministic Markov Processes', University of Paris-Est, June 2015

PhD degree of Lorick Huang, 'EDS Dirigées par des Processus Stables: Methode Parametrix pour des Estimées de Densitées et Application aux Algorithmes Stochastiques'

Université Paris Diderot (Paris 7), Sorbonne Paris Cité, June 2015

PhD degree of Andrea Di Stefano, 'Random Walks Interacting with Evolving Random Environments and Related Kinetic Equations', University Bielefeld, July 2015

PhD degree of Martin Friesen 'Semigroup methods for spatial birth-and-death processes', University Bielefeld, July 2016

PhD degree of Mr Saul Mendoza Palacios "Evolutionary game theory: a general framework for the replicator dynamics", Centre de Investigacion y de Estudios Avanzados del I. P. N. Departamento de Matematicas, Apartado Postal 14-740 07000 Mexico, D. F., 2016

PhD degree of Frantisec Zak, Imperial College, November 2016

PhD degree of Ms Awaz Muhammad, Leicester Uni., Viva October 2017

Full doctor (Habilitation) degree of E. Shishkina, Voronezh University, Russia, Viva June 2019

Full doctor (Habilitaton) degree of A. S. Trushechkin, Steklov Maths Institute, Russia, (September) 2020

Full doctor (Habilitaton) degree of A. Yu. Averbuch, HSE, Russia, (December) 2020

Internal Examiner on research degrees: PhD for Martin Brooks (1997) at the Nottingham Trent University, MRes degree for Ashish Kumar at Warwick Statistics (2012), PhD in Mathematics and Complexity Science for Gui P. A. de Mendonca at Warwick (2013), PhD for Amogh Deshpande at Warwick Statistics (viva Dec. 2014), PhD for James Thompson at Warwick Mathematics (viva Dec. 2015), MPhil for Chris Pettitt at Warwick Statistics (viva Dec. 2015), PhD for Seb Armstrong at Warwick (viva May 2018), PhD for Lorenzo Spisso at Warwick (viva January 2020), PhD John Herman at Warwick (viva June 2020) PhD for Jamie Lukins at Warwick (viva July 2020)

(f) External Examiner for Undergraduate and MSci pure and applied Math degrees at Imperial College, 2009 - 2011

9. TALKS given at CONFERENCES, since 1996

additional keys: i - invited, c - chair of session

1996 Germany, Goslar, Arnold Sommerfeld Institute - XXI International Colloquium on Group Theoretical Methods in Physics

1997 Cyprus - The IEEE Mediterranean Conference on control and systems (i)

1997 Nottingham University - International Workshop On Idempotency (c)
(member of organising Committee)

1998 Bristol, Basic Research Institute in Mathematical Science (BRIMS), Hewlett-Packard Labs - Conference on Non-expansive maps (i,c)

1998 Bonn University - Conference on Dirichlet forms and related topics (i)

1998 Nottingham Trent University - International Conference "Probability: Theory and Applications" (i,c)

1999 Paris, INRIA and Ecole Normal - Conference on Algébre tropicales (i)

1999 France, Caen University - Conference on Idempotent Mathematics (i,c)

1999 Moscow - International Conference on Optimisation, Analysis, Geometry dedicated to the 90-th Anniversary of L.S. Pontryagin (i)

1999 Russia, St. Petersburg - International Conference on Optimal Control (i)

1999 Edinburgh - International Workshop on Financial Mathematics

1999 Nottingham University - "An Asymptotic Day in Nottingham" (i)

2000 Nottingham University - Workshop "Quantum Probability and Paradoxes of the Quantum Century" (i)

2000 University of Warwick - Conference on Analysis on Loop spaces and Related Topics, Satellite to ICMP 2000 (i)

2000 Russia, St. Petersburg - IFAC (International Federation for Automatic Control) Conference on Optimisation (i, member of programme committee)

2000 Nottingham - "Non-commutativity, Probability, Geometry" - Satellite to ICMP 2000 (member of local organizing committee, c)

2000 Japan, Kyoto University - Intern. Conference on Infinite Dimensional Analysis and Quantum Probability (i)

2001 Italy, Trento - Intern. Conference on Quantum Probability (i). Title: "Stochastic Evolutions and Boundary Value Problems"

2001 (April) Warwick - Conference on Lévy Processes (i). Title: "Semiclassical Asymptotics for Stable Like Processes"

2001 (July) San Diego USA - the fifth SIAM Conference on Control (i,p) (the lecture "Non-expansive maps in financial mathematics" was delivered there on my behalf by a colleague).

2001 (August) Prague - Workshop on Max-Plus Algebras, Satellite to the IFAC Symposium on System Structure and Control (i) (the lecture "Small diffusion and fast dying out asymptotics for superprocesses" was delivered there on my behalf by a colleague)

2001 (August) Germany, Oberwolfach - Intern. Workshop on Coagulation (i)

2001 (August) Serbia, Sokobania and Nish - Conference and Summer School on Mathematical Physics (i). Talks: "Mathematics of the Feynman path integral" and "Quantum filtering equation"

2002 (April) UK, Swansea - Conference on Stochastic models in Hydrodynamics (i). Title: "On Measure-Valued Limits of k-ary Interacting Particles"

2002 (May) Bolgaria, Varna - International Seminar on Probability and Statistics (i). Title: "Stable-Like Processes"

2002 (May) Russia, Obninsk - International Conference devoted to the memory of the famous Russian mathematician Chebyshev (i). Title: "On the Rigorous Definition of the Feynman Path Integral"

2002 (July) UK, Swansea - Workshop on Lévy type processes (i). Title: "Feller Processes with Decomposable Pseudo-Differential Generators"

2003 (February) Austria, Vienna, Schrödinger International Institute - International Conference "Idempotent Mathematics and Mathematical Physics" (i,c). Title: "Functional Galois Connections and Applications"

2003 (June) Bulgaria, Sozopol - International Summer Conference on Probability and Statistics (i). Title: "Measure-valued limits of interacting particle systems with k-nary interaction; application to statistical mechanics, population dynamics and evolutionary biology"

2003 (July) Birmingham - International Workshop on Max-Plus algebra (i). Title: "Invertibility of Functional Galois Connections"

2003 (July) IMA Minnesota USA - Probability and Partial Differential Equations in Modern Applied Mathematics (i). Title: "Mathematics of the Feynman Path Integral Applied to the Schrödinger and Stochastic Schrödinger equations"

2003 (December) Cambridge University - : IGSw04 - Stochastic Methods in Coagulation and Fragmentation (i). Title: "Non-binary interacting particle systems and limiting kinetic equations; analytic and probabilistic study"

2005 (May-June) University of Wales, Swansea - EPSRC-LMS School on Stochastic Processes and Applications (i). Title: "Nonlinear Markov Semigroups, Kinetic Equations and Interacting Lévy processes"

2005 (July) Edinburgh University - ICMS Workshop on Coagulation-Fragmentation Processes. Title: "Analytic Approach to Proving the Law of Large Numbers and the Central Limit Theorems for General Coagulation-Fragmentation Models"

2005 (December) 44th IEEE Conf. on Decision and Control and the ECC 2005, Seville, Spain. Talk (jointly with S. Gaubert and M. Akian): "Solutions of the Max-Plus Linear Equations and Large Deviations" (delivered by M. Akian)

2006 (July) Nottingham University - Quantum Probability, Information and Control Symposium (i). Title: "Boundary-value problems and stochastic evolutions"

2007 (April) Gregynog - "Warwick - Wales statistics seminar" (i). Talk: Continuous Time Random Walks

2007 (July) Moscow - International seminar "Matrix Methods and Operator Equations" (i). Talk (jointly with S. Gaubert and M. Akian): "On the connection between the regularity of matrices over idempotent semirings and the solutions to the assignment problem"

2007 (August) Moscow - International Workshop "Idempotent and Tropical Mathematics and Problem of Mathematical Physics" (i). Talk (jointly with S. Gaubert and M. Akian): "On the Assignment Problem for a Countable State Space"

2007 (September) Oberwolfach - Conference 'Coagulation and Fragmentation Models' (i). Talk: "The Central Limit Theorem for the Smoluchovski Coagulation Model"

2009 (January) Warwick – Workshop 'Aggregation, condensation and coagulation in particle systems' (i). Talk: "Dynamic Law of Large Numbers and Central Limit Theorem with the estimates of error terms for Smoluchovski's coagulation and Boltzmann collisions"

2009 (March) Arlington VA USA - Conference 'Adversarial and Stochastic Elements in Autonomous Control' organised by AFOSR (i). Talk: Nonlinear Markov games

2009 (July) Imperial College London - 7 th ISAAC Congress (i). Talk: “SDEs driven by nonlinear Lèvy noise”

2010 (18-19 January) Swansea University - Feynman Path Integrals and Their Applications. Talk: “Feynman Path Integral via Jump- type Markov Processes”

2010 (11-13 April) Warwick - Dynamics in Games and Economics workshop (i). Talk: “General flows of deterministic and stochastic replicator dynamics”

2010 (14-17 April) Warwick - Game theory for finances, social and biological sciences (EPSRC Workshop). Talk (jointly with Wei Jung): “Turnpikes for stochastic games and nonlinear Markov games”.

2010 (May 20-21) Sweden, Vaxio (Linnaeus University) - Stochastic Analysis and Applications. Talk: “Nonlinear Markov processes and games via SDEs driven by nonlinear Levy noise.”

2010 (June 21-25) Pisa, Italy - 16th Conference of the International Linear Algebra Society (i). Talk: “Nonlinear Markov games”

2010 (July 5-9) Budapest - 19 th International Symposium on Mathematical Theory of Networks and Systems (i,c). Two talks: “Nonlinear Markov games” and “Stochastic Perturbations of Deterministic Optimization Problems with Applications to a Spin Control Problem (Control of a Two-Level Atom)”.

2010 (Aug 5 - 8) Kiev - Humboldt Kolleg ’Mathematics and life sciences: possibilities, interlacements and limits’ (i). Talk: “ Markov processes via SDEs driven by nonlinear Levy noise.”

2010 (Aug 9 - 13) Arlington VA USA ’Dynamics and control program review’ (i). Talk: Nonlinear Markov games.

2011 (March 16-18) St. Luis Potosi, Mexico - International conference on stochastic control dedicated to the 65 birthday of Onésimo Hernandez-Lerma (i). Talk “Rainbow options via the interval model of stock prices: risk-neutral selections, explicit formulas, algorithms”.

2011 (June 14-16) Arlington VA - AFOSR Review meeting for the Dynamics and Control Program (i). Talk “Nonlinear Markov control processes and games”.

2011 (June 17) Swansea - Fractional calculus and random processes (i). Talk “The limits of position dependent CTRW (continuous time random walks) with applications to option pricing”.

2011 (June 27-28) Växjö, Sweden - Stochastic Analysis and Applications, 2nd Linnaeus University Workshop (i). Joint talk with Wei Yung (delivered by W.Y.) “Nonlinear Markov processes”.

2011 (July 6 - 8) the Royal Institute of Technology (KTH) in Stockholm, Sweden - The 16th INFORMS Applied Probability Conference (i). Joint talk with Wei Yung (delivered by W.Y.) “Nonlinear controlled Markov processes”.

2011 (July 25 - 27) Baltimore Maryland USA – SIAM conference on Control and its Applications, member of the organizing committee. Talk: “Recent developments in Nonlinear Markov control processes”

2011 (August 22 - 27) Moscow – 8th ISAAC Congress 2011 (i). Talk: “Nonlinear Markov processes and interacting particles”.

2011 (September 12-16) Vienna – ECCS'11 (European Conference on Complex Systems), co-organiser (together with M. Kirkilionis and J. Hofbauer) of the Satellite workshop "Recent Trends in Game Theory". Joint talk with Wei Yang: "Nonlinear Markov Control Processes and Games".

2011 (November 30- December 2) Warwick – Topics in Control (i,c). Talk: "Game-Theoretic analysis of incomplete markets" and joint talk with W. Yang and J. Li "Mean field games and nonlinear Markov processes".

2012 (22-23 May) Linnaeus University Växjö Sweden – Guest Lecture Course 'Introduction to nonlinear Markov processes' and (24 - 25 May) Stochastic Analysis and Applications workshop (i). Talk: "Nonlinear Markov battles".

2012 (18-22 June) Bielefeld University International Workshop 'Qualitative Behavior of Stochastic Systems and Applications' (i). Talk: "Nonlinear Markov processes".

2012 (18-22 July) Bysice, Czech Republic - XV International Symposium on Dynamic Games and Applications (c). Talks: "Mean field games and nonlinear Markov processes" (jointly with Wei Yang) and "Game-theoretic analysis of rainbow options in incomplete markets"

2012 (6-9 Aug) Arlington VA –Control and Dynamics Program Review (i). Talk "Nonlinear Markov battles"

2012 (27-31 Aug) Moscow, Independent University – Tropical mathematics 2012 (i). Talk "On Maslov's quantization of thermodynamics"

2012 (24 -28 Sep) Svetlogorsk (Kaliningrad Region) – The XXX International Seminar on Stability Problems for Stochastic Model (i). Talk: 'Nonlinear Markov processes and Mean-Field Games' and Invited lecture: 'Lévy Processes and SDE driven by Lévy and Poisson noises'

2012 (24 -25 Nov) 2nd Annual Manchester workshop 'Stochastic Economics and Finance' (i). Talk "Game theoretic analysis of incomplete markets"

2013 (25 -27 March) Liverpool. Workshop 'Controlled Stochastic Processes: Theory and Applications' (i). Talk: "Nonlinear Markov Battles"

2013 (8 -12 April) Rennes. 'Perspectives in Analysis and Probability. Opening conference' (i). Talk: "Duality of Markov processes: a study via semigroups and generators"

2013 (10-14 June) Bielefeld. Closing conference 'Fusion of knowledge in stochastic modelling of large complex systems' (i). Talk: "Stochastic differential equations depending on VAR and other quantiles"

2013 (1-4 July) Rome, EuroInforms, 26th European Conference on OR (i). Talk: "Nonlinear Markov games on a finite state space (mean-field and binary interactions)", and Joint talk (delivered by W. Yang): "Inspection Games"

2013 (8 -11 July) San Diego USA – SIAM conference on Control and its Applications, organizer of a session and Talk: "Stochastic Games Against Nature: Applications to Finance"

2013 (4 - 6 Sep.) Padova - Mean Field Games and Related Topics - 2 (i). Talk: "On the 1/N convergence rates for mean-field approximations"

2013 (9 - 13 Sep) Warwick -EPSRC Statistical Mechanics Symposium. Opening Workshop 'Models from Statistical Mechanics in Applied Sciences' (i). Talk: "Bose-Einstein condensation in number theory and economics"

2013 (18 Nov) Warwick - Hybrid Control of Complex Systems (MIR@Warwick day) (i). Talk: Controlled CTRW, random switching and fractional calculus.

2014 (3 - 4 March) University of Strathclyde, Glasgow. Game Theory and Computational Complexity (i,c). Talk: Mean-field games with major player and/or common noise. http://icms.org.uk/workshops/NAISGame

2014 (19 - 22 May) at ZIF, Bielefeld: "Complex systems and interacting particles" (in honor of Yu. Kondratiev 60th birthday) (i). Talk: Duality for Markov processes.

2014 (10-13 June) Linnaeus University Växjö Sweden. 5th conference 'Stochastic Analysis and Applications workshop' (i,c). Talk: SDEs and SPDEs with coefficients depending on VaR.

2014 (27 June - 4 July) International Conference on Mathematical Modeling at Yakutsk University (i) Plenary Talk: Mean-field games and applications, and a short course for students: Introduction to Financial Mathematics

2014 (9-12 July) 16th ISDG Symposium, Amsterdam, the Netherlands. Not present, but two joint talks delivered by co-authors: 'Mean Field Approximation of Controlled Nonlinear Markov Processes with Jumps and Arbitrary Set of Agent's Classes' with Troeva and Wei Yang, and 'Mean field Game Approach to Inspection Game' with Wei Yang

2014 (15 - 19 Sep) UK Easter Probability Meeting, Imperial College London (i). Talk: Duality of Markov processes

2014 (16 October) Conference 'Analyse et Probabilités', Université d'Evry (i) Laboratoire de Mathmatiques et Modlisation dEvry (LaMME) Universit d'Evry (i). Talk: Fractional Hamilton-Jacobi-Bellman equation.

2014 (10-14 November) School and Conference in BCAM (Basque Center for Applied Mathematics), Bilbao, Basque Country - Spain 6 hours invited mini-course on Fractional calculus and CTRW (i).

2015 (11 Feb) Mathematics Colloquium, University of Birmingham (i). Talk: Evolutionary game-theoretic modelling of cyber-security, crime prevention, inspection and corruption.

2015 Semester Program 'Geometric Mechanics, Variational and Stochastic Methods' 01.01.15 - 30.06.15 at the Centre Interfacultaire Bernoulli (CIB) - EPFL, Switzerland (i). My talk (20.02.15) 'Generalized mass action law and thermodynamics of nonlinear Markov processes'

2015 (2 - 6 March) 'New Perspectives in Analysis and Probability', Dep. Maths, University of Sussex (i). Talk: Probabilistic methods for solving fractional differential equations.

2015 (10-12 June) 'Mean-Field Games and Related Topics - 3', Paris, Institute Henry Poincare (i). Talk 'On mean-field games with common noise' was presented on my behalf by P. Caines (as I was unable to attend).

2015 (29 Jun - 04 Jul) 'Modern trends in controlled stochastic processes: theory and applications', Liverpool. (i). Talk: Games of Pressure and resistance.

2015 (8 - 10 July) SIAM Control Conference, Paris (i). Two talks presented by myself and two talks on joint research presented by my co-authors.

2015 (16-17 July) ISDG2015, University of Strathclyde, Glasgow (i). Talk: Mean-field game model of corruption.

2015 (16-18 Dec) 'Stochastic Limit Analysis for Reacting Particle Systems (SLARPS)', Weierstrasse Inst. Berlin (i). Mini lecture course (three two-hour lectures): Dynamic law of large numbers and CLT, with the rates of convergence, for interacting particle systems including Smoluchovskii coagulation and Boltzmann collisions.

2016 (17.05-20.05) Workshop 'Fractality and Fractionality' at the Lorentz Center Leiden (i,c), The Netherlands. Talk: Probabilistic Approach to the Analysus of Fractional Caputo derivatives.

2016 (2-3 June) Workshop "Probability, Non-Local Operators and Applications" at the Department of Mathematics, University of Sussex (i). Talk: Fractional equations with two-sided Caputo derivatives.

2016 (12-15 July) 17th International Symposium on Dynamic Games and Applications, Urbino, Italy. There were 4 talks with me as a coauthor.

2016 (17-21 October) A Workshop on Future Directions in Fractional Calculus Research and Applications (Michigan State University) (i) A talk on our joint results was given by my PhD student L. Toniazzi: On a Probabilistic Generalization of Fractional Derivatives.

2017 (4-9 June) NSF/CBMS Conference in the Mathematical Sciences (Supported by NSF): Nonlocal Dynamics: Theory, Computation and Applications, Chicago, USA (i) (talk on our joint results presented by my PhD student L. Toniazzi).

2017 (13-15th July) The 11th workshop of the International Society of Dynamic Games (ISDG). Banach Center, Institute of Mathematics, Polish Academy of Sciences, Warsaw (two talks presented by my co-authors on our joint research)

2017 (28-30 June) Eleventh International Conference on Game Theory and Management (GTM 2017) (i). Saint Petersburg University (in collaboration with the International Society of Dynamic Games) Talk: Evolutionary and mean-field game modelling of cyber-security, inspection and corruption, counter terrorist measures, coalition building and network growth.

2017 (4-8 July) Yakutsk University, Russia (July) - 8th International Conference on Mathematical Modeling (ICMM - 2017), (i). Two talks given: plenary and a sectional

2017 (10-20 July) Durham Symposium on Stochastic Analysis (i). Talk: Mean-field games with common noise and nonlinear SPDEs.

2017 (Aug 28 Sep 1) Institute for Pure and Applied Mathematics (IPAM), UCLA campus, USA – Workshop "Mean Field Games (i) http://www.ipam.ucla.edu/mfg2017 (Talk on my behalf presented by my PhD student Stam. Katsikas)

2017 (December) Moscow (Snegiri) LSA conference (i). Talk: Generalized Mittag-Leffler functions.

2018 (12-14 Feb) Mean-field games, energy and environment. Alan Turing Institute, London, (i). Talk: Turnpike theory for mean-field games.

2018 (26-28 March) (travel 25-28) Bielefeld-Edinburg Stochastic Spring (i). Talk: Recent Advances in analytic and probabilistic methods for solving fractional PDEs.

2018 (8-19 April) Torino International Master course 16 hours on Stochastic Analysis and a talk on the research seminar: Recent Advances in analytic and probabilistic methods for solving fractional PDEs.

2018 (23 - 29 April) International Workshop 'Functional Inequalities and SPDEs I,

Banach Center, Warsaw, (i). Joint talk (on two sides estimates for fractional heat kernels) delivered by my PhD student Ifan Johnston.

2018 (28th May - 1st June 2018) (travel 26-2) Summer school and conference on nonlocal operators, Bilbao. Minicourse (3 lectures): Probabilistic methods for solving fractional PDEs.

2018 (4 - 6 June) (travel 3-5) International Workshop 'Functional Inequalities and SPDEs II, Banach Center, Warsaw, (i). Talk: Sensitivity and regularity for the solutions to the McKean-Vlasov-type PDEs and SPDEs, with possibly singular coefficients, and applications.

2018 (11 - 25 June) Visit Wuhan, Huazhong University of Science and Technology (HUST), and Beijing Academy of Sciences, minicourse for students (fractional calculus and nonlinear Markov processes), several seminar talks (Wuhan University, Wuhan University of Economics, China Academy of Sciences)

2018 (3-6 July) 14th Viennese Conference on Optimal Control and Dynamic Games, VC2018, Vienna, Austria. Joint talk Kolokoltsov V.N. and Troeva M.S. (delivered by M.S. Troeva) McKean-Vlasov SPDEs for Mean Field Games based on Stable-Like Processes with Common Noise.

2018 (9-12 July) 18th International Symposium on Dynamic Games and Applications, ISDG-2018, Grenoble, France. Joint talk Vassili N. Kolokoltsov and Marianna Troeva (delivered by M.S. Troeva) On Mean Field Games with Common Noise based on Stable-Like Processes.

2018 (24-28 Sep) Perm International Seminar on Stochastic analysis (i). Talk: probabilistic methods in the theory of fractional PDEs.

2018 (6-9 November) Conference in PDE and applications in memory of B. Sternin, Moscow (i). Talk: Fractional calculus. http://www.google.com/url?q=http

2018 (3-7 December) Moscow (Snegiri) LSA conference (i). Talk: Generalized Mittag-Leffler functions as the tools for solving fractional PDEs.

2019 (11-15 March) Marseille CIRM Luminy, France. Conference: Perturbation Techniques in Stochastic Analysis and its Applications (i). Talk: probabilistic methods in the theory of fractional PDEs.

2019 (1-5 April) Joint CDT Colloquium, Warwick, 3 hours crash course on Fractional Calculus (i).

2019 (3-5 July) St. Petersburg, the ISDG12-GTM2019 International Meeting on Game Theory as joint meeting of 12th International ISDG Workshop and 13th International Conference on Game Theory and Management. Talk (presented by co-author M. Troeva): Fractional McKean-Vlasov SPDEs for the Fractional Mean Field Games.

2019 (25-28 September) Sussex University Conference FCPNLO 7. Talk: probabilistic methods in the theory of fractional PDEs (i). Presentation by Kiryakova for my 60th birthday.

2019 (2-6 December) Moscow (Snegiri) LSA conference (i). Talk: Mc-Kean-Vlasov and Hamilton-Jacobi-Bellman equations for space and time fractional evolution.

2020 May invited plenary talk Canceled due to Covid (transferred to May 2021)

2020 (June 15-19) Brunell University LMS school on fractional calculus. Talk: (online)

2020 (October 4-12) Novosibirsk, XII international young scientists school - conference

"Theory and numerical methods for solving inverse and incorrect problems" (i). Talk: Mean Field Games.

2020 (October 19-23) LSA conference HSE Russia (i). Talk: Continuous time random Walk modelling of quantum stochastic filtering, new fractional equations of quantum stochastic filtering and fractional quantum mechanics.

2020 (October 26-30) Ekaterinburg CGS'2020. Third International Seminar "Control Theory and the theory of generalized solutions to Hamilton-Jacobi equations". Seminar devoted to the 75th birthday Academician A.I. Subbotin (i). Talk: quantum dynamic games and HJB - Isaacs equations on Riemannian manifolds.

10. CONFERENCE ORGANIZATION

1997 Nottingham University - International Workshop On Idempotency:
member of organizing committee,

2000 Russia, St. Petersburg - IFAC (International Federation for Automatic Control) Conference on Optimization: member of international programme committee

2000 Nottingham - "Non-commutativity, Probability, Geometry" - Satellite to ICMP 2000: member of local organizing committee

2001 Prague, Workshop on Max-Plus Algebras. Satellite to the IFAC Symposium on System Structure and Control: member of international programme committee

2008 Warwick (31 March-4 April) - International Workshop 'Probability 2008: New scaling limits and other recent developments': member of organizing committee

2008 Warwick (18-19 September) International 'Fractional Flow Workshop' (main organiser)

2009 Warwick (20-25 September) European Conference on Complex Systems (ECCS'09) (member of local organising committee)

2010 Warwick (14-17 April) Game Theory Workshop in the framework of 2009/2010 EPSRC Symposium on the Mathematics of Complexity Science and System Biology (main organiser)

2010 Budapest (5-9 July) MTNS2010, organiser of a special session "Control of Markov and Nonlinear Markov processes"

2011 Baltimore Maryland USA (July 2011) SIAM conference on Control and its Applications, member of the organizing committee and co-organiser (jointly with B. McEneaney and O. Hernandez-Lerma) of special sessions on "Game theory" and "stochastic control"

2011 Vienna (September 12-16) ECCS'11 (European Conference on Complex Systems), co-organiser (together with M. Kirkilionis and J. Hofbauer) of the Satellite workshop "Trends in Game Theory"

2012 Warwick (7-10 May 2012) School - Conference 'From mean-field control to weak KAM dynamics' (Organizers: Astrid Hilbert, Vassili Kolokoltsov and Sebastian van Strien)

2013 Warwick (7-10 May 2013) School - Conference 'Control Theory and Games' (Organizers: Astrid Hilbert, Vassili Kolokoltsov and Robert MacKay)

2013 San Diego USA (8 -11 July) – SIAM conference on Control and its Applications, co-organiser (jointly with B. McEneaney and O. Hernandez-Lerma) of a special session MS48 “Stochastic Dynamic Games”

2014 Warwick (29 Apr - 2 May 2014) 5th Warwick School - Conference ’Control Theory and Games’ (Organizers: Astrid Hilbert, Vassili Kolokoltsov and Robert MacKay)

2014 Yakutsk University, Russia (27 June - 4 July) - 7th International Conference on Mathematical Modeling (ICMM - 2014) (member of the program committee)

2017 Yakutsk University, Russia (July) - 8th International Conference on Mathematical Modeling (ICMM - 2017) (member of the program committee)

1st International Conference on Innovative Informational and Engineering Technologies, IIET-2020, http://iiet-2020.ru/) Member of the program committee. Opening 28th May delivered the welcome speech online

2020 Petrozavodsk Russia (June 22 - 26) - XXXVI International Seminar on Stability Problems for Stochastic Models (ISSPSM2020) (member of the organising committee)

2020 Lisbon, Portugal (October) - 5th Global Conference and Expo on Applied Science Engineering and Technology (member of the organising committee)

2021 Jan - April (including three Workshops) INI Cambridge (Jan-April), International Program on Fractional Differential Equations (main organiser)

11. WEB PAGE

Some publications of mine and related information can be found on my home page http://www2.warwick.ac.uk/fac/sci/statistics/staff/academic/kolokoltsov/