CURRICULUM VITAE

Name: **Kolev, Nikolai Valtchev**

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Personal: Born Topolovgrad, Bulgaria, 17 March 1956; Father of four children.

Education:

- (October 1976 - July 1981): Faculty of Mathematics, Sofia University
  Supervisor: Professor Boyan Dimitrov, MSc in Mathematics (1981)
  Thesis: *Minimal Blocking Time of Unreliable Server*;
- (March 1990 - April 1994): Faculty of Mathematics, Sofia University
  Supervisor: Professor Boyan Dimitrov, PhD in Mathematics (1994)
  Thesis: *Optimization Problems by Servicing with One or Two Devices.*

Employment History:

- National Programming Library, Sofia, Bulgaria
  September 1981 - August 1983: Programmer
  Duties: Programming Data Bases;
- Central Laboratory of Bioinstrumentation
  Bulgarian Academy of Sciences, Sofia, Bulgaria
  September 1983 - March 1989: Research Fellow
  Duties: Research and Programming;
- Department of Statistics
  Public University of Navarra, Pamplona, Spain
  November 1995 - June 1996: Visiting Associate Professor
  Duties: Teaching, Research and Supervising;
- Institute of Mathematics and Informatics
  Bulgarian Academy of Sciences, Sofia, Bulgaria
  April 1989 - February 1998: Research Fellow
  Duties: Teaching, Research and Supervising;
- Department of Statistics, Western Michigan University, USA
  October 2005 - April 2006: Visiting Associate Professor
  Duties: Teaching, Research and Supervising;
- Department of Statistics, IME-USP, Brazil
  March 1998 - January 2013: Associate Professor
  February 2013 - present: Full Professor rank
  Duties: Teaching, Research and Supervising.

Languages: Fluent Bulgarian (native), English, Portuguese, Russian and Spanish.

Teaching:

- (1989-1992): Technical University of Sofia, Bulgaria
  - *Mathematical Analysis I and II*, (for undergraduates).
- (1989-1995): Faculty of Mathematics, Sofia University, Bulgaria
  - *Reliability and Inventory Theory*, (for graduates);
  - *Categorical Data Analysis*, (for graduates);
  - *Probability Theory and Statistics*, (for undergraduates).
- (1993-1995): Economics University of Sofia, Bulgaria
  - *Business Statistics*, (for undergraduates).
- (1995-1996): Public University of Navarra, Pamplona, Spain
  - *Categorical Data Analysis*, (for graduates and PhD).
- (1997): Business Faculty, Sofia University, Bulgaria
  - *Discrete Models and Applications in Finance*, (for graduates).
- (October 2005-April 2006): Western Michigan University, USA
  - *Survival Analysis*, (for graduates and PhD);
  - *Statistical Methods*, (for undergraduates).
- (March 1998 - present): IME-USP, Brazil
  - *Introduction in Risk Analysis*, (for graduates and PhD);
  - *Quantitative Risk Management*, (for graduates and PhD);
  - *Copula Theory and Applications*, (for graduates and PhD);
  - *Statistical Theory of Reliability*, (for graduates and PhD);
  - *Discrete Models and Applications*, (for graduates and PhD);
  - *Probability and Statistics I and II*, (for graduates and PhD);
  - *Categorical Data Analysis*, (for undergraduates);
  - *Statistics*, (variety of undergraduate courses depending on the Faculty).

Invited Presentations: (selected list)

- Santiago de Compostela University, Spain, March 1995;
- Carlos III University, Madrid, Spain, April 1996;
- *Actuarial Sci.: Theory & Implement.*, Moscow, Russia, October 1997;
- Heriot-Watt University, Edinburgh, UK, November 1999;
- *31st Spring Math. Union Conference*, Borovets, Bulgaria, April 2002;
- CIMAT, Guanajuato, Mexico, February 2003;
- *2nd Actuarial Science Workshop*, Leuven, Belgium, March 2003;
- *Colloquium at the Occasion of Jef Teugels*, Leuven, Belgium, May 2004;
- *8th Symposium of Stochastic Processes*, Puebla, Mexico, June 2004;
- *16th Intern.SINAPE Conf.* (Copula course), Caxambu, Brazil, July 2004;
- Mid-West Technical University, Ankara, Turkey, June 2006;
- Delft University of Technology, Delft, The Netherlands, July 2006;
- *6th Multiv. Ditr. with Fixed Marginals Conf.*, Tartu, Estonia, June 2007;
- *VI Workshop on Simulation*, St. Petersburg, Russia, June, 2009;
- *Stochastics Day*, Odense, Denmark, November 2010;
- Univ. of British Columbia, Vancouver, Canada, September 2011;
- MacGill University, Montreal, Canada, October 2011;
- *Gnedenko's Centennial Conference*, Moscow, Russia, June 2012;
- *Advances in Marshall-Olkin Modeling*, Bologna, Italy, October 2013;
- more than 25 invited talks in Brazil, since 1998.

Grants: **A. Sponsored by the Bulgarian Science Foundation:**

- No. 43/87: *Mathematical Methods in Reliability*, Coordinator: B. Dimitrov;
- No. M60/91: *Mathematical Methods in Risk Theory*, Coordinator: B. Dimitrov;
- No. I19/91: *Applied Statistics and Related Software*, Coordinator: D. Vandev;
- No. I444/94: *Financial Mathematics and Statistics*, Coordinator: D. Vandev;
- No. 705/97: *Classes of Probability Measures, Asymptotic of Characteristics and Limit Theorems*, Coordinator: L. Mutafchiev.

B. International:

- (1987-1989): *Statistical Quality Control. Repeatability and Reproducibility of the Results by Inter-Laboratory Tests*, (Standard corresponding to ISO Standard No. 5726-1986), Coordinator: B. Dimitrov;
- (1995-1997): *Categorical Data Analysis*, (between Institute of Mathematics at the Bulgarian Academy of Sciences and Public University of Navarra, Spain), Coordinator: N. Kolev;
- (1998-1999): *Inflation Parameter Family of Discrete Probability Distributions and their Application in Analysis of Over- and Under-dispersed Insurance Data,* (Sponsored by CKER, Society of Actuaries, USA), Coordinator: N. Kolev;
- (2004-2006), No. 171/04: *Modelling Randomness and Uncertainty for Multivariate Scenarios with Applications*, (CAPES-DAAD), Coordinators: N.Kolev and E.von Collani.

C. Sponsored by FAPESP, Sao Paulo, Brazil (coordinated by me):

- (1999), No. 99/08263-1: *Correlated Uncertainty in Periodic Random Environment;*
- (2000), No. 00/13505-3: *Zero-inflated Random Mappings;*
- (2001-2003), No. 01/02699-4: *Extended Premium Principles;*
- (2003), No. 03/05116-5: *Random Sums of Exchangeable Variables;*
- (2005), No. 05/50686-0: *Risk Processes with Dependent Claims;*
- (2006), No. 06/55061-0: *Random Sums, Dependence and Occupation Measures;*
- (2007), No. 06/60952-1: *Randomness and Uncertainty for Multivariate Scenarios;*
- (2008), No. 08/51207-6: *Sibuya's Dependence Function as a Copula Alternative;*
- (2008-2012), No. 08/51097-6: *Time Series, Dependence Analysis and Applications;*
- (2013-2014), No. 2013/08059-4: *Extended Marshall-Olkin Models and Applications.*

D. Few Sponsored by CAPES (Brazilian Education Ministry) and USP Grants.

Referee:

- Annals of the Institute of Statistical Mathematics;
- Applied Stochastic Models in Business and Industry (Editorial Board member 2002-2007);
- Brazilian Journal of Probability and Statistics;
- Chilean Journal of Statistics (Associate Editor since 2010);
- Communications in Statistics: TM and SC (Associate Editor since 2009);
- Economic Quality Control (Regional Editor since 2005);
- Emerging Markets, Finance and Trade;
- European Journal of Operational Research;
- Journal of Computational and Applied Mathematics;
- Journal of Methodology and Computing in Applied Probability;
- Journal of Statistical Planning and Inference;
- Journal of Systems Science and Complexity;
- Journal of Turkish Statistical Association (Associate Editor since 2012) and few more.

Supervision : (PhD students)

- Minkova, L. (1995). *Distributions of Order K Under Markovian Fashion*, (PhD, Sofia University, Bulgaria);
- Ugarte, D. (1996). *Tests and Models for Detecting and Explaining Overdispersion*, (PhD, Public University of Navarra, Spain);
- Bakeva, V. (1998). *Discrete Queuing Systems with Unreliable Server*, (PhD, University of Skopje, Macedonia);
- Neytchev, P. (2000). (Post-doc, IME-USP, Brazil);
- Paiva, D. (2003). *Sums of Equally Correlated Random Variables and Applications in Risk Analysis and Discrete Time Series,* (PhD, IME-USP, Brazil);
- Anjos, U. (2005). *Development and Analysis of Dependence Structures via Copulas,* (PhD, IME-USP, Brazil);
- Paiva, D. (2005-2006). (Post-doc, IME-USP, Brazil);
- Fernandez, M. (2007). *Bivariate Density Classification by the Geometry of Marginals,* (PhD, IME-USP, Brazil);
- Ferreira, F. (2008). *Bivariate Asymmetry and Local Dependence Measures*, (PhD, IME-USP, Brazil);
- Goncalves, M. (2008). *A Study on Dependence Functions and Risk Measures*, (PhD, IME-USP, Brazil);
- Baumann, L. (2011): *Local Measures of Dependence*, (PhD, IME-USP).

Current Supervision:

- Pinto, J. (PhD): *Profounding the Bivariate Lack of Memory Property*;
- Ferreira. L. (PhD): *Bivariate Aging under Censoring: Advanced Models*;
- Mazzei, R. (PhD): *Sibuya-type Copulas and Applications.*

Organizer:

- *3rd International Teletraffic Theory and Computer Modelling Seminar* Sofia, Bulgaria, November 1990;
- *8th International Statistical Data Analysis Seminar* Varna, Bulgaria, September 1992;
- *SMABS'94 European Meeting*, Varna, Bulgaria, June 1994;
- International Workshop *Mathematical Theory of Ruin Probabilities* Bankya, Bulgaria, February 1996;
- Working Seminars at IME-USP: *Risk Analysis Methods*, 1998-2003; *Time Series and Dependence Modeling*, Brazil, 2004-present;
- *Workshop on Statistical Modelling in Insurance and Finance*, Sao Paulo, Brazil, November 2006;
- *Colloquium on Time Series Analysis (at the Occasion of P. Morettin)* Campus de Jordao, Brazil, June 2007;
- *7th Conference on Multivariate Distributions with Applications* Maresias, Brazil, August 2010 (see details at `www.ime.usp.br/∼mda`);
- *1st to 6th Brazilian Conferences on Statistical Modelling in Insurance and Finance*, Ubatuba, Brazil, September 2003 and Maresias: September 2005, March 2007, April 2009, April 2011, and March 2013 (see details at `www.ime.usp.br/bcsmif`).

Academic Membership: • Brazilian Statistical Society.

Author of Programs:
- `Rr`: *Program for Repeatability and Reproducibility of the Results of Inter-Laboratory Tests*: SPS Registration No. 1.B034.00567-01, (1989);
- `AUTOFREQ`: *Program for Automatic Log-Linear Hierarchical Model Selection in Contingency Tables* (Distributed in Europe by the IEC ProGamma Co.): SPS Registration No. 1.B034.01840-01, (1992).

Computer Facilities: Windows, LINUX, UNIX, LaTeX, Fortran, Minitab, Statistica, S+

Honoral Distinctions:
- CKER Research Grant, Society of Actuaries, USA, 1998;
- Scientific Committee Member of several International Stat. Conferences.

Visiting Professor:
- Department of Statistics (PhD Course: *Generalized Linear Models*)
  Public Univ. of Navarra, Pamplona, Spain, November 1995 - June 1996;
- Department of Probability and Statistics
  University of Skopje, Skopje, Macedonia, September 1997;
- Department of Probability and Statistics
  CIMAT, Guanajuato, Mexico, January - February 2003;
- Department of Actuarial Science, Faculty of Economics
  Catholic University of Leuven, Belgium, March 2003;
- Department of Economics
  University of Würzburg, Würzburg, Germany
  September - October 2004, June - July 2005, June - July 2006;
- Department of Statistics (PhD Course: *Survival Analysis*)
  Western Michigan University, Kalamazoo, USA
  October 2005 - April 2006;
- Department of Mathematics (PhD Course: *Basic Copula Theory*)
  National Technical University, Quito, Ecuador, February 2008;
- Department of Mathematics (PhD Course: *Copula Theory and Applicatio*
  Izmir University of Economics, Izmir, Turkey, October - December 2012.

Research Since 1981:
- Categorical Data Analysis;
- Distributions of Order K and their Extensions;
- Dependent Random Sums and Applications;
- Modelling Dependence through Copulas and Applications;
- Optimization Problems in Reliability;
- Modelling of Over- and/or Under-dispersion.

Future Research:
- Bounds for Functions of Dependent Random Variables and Applications;
- Maximum T(q)-Likelihood Estimation and Extreme Value Applications;
- Optimization Problems in Finance and Insurance;
- Multivariate Aging and Applications;
- Sibuya's Dependence Function as a Copula Alternative.

Reference Colleagues:

- **Prof. Barry Arnold**
  e-mail: `barry.arnold@ucr.edu`
  Department of Statistics, University of California Riverside
  2615 Statistics-Computer Building, Riverside, CA 92521, USA
  Phone +1 951 827 5939, FAX: +1 951 827 3286;
- **Prof. Boyan Dimitrov**
  e-mail: `bdimitro@kettering.edu`
  Department of Mathematics, Kettering University
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- **Prof. Christian Genest**
  e-mail: `Christian.Genest@mat.ulaval.ca`
  Département de mathématiques et de statistique, Universite Laval
  1045, avenue de la Medecine, Quebec, Canada G1V 0A6
  Phone: +1 418 656 5280, FAX: +1 418 656 2817;
- **Prof. Jan Dhaene**
  e-mail: `Jan.Dhaene@econ.kuleuven.be`
  Center for Risk and Insurance, Katolieke Universiteit Leuven
  Naamsestraat 69 - bus 3507, 3000 Leuven, Belgium
  Phone: +32 9 386 9956, FAX: +32 16 323 740;
- **Prof. Jef Teugels**
  e-mail: `Jef.Teugels@wis.kuleuven.be`
  Center of Statistics, Katolieke Universiteit Leuven
  De Croylaan 52B, 3001 Haverlee, Belgium
  Phone: +32 16 471 493, FAX: +32 16 471 584;
- **Prof. Narayanaswamy Balakrishnan**
  e-mail: `bala@univmail.cis.mcmaster.ca`
  Department of Mathematics and Statistics, McMaster University
  Hamilton, Ontario, Canada L8S 4K1
  Phone: +1 905 5259140, ext: 23420; FAX: +1 905 522 1676;
- **Prof. Roger M. Cooke**
  e-mail: `R.M.Cooke@tudelft` and `cooke@rff.org`
  Chauncey Starr Chair for Risk Analysis, Resources for the Future, USA
  and Department of Mathematics, Delft University of Technology
  Mekelweg 4, 2628 CD, Delft, The Netherlands
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- **Prof. Roger Nelsen**
  e-mail: `nelsen@lclark.edu`
  Mathematical Sciences Department, Lewis & Clark College
  0615 SW Palatine Hill Road, Portland, OR 97219, USA
  Phone: +1 503 768 7565, FAX: +1 503 768 7668.

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LIST OF PUBLICATIONS

Nikolai Kolev

Books:

1. *Applied Statistics, Part 1 (with Program PRISTAT 1).* "Stopanstvo" Publishing House, Sofia, (1994), 289 pp; ISBN 954-494-097-9, (in Bulgarian).

2. *Statistical Methods in Geography*, (with M. Vodenska). St. "Kl. Ohridski" University Press, Sofia, (1995), 402 pp; ISBN 954-07-0356-5, (in Bulgarian).

3. *Modelling Dependence Through Copulas*, (with U. Anjos, F. Ferreira and B. Mendes), University Press, Sao Paulo, (2004), 143 pp; (in Portuguese; English monograph in preparation).

Proceedings Editor:

1. *Proceedings of the First Brazilian Conference on Statistical Modelling in Insurance and Finance*, (with J. Dhaene and P. Morettin), University Press, Sao Paulo, (2003), 287 pp; ISBN 85-88697-03-3.

2. *Proceedings of the Second Brazilian Conference on Statistical Modelling in Insurance and Finance*, (with P. Morettin), University Press, Sao Paulo, (2005), 354 pp; ISBN 85-88697-07-6.

3. *Proceedings of the Third Brazilian Conference on Statistical Modelling in Insurance and Finance*, (with C. Fernandes and H. Schmidli), University Press, Sao Paulo, (2007), 361 pp; ISBN 85-88697-12-2.

4. *Proceedings of the Fourth Brazilian Conference on Statistical Modelling in Insurance and Finance*, Electronic version CD-ROM, Sao Paulo, (2009), 363pp.

Book Reviews:

1. *Econometric Analysis of Count Data*, (by R. Winkelmann). *The Statistician* **47**, (1998), 560-561.

2. *Random Iterative Models*, (by D. Duflo). *The Statistician* **47**, (1998), 708-709.

Papers in Refereed Journals:

1. Minimization of blocking time of unreliable server with implicit breakdowns, (with P. Petrov). *Serdica* **12**, (1986), 245-249, (in Russian).

2. Poisson distribution of order K and some of its properties, (with L. Minkova). *Comptes rendus de l'Académie bulgare des Sciences* **39(5)**, (1986), 31-33.

3. Controlled unreliable process with implicit or explicit breakdowns and mixed executive times, (with B. Dimitrov and P. Petrov). *Lecture Notes in Engineering* **33**, (1987), 77-90.

4. An optimal control problem when the breakdowns are implicit and its connection with distributions of order K. *Comptes rendus de l'Académie bulgare des Sciences* **40(7)**, (1987), 15-17.

5. Control of unreliable process with implicit breakdowns and mixed executive times, (with B. Dimitrov and P. Petrov). *Mathematica Balkanica* **2**, (1988), 391-396.

6. Optimal implementation of tests when the breakdowns are implicit. *Mathematics and Education in Mathematics* **18**, (1989), 378-382.

7. On the optimal total processing time using checkpoints, (with B. Dimitrov, Z. Khalil and P. Petrov). *IEEE Transactions on Software Engineering* **SE-17**, (1991), 436-442.

8. Joint distribution of successes and failures related to runs of length K in homogeneous Markov chain, (with L. Minkova). *Comptes rendus de l'Académie bulgare des Sciences* **48(9)**, (1995), 19-22.

9. Tests for detecting overdispersion in a natural exponential family, (with D. Ugarte). *Comptes rendus de l'Académie bulgare des Sciences* **49(2)**, (1996), 13-16.

10. $C(\alpha)$ statistics for different negative binomial parameterizations in one-way layout of data, (with D. Ugarte). *Comptes rendus de l'Académie bulgare des Sciences* **49(3)**, (1996), 9-12.

11. Discrete distributions related to success runs of length K in a multi-state Markov chain, (with L. Minkova). *Communications in Statistics: Theory and Methods* **26**, (1997), 1031-1049.

12. Run and frequency quotas in a multi-state Markov chain, (with L. Minkova). *Communications in Statistics: Theory and Methods* **28**, (1999), 2223-2233.

13. Quotas on runs of successes and failures in a multi-state Markov chain, (with L. Minkova). *Communications in Statistics: Theory and Methods* **28**, (1999), 2235-2248.

14. Minimization of the blocking time of the unreliable $Geo/G_D/1$ queueing system, (with V. Bakeva). *Mathematical Communications* **4**, (1999), 1-10.

15. Two characterizations of the geometric distribution related to an unreliable $Geo/G_D/1$ queuing system, (with V. Bakeva and M. Georgieva). *Engineering Simulation* **16**, (1999), 611-620.

16. A characterization of the negative binomial distribution, (with L. Minkova). *Pliska: Studia Matematica Bulgarica* **13**, (2000), 151-154.

17. Inflated-parameter family of generalized power series distributions and their application in analysis of overdispersed insurance data, (with L. Minkova and P. Neytchev), *ARCH Research Clearing House* **2**, (2000), 295-320.

18. Beta transformation. Beta-type self-decomposability and related characterizations, (with B. Dimitrov). *Brazilian Journal of Probability and Statistics* **14**, (2000), 123-140.

19. Bernoulli trials: extensions, related probability distributions and modeling powers, (with B. Dimitrov). *Mathematics and Education in Mathematics* **31**, (2002), 15-24.

20. A zero-inflated distribution: exact results and Poisson convergence, (with L. Mutafchiev). *International Journal of Mathematics and Mathematical Sciences* **28**, (2003), 1771-1782.

21. An application of Kendall distribution, (with U. Anjos). *Journal for Economy and Management* **L(1)**, (2005), 95-101.

22. Run and frequency quotas under Markovian fashion and their application in risk analysis. *Economic Quality Control* **20**, (2005), 97-109.

23. Copula associated to order statistics, (with U. Anjos and N. Tanaka). *Brazilian Journal of Probability and Statistics* **19**, (2005), 111-123.

24. Multinomial model for random sums, (with D. Paiva). *Insurance: Mathematics & Economics* **37**, (2005), 494-504.

25. Joint probability generating function for a vector of arbitrary indicator variables, (with J. Lopez-Mimbela and E. Kolkovska). *Journal of Computational and Applied Mathematics* **186**, (2006), 89-98.

26. Copulas: a review and recent developments, (with U. Anjos and B. Mendes). *Stochastic Models* **22**, (2006), 617-660, (Invited paper).

27. Bivariate density classification by the geometry of marginals, (with M. Fernandez). *Economic Quality Control* **22**, (2007), 3-18.

28. Random sums of exchangeable variables and actuarial applications, (with D. Paiva). *Insurance: Mathematics & Economics* **42**, (2008), 147-153.

29. How long memory in volatility affects true dependence structure, (with B. Mendes). *International Review of Financial Analysis* **17**, (2008), 1070-1086.

30. Bounds for quantile-based risk measures of functions of dependent random variables, (with M. Goncalves and A. Fabris). *Economic Quality Control* **23**, (2008), 55-70.

31. Bounds for distorted risk measures, (with M. Goncalves and A. Fabris). *Economic Quality Control* **23**, (2008), 243-255.

32. A new measure of bivariate asymmetry and its evaluation, (with F. Ferreira). In: *Bayesian Inference and Maximum Entropy Methods in Science and Engineering*, (Eds. M. Lauretto, C. Pereira and J. Stern), Melville, New York, (2008), 173-180.

33. Copula-based regression models: a survey, (with D. Paiva). *Journal of Statistical Planning and Inference* **139**, (2009), 3847-3856.

34. A simple relation between the Leimkuhler curve and the mean residual life, (with N. Balakrishnan and J.M. Sarabia). *Journal of Informetrics* **4**, (2010), 602-607.

35. The BALM copula, (with B. Dimitrov). *International Journal of Stochastic Analysis* (2013, to appear)

Discussion Contribution:

In: *North American Actuarial Journal (NAAJ)* **2**, (1998), pp. 51-52, (with L. Minkova), by E.W. Frees: Relative importance of risk sources in insurance systems. *NAAJ* **2**, (1998), 34-52.

Refereed Conference Papers:

1. Analysis of contingency tables having ordered categories - an overview. In: *Proc. Statistical Data Analysis*, Varna, Bulgaria, (1987), 63-71.

2. On the optimal service in M/G/1 queue with failures caused from the input, (with B. Dimitrov and Z. Khalil). In: *Proc. 2nd International Seminar of Teletraffic Theory and Computer Modeling* **1**, Moscow, Russia, (1989), 1-12.

3. Work optimization of distributed system with two processors. In: *Proc. 2nd International Seminar of Teletraffic Theory and Computer Modeling* **2**, Moscow, Russia, (1989), 1-9. (In Russian).

4. Log-linear analysis of data from Parliamentary Elections'91 and Presidential Elections'92 in Bulgaria using the program AUTOFREQ. In: *Proc. Statistical Data Analysis*, Varna, Bulgaria, (1992), 38-52.

5. Statistical methods for contingency tables analysis of data from behavioral sciences - an overview. In: *Proc. SMABS'94 European Meeting*, Varna, Bulgaria, (1994), 102-128.

6. A program AUTOFREQ for automatic log-linear model selection in contingency tables (Release: 2.0). In: *Proc. Computational Statistics Software Descriptions, COMPSTAT'94* (Eds. R. Dutter and W. Grossman), Wien, Austria, (1994), 51-52.

7. Modified power series distribution as a model for the analysis of cross-classified data, (with D. Ugarte). In: *Proc. Statistical Data Analysis*, Varna, Bulgaria, (1995), 41-50.

8. Generalized negative binomial parameterization and corresponding $C(\alpha)$ statistics in a one-way layout of data, (with D. Ugarte). In: *Proc. COMPSTAT'96*, (Eds. A. Prat and E. Ripoll), Barcelona, Spain, (1996), 129-130.

9. Correlated INAR(1) process, (with D. Paiva). In: *Proc. of Contributed Papers, COMPSTAT'2000*, (Eds. J. Bethelehem and P. van der Heijden), Utrecht, the Netherlands, (2000), 337-342.

10. Maintenance characteristics under imperfect repairs, (with W. Borges, B. Dimitrov and Z. Khalil). In: *Proc. 2nd International Conference Mathematical Methods in Reliability*, Bordeaux, France, (2000), 338-341.

11. On optimum maintenance strategies under imperfect repairs, (with W. Borges, B. Dimitrov and Z. Khalil). In: *Proc. 2nd International Conference Mathematical Methods in Reliability*, Bordeaux, France, (2000), 342-345.

12. Correlation between dependent risks and associated overdispersed models, (with D. Paiva). In: *Annals of the 46th RBRAS and 9th SEAGRO*, Piracicaba, Brazil, (2001), 459-462, (In Portuguese).

13. Extended DAR(1) processes, (with D. Paiva). In: *Proc. 16th International Workshop on Statistical Modelling*, (Eds. B. Klein and L. Korsholm), Odense, Denmark, (2001), 487-490.

14. Volodya, I miss you (two correlated collective risk models). In: *Proc. Applied Stochastic Models and Information Processes*, Petrozavodsk, Russia, (2002), 94-97.

15. Generation of binary random vectors, (with F. Ferreira). In: *Proc. First Brazilian Conference on Statistical Modelling in Insurance and Finance*, (Eds. J. Dhaene, N. Kolev and P. Morettin), Ubatuba, Brazil, (2003), 114-117.

16. Multinomial model for random sums and actuarial applications, (with D. Paiva). In: *Proc. First Brazilian Conference on Statistical Modelling in Insurance and Finance*, (Eds. J. Dhaene, N. Kolev and P. Morettin), Ubatuba, Brazil, (2003), 268-271.

17. Copulas with given multivariate marginals, (with U. Anjos). In: *Proc. 3rd Conference in Actuarial Science and Finance*, Samos, Greece, (2004), 55-62.

18. Bounds for distortion functions of dependent risks via copulas, (with M. Goncalves and A. Fabris). In: *Proc. Second Brazilian Conference on Statistical Modelling in Insurance and Finance*, (Eds. N. Kolev and P. Morettin), Maresias, Brazil, (2005), 122-127.

19. Random sums of partially exchangeable variables, (with D. Paiva and M Fernandez). In: *Proc. Second Brazilian Conference on Statistical Modelling in Insurance and Finance*, (Eds. N. Kolev and P. Morettin), Maresias, Brazil, (2005), 306-309.

20. A unified approach to testing hypotheses about parameters of normal population, (with D. Paiva). In: *Proc. ICOTS7*, Salvador, Brazil, (2006), 171-175.

21. Bivariate density approximation under marginal and conditional information, (with M. Fernandez) In: *Proc. Third Brazilian Conference on Statistical Modelling in Insurance and Finance*, (Eds. C. Fernandes, H. Schmidli and N. Kolev), Maresias, Brazil, (2007), 322-325.

22. Some probabilistic properties of Sibuya's dependence fiction, (with M. Goncalves). In: *Proc. Third Brazilian Conference on Statistical Modelling in Insurance and Finance*, (Eds. C. Fernandes, H. Schmidli and N. Kolev), Maresias, Brazil, (2007), 336-339.

23. A general representation of multivariate distribution with applications. (with D. Paiva and J. Lopez-Mimbela). In: *Proc. Third Brazilian Conference on Statistical Modelling in Insurance and Finance*, (Eds. C. Fernandes, H. Schmidli and N. Kolev), Maresias, Brazil, (2007), 352-355.

24. Copula regression models: an insurance application (with D. Paiva). In: *Proceedings of the Fourth Brazilian Conference on Statistical Modelling in Insurance and Finance*, Maresias, Brazil, (2009), 308-313.

Selected Conference Abstracts:

1. An approach for modeling in the presence of overdispersion, (with D. Ugarte). In: *Proc. 9th European Meeting of the Psychometric Society*, Leiden, (1995), p. 124; and In: *Proc. 10th International Workshop on Statistical Modeling*, Innsbruck, Austria, (1995), 23-24.

2. Some hierarchical models to explain overdispersion in contingency tables, (with D. Ugarte and A. Militino). In: *Proc. 22do Congreso Nacional de Estadistica e I.O.*, Sevilla, Spain, (1995), 265-266.

3. Extended partially correlated binomial and Poisson distributions, (with L. Minkova). In: *Proc. 13th International SINAPE Conference*, Caxambu, Brazil, (1998), 217-218.

4. A generalization of the INAR(1) process. In: *Proc. 8th ESTE,* Nova Friburgo, Brazil, (1999), p. 145.

5. Negative binomial cross-classifications. In: *Proc. 44th REBASO*, Botucatú, Brazil, (1999), p. 164.

6. An extension of INAR(1) process, (with D. Paiva). In: *Proc. 14th SINAPE*, vol. **1**, Caxambu, Brazil, (2000), 264-265.

7. Correlation between dependent risks, (with D. Paiva). In: *Proc. 14th SINAPE*, vol. **2**, Caxambu, Brazil, (2000), 389-390.

8. Extensions of DAR(1) process, (with D. Paiva). In: *Proc. 9th ESTE,* Belo Horizonte, Brazil, (2001), p. 103.

9. Modelo multinomial latente para somas aleatórias, (with D. Paiva). In: *Proc. 15th SINAPE*, vol. **2**, Águas de Lindóia, Brazil, (2002), p. 261.

10. Multinomial latent model for random sums, (with D. Paiva). In: *Proc. 2nd Conference in Actuarial Science and Finance*, Samos, Greece, (2002), 10-11.

11. Bounds for quantile-based measures of dependent risk functions, (with M. Goncalves). In *Proc. 9th International Vinius Conference on Probability Theory and Mathematical Statistics*, Vilnius, Litva, (2006), p. 187.

12. Bounds for quantile-based measures of dependent risks' functions, (with M. Goncalves and A. Fabris). In: *Proc. 10th International Congress on Insurance: Mathematics and Economics*, Leuven, Belgium, (2006), 60-61.

13. Bivariate density classification by the geometry of marginals, (with M. Fernandez). In: *Proc. 10th International Congress on Insurance: Mathematics and Economics*, Leuven, Belgium, (2006), 73-74.

14. Copula-based regression models. In: *Proc. 6th Conference on Multivariate Distributions with Fixed Marginals*, Tartu, Estonia, (2007), p. 42.

15. Sibuya's function, (with M. Goncalves and B. Dimitrov). In: *Proc. 11th International Congress on Insurance: Mathematics and Economics*, Piareus, Greece, (2007), p. 5.

16. A new measure of bivariate asymmetry. In: *Proc. 1st Workshop in Stochastic Modeling*, Ribeirao Preto, (2008), p. 11.

17. On the IFR aging of bivariate lifetime distributions under binary associative operation, (with J. Pinto), In: *Proc. International Conference "Probability Theory and its Applications"*, Moscow, Russia, (2012), 284-285.

Technical Reports (Department of Statistics, IME-USP):

1. Over- and underdispersed models for ruin probabilities, (with L. Minkova). RT-MAE 9812, June, Sao Paulo, (1998), 34p.

2. Negative binomial cross-classifications. RT-MAE 9813, June, Sao Paulo, (1998), 16p.

3. Two characterizations of the geometric distribution related to an unreliable $Geo/G_D/1$ queuing system, (with V. Bakeva and M. Georgieva). RT-MAE 9814, July, Sao Paulo, (1998), 11p.

4. Some basic inflated-parameter discrete distributions, (with L. Minkova). RT-MAE 9815, June, Sao Paulo, (1998), 19p.

5. New over-/uner- dispersed class of inflated-parameter discrete probability distributions, (with L. Minkova). RT-MAE 9819, July, Sao Paulo, (1998), 10p.

6. Inflated-parameter family of generalized power series distributions, (with L. Minkova). RT-MAE 9820, July, Sao Paulo, (1998), 11p.

7. The optimal blocking time of the unreliable $Geo/G_D/1$ queueing system, (with V. Bakeva). RT-MAE 9904, February, Sao Paulo, (1999), 12p.

8. Run and frequency quotas in a multi-state Markov chain, (with L. Minkova). RT-MAE 9905, February, Sao Paulo, (1999), 14p.

9. Quotas on runs of successes and failures in a multi-state Markov chain, (with L. Minkova). RT-MAE 9906, March, Sao Paulo, (1999), 11p.

10. Run and frequency quotas under Markovian fashion and their application in risk analysis. RT-MAE 9919, July, Sao Paulo, (1999), 15p.

11. Two characterizations of the geometric distribution related to β-transformation. RT-MAE 9920, July, Sao Paulo, (1999), 11p.

12. Correlated INAR(1) process. RT-MAE 9921, July, Sao Paulo, (1999), 12p.

13. Two extended partially correlated models. RT-MAE 9922, August, Sao Paulo, (1999), 13p.

14. System's performance under mixed minimal and imperfect repair maintenance strategies, (with W. Borges, B. Dimitrov and Z. Khalil). RT-MAE 2000-6, Sao Paulo, (2000), 17p.

15. The number of empty cells in an allocation scheme generated by a zero-inflated distribution: Exact results and Poisson convergence, (with L. Mutafchiev). RT-MAE 2001-13, Sao Paulo, (2001), 11p.

16. Multinomial latent model for random sums, (with D. Paiva). RT-MAE 2002-08, Sao Paulo, (2002), 9p.

17. Volodya, I miss you (two correlated collective risk models). RT-MAE 2002-15, Sao Paulo, (2002), 20p.

18. Copula associated to order statistics, (with U. Anjos and N. Tanaka). RT-MAE 2004-16, Sao Paulo, (2004), 12p.

19. Copulas with given nonoverlapping multivariate marginals, (with U. Anjos). RT-MAE 2005-02, Sao Paulo, (2005), 9p.

20. Representation of bivariate copulas via local measure of dependence, (with U. Anjos). RT-MAE 2005-03, Sao Paulo, (2005), 15p.

21. Copulas: a review and recent developments, (with U. Anjos and B. Mendes). RT-MAE 2005-07, Sao Paulo, (2005), 46p.

22. Bounds for quantile-based measures of dependent risks' functions, (with M. Goncalves and A. Fabris). RT-MAE 2007-02, Sao Paulo, (2007), 16p.

23. Occupation measure of Markov-modulated risk processes, (with J. Lopez-Mimbela), RT-MAE 2007-03, Sao Paulo, (2007), 12p.

24. Bounds for distortion measures of dependent risks, (with M. Goncalves and A. Fabris). RT-MAE 2007-04, Sao Paulo, (2007), 11p.

25. Copula-based regression models, (with D. Paiva). RT-MAE 2007-07, Sao Paulo, (2007), 28p.

26. Probabilistic properties of Sibuya's dependence function, (with M. Goncalves and B. Dimitrov). RT-MAE 2008-18, Sao Paulo, (2008), 16p.

27. Extended Marshall-Olkin model and applications, (with J. Pinto). RT-MAE 2012-06, 13p.

28. Continuous bivariate distributions with linear sum of hazard gradient components, (with J. Pinto). RT-MAE 2013-05, 37p.

Selected Papers Published in Refereed Mathematical Journals and Conference Proceedings (in Bulgarian):

1. Application of queueing theory in the motor transport. *Motor Transport*, (1981), 81-90.

2. Parameter estimation of probit and logit models, (with S. Yanev, P. Neytchev and N. Neykov). In: *Proc. 4th Pharmacology Congress*, Plovdiv, (1984), 28-37.

3. Analysis of "dose-response" data applied to quality control, (with P. Neytchev and N. Neykov). In: *Proc. Mathematical Methods in Quality Control*, Smolian, (1984), 25-29.

4. Methods for contingency tables analysis. *Mathematics and Education in Mathematics* **14**, (1985), 442-447.

5. Program system for modelling and parametric identification of biotechnological processes, (with N. Neykov, I. Simeonov and T. Iliev). In: *Proc. 2nd International Seminar of Biotechnological Processes*, Varna, (1985), 38-47.

6. A generalization of the geometric distribution of order K. *Mathematics and Education in Mathematics* **15**, (1986), 417-421.

7. An optimization problem when the server is unreliable and breakdowns are implicit. *Mathematics and Education in Mathematics* **16**, (1987), 447-481.

8. A model for identification of biosynthesis processes. In: *Proc. 4th International Seminar of Biotechnological Processes*, Varna, (1987), 85-88.

9. Analysis of contingency tables having ordered categories and applications in quality control. *Statistical Methods in Quality Control*, (1988), 20-25.

10. Traffic profiles of satellite systems, (with P. Todorov and P. Neytchev). In: *Proc. TELECOM'95*, Varna, (1995), 154-160.

Working Papers (few submitted):

1. Risk processes with dependent claim sizes, (with H. Schmidli).
2. Four local measures of dependence between two random variables, (with M. Goncalves).
3. Sibya's dependence function as a complement and alternative to copula modelling, (with M. Goncalves and B. Dimitrov).
4. A measure of bivariate asymmetry, (with F. Ferreira and N. Balakrishnan).
5. Non-exchangeability and radial asymmetry identification via bivariate quantiles (with F. Ferreira).
6. Maximum T(q)-Likelihood estimation method and its application to CVaR evaluation.
7. Extended Marshall Olkin model and applications, (with J. Pinto).
8. Dual extended Marshall Olkin model, (with J. Pinto).
9. Continuous bivariate distributions with linear sum of hazard gradient components, (with J. Pinto).
10. A new notion of bivariate lack of memory property, (with J. Pinto).
11. Sibuya-type copulas and applications, (with J. Pinto).

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