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;
- 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 and Operations Research
  Public University of Navarra, Pamplona, Spain
  November 1995 - June 1996: Visiting Associate Professor
  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 2001: Assistant Professor
  February 2001 - January 2013: Associate Professor, level 1
  February 2013 - April 2017: Associate Professor, level 2
  May 2017 - present: Full Professor
  Duties: Teaching, Research and Supervising.

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

Teaching:

- 1989-1992: Technical University of Sofia, Bulgaria
  - *Calculus I and II*, (for undergraduates).
- 1989-1995: Faculty of Mathematics, Sofia University, Bulgaria
  - *Reliability and Inventory Theory*, (for graduates);
  - *Probability Theory and Statistics*, (for undergraduates).
- 1995-1996: Public University of Navarra, Pamplona, Spain
  - *Generalized Linear Models*, (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 II (Stochastic Calculus)*, (for graduates and PhD);
  - *Categorical Data Analysis*, (for undergraduates);
  - *Probability & Statistics I and II*, (variety of undergraduate courses).

Invited Presentations: (Selected List)

- More than 50 invited talks (about half in Bazil).
- 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 Mathematical Union Conference*, Borovets, Bulgaria, April 2002;
- *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;
- *6th Conf. Multiv. Ditr. with Fixed Marginals*, Tartu, Estonia, June 2007;
- *VI Workshop on Simulation*, St. Petersburg, Russia, June, 2009;
- *Stochastic Day*, University of Southern Denmark, Odense, Nov. 2010;
- *Gnedenko's Centennial Conference*, Moscow, Russia, June 2012;
- Izmir University of Economics, Turkey, November 2012;
- Vienna University of Technology, Austria, September 2013;
- *Advances in Marshall-Olkin Modeling*, Bologna, Italy, October 2013;
- *21th SINAPE Conference* (Copula course), Natal, Brazil, July 2014;
- *16th ASMDA Conference*, Athens, Greece, July 2015;
- McGill University, Montreal, Canada, October 2017;
- Costa Rica Univ. (Copula course), San Jose, Costa Rica, February 2018;
- Universities of Durham, Manchester and York, UK, June 2018;
- University of Bologna (Line Integral Course), Italy, December 2019.

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. I444/94: *Financial Mathematics and Statistics*, Coordinator: D. Vandev;
- No. 705/97: *Probability Measures 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;
- 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*, (Sponsored by CAPES-DAAD), Coordinators: N. Kolev and von Collani.

C. Sponsored by Sao Paulo Sci. Foundation, FAPESP (Principal Investigator)

- No. 99/08263-1: *Correlated Uncertainty in Periodic Random Environment;*
- No. 00/13505-3: *Zero-inflated Random Mappings;*
- 2001-2003, No. 01/02699-4: *Extended Premium Principles;*
- No. 03/05116-5: *Random Sums of Exchangeable Variables;*
- No. 05/50686-0: *Risk Processes with Dependent Claims;*
- No. 06/55061-0: *Random Sums, Dependence and Occupation Measures;*
- No. 07/60952-1: *Randomness and Uncertainty for Multivariate Scenarios;*
- 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;*
- 2013-2023, No. 2013/07375-0: *CEPID Interdisciplinary: Mathematics Applied to Industry*

D. Several Grants Sponsored by USP, CAPES, CNPq (Main Scientific Found.).

Referee:

- Annals of the Institute of Statistical Mathematics;
- Applied Stochastic Models in Business and Industry (Editorial Board 2002-2007);
- Brazilian Journal of Probability and Statistics;
- Chilean Journal of Statistics (Associate Editor since 2010);
- Communications in Statistics: TM and SC (Associate Editor 2009 - 2019);
- Communications in Statistics: TM (Guest Editor Volume 42, Number 4, 2013);
- Economic Quality Control (Regional Editor 2005-2013);
- Emerging Markets, Finance and Trade;
- European Journal of Operational Research;
- Insurance: Mathematics and Economics;
- 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);
- Spanish Journal of Statistics (Associate Editor since 2019), and 25 more.

Supervision:
(PhD and Post-doc)

- Minkova, L. (1995). *Gaussian Processes Equivalent to Gaussian Martingale*, Sofia University, Bulgaria;
- Ugarte, D. (1996). *Tests and Models for Detecting and Explaining Overdispersion*, Public University of Navarra, Spain;
- Bakeva, V. (1998). *Discrete Queuing Systems with Unreliable Server*, 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,* IME-USP, Brazil;
- Anjos, U. (2005). *Development and Analysis of Dependence Structures via Copulas,* IME-USP, Brazil;
- Paiva, D. (2005-2006). Post-doc, IME-USP, Brazil;
- Fernandez, M. (2007). *Bivariate Density Classification by the Geometry of Marginals,* IME-USP, Brazil;
- Ferreira, F. (2008). *Bivariate Asymmetry and Local Dependence Measures*, IME-USP, Brazil;
- Goncalves, M. (2008). *A Study on Dependence Functions and Risk Measures*, IME-USP, Brazil;
- Baumann, L. (2011): *Local Measures of Dependence*, IME-USP, Brazil;
- Pinto, J. (2014): *Deepening the Notions of Bivariate Aging*, IME-USP;
- Ara, A. (2016-2017). Post-doc, IME-USP, Brazil;
- Bahraoui, T. (2018-2019). Post-doc, IME-USP, Brazil.

Supervision:
(MBA in Data Science)

- Paula, F. (2020). *Classification of Public Funds and Information Transparency of the Government*, ICMC-USP, Brazil;
- Furlan, J. (2020). *Semantic Documents Categorization of the Electronic System*, ICMC-USP, Brazil;
- Fernandes, R. (2020). *Automatic Analysis of the Public Funds Planning*, ICMC-USP, Brazil;
- Pedatella, R. (2020). *A Predictive Model for Risk Contract Identification*, ICMC-USP, Brazil;
- Vieira, H. (2020). *Patent Classification Through Categories and Topics*, ICMC-USP, Brazil;
- Eduardo Flores (MBA in Data Science): *Machine Learning and Tax Transaction Applications*, ICMC-USP.

Current Supervision:

- Lucas Pereira Lopes (PhD): *New Data Science Tools with Finance Aplications*, IME-USP;
- Daniel Morales (PhD): *Line Integral on Discrete Grids with Aplications in Finance and Economics*, IME-USP;
- Yuri Verges (PhD): *Vine Copulas Tools in Machine Learning*, IME-USP

Visiting Professor:

- November 1995 - June 1996: Dept. of Statistics and Operation Research
  Public University of Navarra, Pamplona, Spain
  PhD Course: *Generalized Linear Models*;
- January - February 2003: Department of Probability and Statistics
  CIMAT, Guanajuato, Mexico;
- September - October 2004, June - July 2005 and June - July 2006:
  Department of Economics, University of Würzburg, Germany;
- October 2005 - April 2006: Department of Statistics
  Western Michigan University, Kalamazoo, USA
  PhD Course: *Survival Analysis*;
- February 2008: Department of Mathematics
  National Technical University, Quito, Ecuador
  PhD Course: *Introduction to Copulas*;
- October - December 2012: Department of Mathematics
  Izmir University of Economics, Turkey, PhD Course: *Copula Theory*;
- September - November 2013 and September 2015 - February 2016:
  Department of Statistics, Bologna University, Italy;
- May - July 2022: Finance Mathematics,
  Department of Mathematics, Technical University of Munich, Germany.

Several Short Visits: (up to 3 weeks)

- September 1997: Department of Probability and Statistics
  University of Skopje, Skopje;
- October 1997, June 2002, June 2012 and November 2017:
  Department of Probability and Statistics
  Lomonosov State University, Moscow, Russia;
- March 2003 and May 2004: Department of Actuarial Science
  Catholic University of Leuven, Belgium;
- June 2006: Mid-West Technical University, Ankara;
- July 2006: Delft University of Technology, Delft, The Netherlands;
- November 2010: University of Southern Denmark, Odense, Denmark;
- September 2011: University of British Columbia, Vancouver, Canada;
- October 2011 and October 2017: McGill University, Montreal, Canada;
- September 2012: Technical University of Munich, Germany;
- September 2013: Vienna University of Technology, Austria;
- November 2013: Technical University of Zurich, Switzerland;
- November 2012 and June 2015: University of Piraeus, Greece;
- June 2018: Universities of Durham, Manchester and York, UK;
- July and December 2019: Bologna University, Italy.

Patents:

- *PIBT: Program for Parametric Identification of the Results Biotechnological Processes*: No. 1.M011.00273-01/1987, Bulgaria;
- *Rr: Program for Repeatability and Reproducibility of Inter-laboratory Tests*. No. 1.B034.00576-01/1989, Bulgaria;
- *AUTOFREQ: Program for Automatic Log-linear Hierarchical Model Selection in Contingency Tables*. No. 1.B034.01840-01/1992, Bulgaria.

Organizer:

- 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* (2004-2012), *Copula Modelling with Insurance and Finance Applications*, since 2010;
- *Workshop on Statistical Modelling in Insurance and Finance*, IME-USP, 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`);
- *3rd Workshop on Risk Assesment* IME-USP, Sao Paulo, Brazil, November 2016;
- *Workshop on Copula Modelling - a Nonstandard Brazilian View* IME-USP, Sao Paulo, Brazil, June 2017;
- *Workshop on Dependence Modelling* IME-USP, Sao Paulo, Brazil, February 2019;
- *Workshop on Risk Analysis* IME-USP, Sao Paulo, Brazil, March 2020;
- *1st to 7th Brazilian Conferences on Statistical Modelling in Insurance and Finance (BCSMIF)*, Ubatuba, Brazil, September 2003 and Maresias: September 2005, March 2007, April 2009, April 2011, March 2013 and March 2020 (see details at `www.ime.usp.br/bcsmif`).

Statistical Consultancy:

- Statistical Modelling in Finance, Insurance and Industry, (coordinator of interdisciplinary teams in the use of copula models).

Academic Membership:

- Brazilian Statistical Society;
- International Association of Statistical Computing.

Committee Member:

- Search (Professorship in Brazil + WMU and KetteringU, USA): 5 times
- Search (Associate Professorship in Brazil): 5 times;
- Search (Assistant Professorship in Brazil): 7 times;
- Scientific Committee Member International Conferences: 15 times;
- PhD defenses in Brazilian Universities: 33 times.

Honor Distinctions:

- CKER Research Grant, Society of Actuaries, USA, 1998;
- Quarterly Franklin Membership, London Math. Society, UK, 2019;
- As-hoc referee of CAPES, CNPq, FPAESP (Brazilian Sci. Foundations)

Areas of Interest:

- Dependence Modeling via Copulas and Finance Applications;
- Dependent Random Sums and Insurance Applications;
- Multivariate Analysis and Industry Applications;
- Sibuya's Dependence Function as a Copula Alternative;
- Line Integral on Discrete Grids and Finance Applications;
- New Machine Learning and Data Science Tools.

Reference Colleagues:

- **Prof. Boyan Dimitrov (theses supervisor)**
  e-mail: bdimitro@kettering.edu
  Department of Mathematics, Kettering University
  1700 West Third Ave., Flint, MI 8504, USA
  Phone +1 810 762 7910, FAX: +1 810 762 9796;

- **Prof. Christian Genest**
  e-mail: cgenest@math.mcgill.ca
  Dept. of Mathematics and Statistics, McGill University
  805, rue Sherbrooke ouest, Montreal, Canada
  Phone: +1 514 398 3818 , FAX: +1 514 3983899;

- **Prof. Ismihan Bayramoglu**
  e-mail: ismihan.bayramoglu@izmirekonomi.edu.tr
  Department of Mathematics, Izmir University of Economics
  Teleferik, Sakarya Str. 156, 35330 Izmir, Turkey
  Phone: +90 232 488 8139, FAX: +90 232 279 2626;

- **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. Uwe Schmock**
  e-mail: schmock@fam.tuwien.ac.at
  Institute for Mathematical Methods in Economics
  Vienna University of Technology
  Wiedner Hauptstrae 8-10/105-1, A-1040 Vienna, Austria
  Phone: +43 1 58801-10510; FAX: +43 1 58801-9-10510.

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LIST OF PUBLICATIONS

Nikolai Kolev

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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).

Book Chapters:

1. A new measure of bivariate asymmetry and its evaluation (with F. Ferreira). In: *Bayesian Inference and Maximum Entropy Methods in Science and Engineering*, (C. Pereira and J. Stern, eds.), AIF **1073** (2008), 173-180.

2. Copula representations for invariant dependence functions (with J. Pinto). In: *Innovations in Quantitative Risk Management*, (K. Glau, M. Scherer and R. Zagst, eds.), Springer Series in Probability & Statistics **99**, Chapter 24, (2015), 411-421.

3. Extended Marshall-Olkin model and its dual version, (with J. Pinto). In: *Marshall-Olkin Distributions - Advances in Theory and Applications*, (U. Cherubini, F. Durante and S. Mulinacci, eds.), Springer Series in Probability & Statistics **141**, Chapter 6, (2015), 87-113.

4. Bivariate Teissier distributions (with N. Ngo ; Ting Ju). In: *Lecture Notes in Computer Science*, Springer International Publishing (V. Rykov and A. Kozyrev, eds.), **10684** (2017), 279-290.

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-decomposition 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 occupancy distribution: exact results and Poisson convergence, (with L. Mutafchiev). *Intern. Journal of Mathematics and Math. 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). *American Institute of Physics Conference Proceedings* **1073**, (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* **201**, (2013), 1-6.

36. Transfer of global measures of dependence into cumulative local, (with B. Dimitrov, S. Esa and G. Pitselis). *Applied Mathematics* **5**, (2014), 615-627.

37. Sibuya-type bivariate lack of memory property, (with J. Pinto). *Journal of Multivariate Analysis* **134**, (2015), 119-128.

38. A class of continuous bivariate distributions with linear sum of hazard gradient components, (with J. Pinto). *Journal of Statistical Distributions and Applications* **3**, (2016), 1-17.

39. Characterizations of the class of bivariate Gompertz distributions. *Journal of Multivariate Analysis* **148**, (2016), 173-179.

40. Extreme value properties of Extended Marshall-Olkin models, (with J. Pinto). *International Journal of Statistics and Probability* **5**, (2016), 253-260.

41. Dependence modeling in energy markets using Sibuya-type copulas, (with J. Pinto). *International Journal of Statistics and Probability* **5**, (2017), 43-50.

42. A weak version of the bivariate lack of memory property, (with J. Pinto). *Brazilian Journal of Probability and Statistics* **32**, (2018), 873-906.

43. Functional equations involving Sibuya's dependence function, (with J. Pinto). *Aequationes Mathematicae* **92**, (2018), 441-451.

44. Reliability function of renewable system under Marshall-Olkin failure model, (with D. Kozyrev and V. Rykov). *Reliability: Theory and Applications* **13**, (2018), 39-46.

45. Joint life insurance pricing using extended Marshall-Olkin models, (with F. Gobbi and S. Mulinacci). *Astin Bulletin* **49**, (2019), 409-432.

46. New measure of the bivariate asymmetry, (with T. Bahraoui). *Sankhya A* **82**, (2020), 1-28.

47. Discrete line integral on uniform grids: probabilistic interpretation and applications. *Brazilian Journal of Probability and Statistics* **34**, (2020), 821-843.

48. A law of uniform seniority for dependent lives, (with C. Genest). *Scandinavian Actuarial Journal* (2021) **2021(8)**, 726-743.

49. Ryu-type extended Marshall-Olkin model with implicit shocks and joint life insurance applications, (with F. Gobbi and S. Mulinacci). *Insurance: Mathematics and Economics* **101, Part B**, (2021), 342-358.

50. New characterizations of bivariate discrete Schur-constant models, (with S. Mulinacci). *Statistics and Probability Letters* **180** (2021), 109-114.

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 (selected):

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.

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