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Prof. Dr.Sci. Svetlozar (Zari) Rachev - Curriculum Vitae

Name: Rachev
Given name(s): Svetlozar (Zari) Todorov
Date of birth: September 6th, 1951
Current Position: Professor Endowed Chair of Statistics, Econometrics and Mathematical Finance , School of Economics and Business Engineering, Karlsruhe University and Karlsruhe Institute of Technology (KIT), Germany

Web-page: http://www.statistik.uni-karlsruhe.de

Professional Career

M.Sc. in Mathematics, Sofia University, Faculty of Mathematics, July 1974, Thesis: "Reliability of aging systems."
Ph.D. in Mathematics, Lomonosov University (Moscow), Faculty of Mechanics and Mathematics, October 12, 1979, Dissertation: "The structure of the metrics in the space of random variables and their distributions."
Doctor of Science (Habilitation) in Physics and Mathematics, Steklov Mathematical Institute, Moscow, April 10, 1986. Dissertation: "Probability metrics and their applications to the stability problems for stochastic models."

Present appointment: since 1998 Professor at the School of Economics and Business Engineering, Karlsruhe University.

Previous appointments:

1974 - 1977: Mathematican, Mathematical Institute, Bulgarian Academy of Sciences.
1977 - 1979: Post-graduate Student, Lomonosov University, Faculty of Mechanics and Mathematics, Department of Probability, Moscow, USSR
1980 - 1984: Research Fellow, Mathematical Institute, Bulgarian Academy of Sciences.
1984 - 1986: Senior Research Fellow, Bulgarian Academy of Sciences, and Visiting Senior Research Fellow, Steklov Mathematical Institute, Academy of Sciences of the USSR, Moscow.
1987 -- 1987: John H. Van Vleck, Visiting Professor, Wesleyan University, Connecticut, and Visiting Associate Professor, Center for Stochastic Processes, University of North Carolina at Chapel Hill.
1988 -1988: Visiting Associate Professor, State University of New York at Stony Brook.
1988 - 1998: Professor, Department of Statistics and Applied Probability, University of California at Santa Barbara.

(1994-1995, Chairman, Department of Statistics \& Applied Probability, University of California at Santa Barbara.)
Since May 1998 : Professor, School of Economics and Business Engineering, University of Karlsruhe

Responsibilities. awards and memberships: Fellow of the Institute of Mathematical Statistics, Elected Member of the International Statistical Institute, Foreign Member of the Russian Academy of Natural Science, Honorary Doctor of Science at St. Petersburg Technical University, Humboldt Professor Award (1997), Principal Investigator of NSF and DFG Grants (1989 – present).

Research Degrees, Current Position and Areas of Expertise

Svetlozar (Zari) Rachev completed his Ph.D. Degree in 1979 from Moscow State (Lomonosov) University, and his Doctor of Science Degree in 1986 from Steklov Mathematical Institute in Moscow. Currently he is Chair- Professor in Statistics, Econometrics and Mathematical Finance at the University of Karlsruhe in the School of Economics and Business Engineering. He is also Professor Emeritus at the University of California, Santa Barbara in the Department of Statistics and Applied Probability.

He has published 13 monographs (plus 2 forthcoming), 9 handbooks and special edited volumes , and over 300 research articles. His research areas include mathematical and empirical finance, econometrics, probability, and statistics. He is Fellow of the Institute of Mathematical Statistics, Elected Member of the International Statistical Institute, Foreign Member of the Russian Academy of Natural Science, and holds an honorary doctorate degree from St. Petersburg Technical University. To date, he has supervised over twenty five doctoral students in the areas of finance, insurance, statistics, probability and econometrics. He is in the Editorial Board of 7 journals in probability, finance, insurance, data analysis and applied mathematics

His current research interests in the area of mathematical and empirical finance include:

(i) modeling financial time series: asset returns time series models with heavy-tailed innovations, exhibiting clustering of the volatility, and short and long range dependence;
(i) pricing and hedging in volatile markets;
(ii) portfolio optimization;
(iii) risk management (market, credit and operational risk management)
(iv) asset liability management.

Professor Rachev is co-founder of Bravo Risk Management Group specializing in financial risk- management software. Bravo Group was recently acquired by FinAnalytica for which he currently serves as Chief-Scientist.

RESEARCH ACTIVITIES, 2008- 2009

General Research Projects:
(i*) Finance and Econometrics:* non-Gaussian models in mathematical and empirical finance, financial econometrics, factor models for asset returns, market and credit risk management, operational risk assessment and forecast, asset liability modeling, optimal choice of performance measures, momentum and risk-neutral strategies, statistical arbitrage, optimal portfolio theory for highly volatile markets, option pricing with stable and tempered stable GARCH-type processes for the underlying risk factors, statistical tests for CAPM and APT in the presence of heavy-tailed distributed financial returns, Bayesian methods in finance, tempered stable processes in finance, credit derivatives and CDOs, modeling high-frequency data, statistical analysis of hedge-fund industry, risk analysis and optimization of funds of hedge funds, statistical models energy markets;
(*ii) Probability and Statistics*: general stability and ill-posed problems in stochastic modeling , robustness versus heavy-tailed models in statistics.

In 2007-2008, the work on these projects was based on a joint collaborative research with Frank J. Fabozzi, (Yale University, School of Management), Lev Klebanov (Charles University), Wei Sun, Aaron Kim, Stefan Trueck, Markus Hoechstoetter, Sebastian Kring, Michael Stein , Almira Biglova (University of Karlsruhe),Stoyan Stoyanov, Boryana Racheva-Iotova, Stefcho Dokov (FinAnalytica) , John Hsu, Biliana Bagasheva , Deszong Wang (UCSB), Marida Bertocchi, Rosella Giacometti, Sergio Ortobelli and Michele-Leonardo Bianchi (University of Bergamo), Haim Shalit (Ben-Gurion University), Carlo Marinelli (University of Bonn), Takashi Kanamura (J-Power, Japan), Audrius Kabasinskas, Leonidas Sakalauska, Igoris Belovas (Kaunas University of Techonology) and others.

Monographs:

1.Klebanov L. , Rachev S. and Fabozzi, F. *Robust versus Heavy-Tailed Models in Statistics*, NOVA- Science Publ., NY, 2009

2. Stefan Trueck, Svetlozar T. Rachev , *Rating Based Modeling of Credit Risk: Theory and Application of Migration Matrices* , Academic Press Advanced Finance, 2008

3. Svetlozar T. Rachev, Stoyan Stoyanov, and Frank J. Fabozzi, *Advanced Stochastic Models, Risk Assessment, and Portfolio Optimization: The Ideal Risk, Uncertainty, and Performance Measures,* John Wiley,Finance, 2007

4. Rachev, S. , Hsu, J. Bagasheva B. and
Fabozzi, F. *Bayesian Methods in Finance*, John Wiley, Finance , 2007

5. Rachev, S., Mittnik, S. Fabozzi, F. , Focardi,S.,
Jasic T. , *Financial Econometrics,* John Wiley,Finance, 2007

6. Chernobai, A. Rachev, S., Fabozzi, F. *Operational Risk: A Guide to Basel II Capital Requirements, Models and Analysis.* John Wiley, Finance , 2007

7. Klebanov, L. Kozubowski T. and Rachev, S. *Ill-Posed Problems in Probability and Stability of Random Sums*, Nova Science Publishers, New York, 2006

8. Rachev, S., Menn C. and Fabozzi F. *, Fat-Tailed and Skewed Asset Return Distributions: Implications for Risk Management, Portfolio selection, and Option Pricing* JohnWiley, Finance, 2005

9. Rachev, S. and Mitnik S. *Stable Paretian Models in Finance* , John Wiley, Series in Financial Economics and Quantitative Analysis, Chechester, New York, 2000.

10. Rachev S. and Rüschendorf L. *Mass Transportation Problems, Vol II: Applications* , Springer, New York, 1999

11. Rachev S. and Rüschendorf L. *Mass Transportation Problems, Vol I: Theory* , Springer, New York, 1998.

12. Rachev S. *Probability Metrics and the Stability of Stochastic Models* , Wiley, Chichester,New York, 1991.

13. Kashnikov V. and Rachev, S. *Mathematical methods for construction for queueing models* Moscow, Nauka, (in Russian) 1988, English transl., Wadsworth & Brooks/Cole Advanced Books, 1990.

14. Kakosyan A. , Klebanov L. , Rachev, S. *Quantitative Criteria for Convergence of Measures,* Erevan, Ajastan Press, 1987, (in Russian).

Forthcoming Monographs

1.Svetlozar T. Rachev, Stoyan Stoyanov, and Frank J. Fabozzi, *The Theory of Ideal Risk measures and Probability Distances ,* Blackwell Publishing, 2010

2.Svetlozar T. Rachev, Markus Hoechstoetter, Frank J. Fabozzi, and Sergio M. Focardi, *Probability and Statistics for Finance*,John Wiley, Finance , October , 2010

3. Borjana Racheva , S. T. Rachev, Stoyan Stoyanov and Frank Fabozzi *Advanced Risk Management and Portfolio Optimization: The Mercury-Cognity Approach* , Wiley, Finance, May 2011

Handbooks and Special Volumes:

1.S.T. Rachev and F.J. Fabozzi (Guest Editors) *Special Issue on Studies in Mathematical and Empirical Finance, Mathematical Methods of Operations Research*, **Vol. 69/3**, July, 2009

2. G.Bol, S. Rachev and R. Würth (editors) *Risk Assessment: Decisions in Banking and Finance*, Springer/Physika, 2009

3. Rachev S. (Editor) *Computational and Numerical Methods in Finance*, Handbook, Birkhäuser, Boston, 2004.

4. Bol, G., Nakhaeizadeh G. , Rachev, S. Rieder, T. , Vollmer K-H. (Editors), *Credit Risk (Measurement, Evaluations and Management)* Editors. Contributions to Economics. Springer Verlag, . Physica-Verlag Series, Heidelberg,NY, 2003.

5. Rachev S. (Editor*) Handbook of Heavy Tailed Distributions in Finance*, Book 1 North Holland Handbooks of Finance, Elsevier/North-Holland , Amsterdam, Boston,London, NY, 2003.

6. Rachev S. (Editor) *Mathematical Models in Market and Credit Risk Editor*, Mathematical Methods of Operations Research, Vol. 55/2, 2002, Springer, NY

7. Mittnik S. and Rachev, S. (Editors) *Stable Non-Gaussian Models in Finance and Econometrics*, Mathematical and Computer Modeeling, Vol 29, No-10-12, 1999, Pergamon, NY

8. Mittnik S. and Rachev S. (Editors) *Distributional Modeling in Finance,* Mathematical and Computer Modeeling, Vol 29, No-10-12, 1999, Pergamon, NY

9. Heyde, C., Prohorov, Yu., Pyke, R., Rachev S. *Probability Theory and its Application in Applied and Industrial Mathematics,* Springer Verlag, 1995

10. Anastassiou G. and Rachev S. (Editors) *Approximation, Probability and Related Fields*, Plenum Press, New York and London, 19949

PATENTS

1. Rachev et al. *System and Method for the Valuation of Derivatives*, **United States Patent No.: US 7,630,931 B1**, Date of Patent: Dec.8, 2009
2. Rachev et al. *System and Method for Prividing Optimization of a Financial Portfolio Using a Parametric Leptokurtic Distribution,* **United States Patent, Serial No.: 10/888,414, Filed July 9, 2004, Docket No.: 031/0424.US.UTL** , Filed: July 9, 2004 (forthcoming)

PUBLICATIONS, 2010

331. Stoyan V. Stoyanov · Borjana Racheva-Iotova ·, Svetlozar T. Rachev , Frank J. Fabozzi ,Stochastic models for risk estimation in volatile markets: a survey, *Annals of Operations Research*: **176**/**1,** 293 -309, 2010

330. Anna Serbinenko, S.T. Rachev, A new hybrid model for intraday spot foreign exchange trading accounting for heavy tails and volatility clustering, in *Journal of Computational Analysis and Applications*, **12**/**1-B**, 337-360, 2010

329. Audrius Kabasinkas, Svetlozar T. Rachev, Leonidas Sakalauskas, Wei Sun and Igoris Belovas, Stable Mixture model with dependent stats for financial returns series exhibiting short histories and periods of strong passivity. *Journal of Computational Analysis and Applications" (JoCAAA)*, **12**/**1-B,** 268-292, 2010

328. Grebeck M.J., Rachev S.T. and Fabozzi F.J. Stochastic Programming and Stable Distributions in Asset Liability Management, *The Journal of Risk*, 29-47, **12**/**2**, 2009/2010

327. Caviezel V. ,Ortobelli,S., Rachev S. Semiparametric estimators for heavy-tailed distributions, *Journal of Concrete and Applicable Mathematics*, **8**/**1**, 150-164, 2010

326. Biglova A., Ortobelli S.,Rachev S.T. Stoyanov S. A note on the impact of non linear reward and risk measures, *Journal of Applied Functional Analysis*, **5**/**2,** 194-202, 2010

325. Ortobelli S., Biglova A., Rachev S.T., Stoyanov S. Portfolio Selection Based on a Simulated Copula, *Journal of Applied Functional Analysis*, **5**/**2**, 177-193, 2010

324. Kanamura, T., Rachev S.T. and Fabozzi F. A profit model for spread trading with application to energy futures, *The Journal of Trading,* **5**/**1,** 48-62, 2010

PUBLICATIONS, 2009

323. Serbinenko A. and Rachev S.T. Intraday spot foreign exchange market. Analysis of efficiency, liquidity and volatility*, Investment Management and Financial Innovations***, 6**/**4,** 35-45, 2009

322. Jan Fraenkle, Svetlozar Rachev, Review: Algorithmic Trading, *Investment Management and Financial Innovations,* Vol. 6, issue 1, 7-20, 2009.

321. . Stein M., Rachev S. , Stoyanov S. R-ratio optimization with heterogeneous assets using genetic algorithm , *Investment Management and Financial Innovations,* **6**/ **2,** 117-134, 2009.

320. A.Biglova, S.Ortobelli, S. Rachev, F. Fabozzi, .Modeling, Estimation and Optimization of Equity Portfolios with Heavy-tailed Distributions. In *Optimizing Optimization , The Next Generation of Optimization - Applications and Theory, Editor Stephen Satchel,* Academic Press/Elsevier, 2010, 117-141

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318. Sebastian Kring, Svetlozar T. Rachev, Markus Hochstotter, Frank J. Fabozzi, and Michele Bianchi, "Multi-Tail Elliptical Distributions." *The Econometrics Journal*, **12**/**2** , 272-291, 2009

317. Menn S. and Rachev S.T. , Smoothly truncated stable distributions, GARCH-models, and option pricing, *Mathematical Methods in Operational Research*, **69**, 411-438, 2009

316. Rachev, S.T., M. Stein and W. Sun, Copula Concepts in Financial Markets*, Portfolio Institutionell*, **4,** 12 – 15,April 2009

315. Jochen Papenbrock, Svetlozar Rachev, Markus Hoechstoetter, Frank Fabozzi, Price calibration and hedging of correlation dependent credit derivatives using structural model with alpha-stable distributions, *Applied Financial Economics,* **19**/**17** , 1401-1416 2009

314. Stoyan V. Stoyanov, Svetlozar T. Rachev, Frank J. Fabozzi: Construction of probability metrics on classes of investors, *Economics Letters* ,**103**,45-48, 2009

313. Wei Sun, Svetlozar T. Rachev, Frank J. Fabozzi, A new approach for using Levy processes for determining high-frequency value-at-risk predictions, *European Financial Management*, **15**/**2** , 340-361, 2009.

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306. A. Biglova, S. Rachev, S.Stoyanov and S. Ortobelli, Analysis of the Factors Influencing Momentum Profits, *Journal of Computational Analysis and Applications*, Vol.4,No1, 2009,81-106

305. Stoyanov S. , Rachev.S. and Fabozzi F. Probability Metrics with Applications in Finance, *Journal of Statistical Theory and Practice, special volume : Recent Advances in Applied Probability,* Volume 2,No2, June, 253-277 , 2008

304.Wang D., Rachev, S. Fabozzi F. Pricing Tranches of a CDO and SDS Index: Recent Advances and Future Research , *Journal of Empirical Finance*, Vol 16 263-286, 2009

303. Kim Y.S. ,Rachev S.T. ,Bianchi M-L, Fabozzi F. A new tempered stable distribution and its application to finance, in: G. Bol et al. (eds), *Risk Assessment: Decisions in Banking and Finance*, Springer/Physika, 77-110, 2009

302. Kring S., Rachev S. , Höchstötter, M., Fabozzi, F. Estimation of Alpha-Stable Sub-Gaussian Distributions for Assets Returns, in: G. Bol et al. (eds), *Risk Assessment: Decisions in Banking and Finance*, Springer/Physika, 111-152, 2009

301. Rachev, S., D. Martin, B. Racheva-Iotova and S. Stoyanov (2009), Stable ETL optimal portfolios and extreme risk management', in: G. Bol et al. (eds), *Risk Assessment* : *Decisions in Banking and Finance*, Springer/Physika, 235-262, 2009

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300. S.Ortobelli,S.Rachev,H.Shalit, F.Fabozzi, Orderings and Risk Probability Functionals in Portfolio Theory, *Probability and Mathematical Statistics*, **28/2**, 203-234, 2008

299. Stoyanov S. , Rachev.S. and Fabozzi F. Principles of Optimization in Portfolio Selection, in Frank J. Fabozzi (ed.), *Handbook of Finance,* **Vol 3**, 763-773, John Wiley & Sons, 2008.

298. . Rachev S., Menn, C, Fabozzi F. Introduction to Stochastic Processes, in Frank J. Fabozzi (ed.), *Handbook of Finance,* **Vol 3**, 725-737, John Wiley & Sons, 2008.

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286. S.Rachev, W.Sun, F.J.Fabozzi - A New Solution for Finance- Stable Family Models, Karlsruher Transfer, **No 37**, 2008, 26-27

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1.Credit Risk Management – The Phi-Alpha Approach, HSBC, NY, Credit Risk Management Department, July, 2003

2.Econometrics of Financial Assets with Heavy-Tailed Distributed returns , Bear, Stearns &Co, NY, September 2003

3.Stable Paretian Models in Financial Risk Management and Optimization, University of Sofia, Bulgaria, December 2003

4. Financial Optimization and Asset Liability Management – the Cognity Software
Union Asset Management, January 2004

5. Stable Paretian Models in Risk Management and Optimization, University of Washington, Department of Statistics, February 2004.

6. Valuation of Collateralized Debt Obligations, University of Bergamo, Mathematics Department, March 2004

7. Econometrics of Financial Markets in the Presence of High Volatility, University of Karlsruhe, Economics department, May 2004

8. Statistical Issues in Modeling Financial Data with heavy-tailed distributions, Technical University of Graz, Austria, Statistics department, May 2004,

9. Option Pricing with GARCH-stable Processes, University of Vienna, Austria, Statistics Department, June 2004

10. Stable Option Pricing, Symposium of Joe Gani's birthday, A Celebration of Modelling and Applied Probability, ANU, 14-15 Dec 2004, Australia

11. Stable Models in Finance, Recent Advances.Quantitative Methods in Finance, 2004, December 15-19, Sydney, Australia

12. Bond Portfolio Management, Istituto Applicazioni del Calcolo , IAC-CNR, Rome, Italy, march 8, 2005

13. Risk Managment, Optimization and Option Pricing: Stable Non-Gaussian Models in Finance, Seminar in Probability an Statistics, Departement of Mathematics, University "La Sapienza', Rome, March 7, 2005

14. Risk Management, Optimization and Option Pricing; Stable Non-Gaussian Models in Finance "Finance and Decisions 05", Bolzano, Italy, April 28-30,2005

15. Risk Management with Stable Distributions, Statististics Seminar , University of Freiburg, May 6, 2005

16. Momentum Strategies and Risk Measures, Workshop "Risk Measures & Risk Management General Aspects", EURANDOM, Eindhoven, May 9-10, Netherlands, 2005

17. The Stable Non-Gaussian Approach to Portfolio Management and Option Pricing, New Directions in Risk Modelling, CARISMA –UNICOM Workshop ,18-19 May, London, UK, 2005

18. Risk Management, Optimization and Option Pricing:Stable Non-Gaussian Models in Finance, Part1 and Part 2, May 30 and June 1, Hitotsubashi University, Graduate School of International Corporate Strategy National Center of Sciences, Tokyo ,Japan, 2005

19. Portfolio Optimization, Factor models and Momentum Strategies, University of Sofia, Faculty of Mathematics, July 5, 2005

20. Stable Models for Intergrated Risk Management, University of Bergamo, Italy, October 20, 2005

21. Portfolio Management in Volatile Markets, Barclays Global Investors, London, UK, January 13, 2006

22. Momentum Strategies and Risk Adjusted Portfolio Measures, 10th Karlsrue Econometric Workshop, "Risk Assessment: Decisions in Banking and Finance ", April 5, 2006

23. Risk Management, Portfolio Management and Option Pricing, Hector School, International

Department, University of Karlsruhe, May 22, 2006

24. Momentum Strategies using Risk-adjusted Stock Selection Criteria, CARISMA , New Directions in Financial Modelling London, 23-24 May 2006.

25. Portfolio Optimization in Highly Volatile Market, Whitman School of Management, Syracuse University, Syracuse, September 21, 2006

26. Operational Risk Management - Advanced Approaches, Daimler Chrysler research office, Ulm, October 30

27.. Risk Management,optimization,and option pricing:stable non-Gaussian approach; The UK Society of Quantittative Investment Professionals (UK QUIPS), London, November 7,2006

28. Tempered Stable Processes for Option Prcing, RiskMetrics, Geneva, Switzerland, November 17, 2006

29. Stable Non-Gaussian Models in Finance, Talk 1 : Risk Management, Talk 2: Option Pricing , Talk 3: Forecasting methods, IISA Conference, Cocin, India , January 2 – 5, 2007

30. Stable and Tempered Stable processes in Finance, Department of Economics, Technical University of Dresden, January 23, 2007

31. Operational Risk Models with Heavy-tailed Distributions, University fo Bergamo and BPU-Bank, Bergamo, March 16, 2007

32.Statistical analysis of high frequency data, Daimler-Chrysler research Office, Ulm, April 4, 2007

33.Operational Risk, IBM Germany, Frankfurt, June 12, 2007

34.Portfolio optimization in volatile markets, VBV Insurance, Stuttgart, August 8, 2007

35. Credit Derivatives, IBM Germany, Frankfurt, August 28, 2007

36.Invited Talk, Momentum strategies using risk-adjusted stock criteria, Workshop " Credit Risk Models for Financial Markets and banking:, Faculty of Economics, University of Bologna, Rimini, October 10, 2007

37.Risk management in intraday trading, Commerzbank, Corporates and Markets, Frankfurt, October 30, 2007

38.Option Pricing with Levy Processes, Department of Probability and Statistics, Bulgarian Academy of Sciences, Sofia, December 27, 2007

39.Risk Management and Portfolio Optimization, University of Bergamo, 25 February, 2008

40.Risk management of Fund of Funds, Grosvenor, Capital Management, Chicago, April 23

41.Invited Talk, Modeling volatile markets and market crashes, International Summer School on Risk Management and Control, July 1, Rome

42. Factor Models with Multi-tailed distributions, Department of Probability and Statistics, Bulgarian Academy of Sciences, Sofia, July 28, 2008

43.Risk management in the automotive industry, BMW Group, Finance and Control , Munich , August 12, 2008

44.Modelling tail dependencies in operational risk modeling, Commerzbank AG, Market- and Operational Risk Control, Frankfurt, October 10, 2008

OTHER PROFESSIONAL ACTIVITIES

Editor of Jornal of Operational Risk, Advances in Data Analysis and Classification', Journal of Computational and Applied Mathematics, Mathematical Methods in Operations Research, Probability and Mathematical Statistics, Serdica and Computational Analysis and Applications, Journal of Pure and Appl. Mathematics, Journal of Applied Functional Analysis

Cumulative List of Publications -- Articles:

1977

1.	Reliability of aging system.	Ann. Univ. Sofia, Fac. Math. Mec., Vol. 68 (1973/74),1977, 339-347 (in Russian).

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2.	Theorems of moments and their applications for NBU distributions.	Mathematics and Mathematical Education. Proc. of Fourth Spring Conference of Bulgarian Mathematical Society, Pernik, (April 2-4, 1975), 1978, 303-310 (in Russian).
3.	Maximum likelihood estimation of U-type failure rate function.	Annuaire Univ. Sofia, Fac. Math. Mec. Vol. 72, 1978, 127-140.

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4.	Hausdorff metric structures of the space of probability measures.	Zap. Nauchn.Sem. Leningrad. Otdel Mat. Inst. Stelkov. (LOMI), Vol. 87, 1979, 87-103 (in Russian); English transl., J. Soviet Math., Vol. 17, 1981, 2218-2232.

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7.	Minimal metrics in a space of random vectors with fixed one-dimensional marginal distributions.	Stability Problems for Stochastic Models, Proceedings, Moscow, VNIISI, 1981, 112-128 (in Russian); English transl., J.Soviet Math., Vol.34, No.2, 1986, 1542-1555.

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9.	Minimal metrics in the random variables space.	Probability and Statistical Inference, Proceedings of the 2nd Pannonian Symp. Ed. by Grossmann M. et al. Dodrecht; D.Reidel Publ. Company, 1982, 318-327.
10.	Metrics that are invariant relative to monotone transformations (with D. Vandev and C. Ignatov).	Stability Problems for Stochastic Models, Proceedings, Moscow, VNIISI, 1982, 25-36 (in Russian); English transl., J.Soviet Math., Vol.35, No.3, 1986, 2466-2478.
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13.	Stability of an exponential law characterization (with B. Dimitrov and L.B. Klebanov).	Stability Problems for Stochastic Models, Moscow, VNIISI 1982, 39-46.

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14.	Minimality of ideal probabilistic metrics (with Zv. Ignatov).	Stability Problems for Stochastic Models, Proceedings, Moscow, VNIISI, 1983, 36-48 (in Russian); English transl., J.Soviet Math., Vol.32, No.6, 1986, 595-608.
15.	Stability of the service process in a system of type M/M/1 (with A. Obretanov and B. Dimitrov).	Stability Problems for Stochastic Models, Proceedings, Moscow, VNIISI, 1983, 71-79 (in Russian); English transl., J.Soviet Math., Vol.32, No.6, 1986, 634-643.
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17.	Minimal metrics in the real valued random variables space.	Lect. Notes Math., (Springer-Verlag), Vol. 982, 1983, 172-180.
18.	Existences and uniqueness of the limit Gibbs' distribution (with G. Chobanov).	Lectures on Stochastic Problems of the Modern Physics, Sofia, Univ. Sofia, 1983, 42-60.
19.	Compactness in the probability measures space.	Proceedings of the Third European Young Statisticians Meeting, Ed. by Galyare M. et al., Leuven: Katholieke Univ., 1983, 148-152.
20.	Characterization of the bivariate exponential distribution and Marshall-Olkin distribution and stability (with A. Obretanov).	Lect. Notes Math., (Springer-Verlag), Vol. 982, 1983, 136-150.

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22.	On a class of functionals in a space of probability measure.	Teor. Verojatnot. i Primen., Vol. 29, No. 1, 1984, 41-48 (in Russian); English transl., Theor. Probab. Appl., Vol. 29, No. 1, 1985, 41-49.
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29.	Extreme functionals in the space of probability measures.	Lecture Notes in Math., (Springer-Verlag), Vol. 1155, 1985, 320-348.
30.	Characterization problems in queueing and their stability (with V. V. Kalashnikov).	Adv. Appl. Prob, 17, 1985, 320-348.
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35.	Bounds of deviation from exponentiality of distribution function classes (with A. Obretenov).	Proceedings of the 14th Spring Conference of the Union of Bulgarian Mathematicians, Sunny Beach, April 1985, 495-501.
36.	Probability Metrics and Their Applications to the Problems of Stability for Stochastic Models.	Author-summary on the Doctor of Science Dissertation, Moscow, Steklov Mathematical Institute, 1985.

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38.	Characterization of inverse problems in queueing and their stability (with V.V. Kalashnikov).	J. Appl. Prob., Vol. 23, 1986, 459-473.
39.	New methods for comparison of volume functions of historical texts (with A.T. Fomenko and V. V. Kalashnikov).	Stability problems for Stochastic Models, Proceedings, Moscow, VNIISI, 1986, 33-45 (in Russian).
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41.	On the optimal duality usage (with B.N. Dimitrov).	Proceedings IV International Conference on Statistical Methods in Experimental Design and Quality Control, Vol. 2, Varna, 1986, 5-10.
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43.	Metrization of the vague convergence (with G.S. Chobanov).	Pliska, No. 2, 1986, 1154-1158 (in Russian).

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45.	The problems in stability in insurance mathematics (with J. Beirlant).	Insurance: Mathematics & Economics, Vol. 6, 1987, 179-188.
46.	Probability metrics and their application to problems of stability of stochastic models.	Proceedings of the 16th Spring Conference of the Union of Bulgarian Mathematicians, Sunny Beach, April 1987, 53-60.
47.	An ideal metric and the rate of convergence to a self-similar process (with M. Maejima).	Ann. Probability, Vol. 15, 1987, 702-707.

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49.	Theoretical bounds for radiation therapy efficiency (with A. Yu. Yakovlev).	Medical Radiology, No. 5, Moscow, 1988, 17-21 (in Russian).
50.	Some problems of the competing risk theory (with A. Yu. Yakovlev).	Proceedings of the Fifth International Summer School on Probability Theory and Mathematical Statistics, Varna, 1985, Publishing House of Bulgarian Academy of Sciences, Sofia, 1988, 171-187.
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54.	Bounds for crude survival probabilities within competing risks framework and statistical application (with A. Yu. Yakovlev).	Statistics and Probability Letters, 1988, 389-394
55.	Bounds for the probabilistic characteristics of latent failure times within competing risks framework (with A. Yu. Yakovlev).	Serdica, Vol. 14, 1988, 325-332.
56.	On the statistical inference from survival experiments with two types of failure (with A. Yu. Yakovlev, N. O. Kadyrova, E.M. Nyasmikova.)	Biom., J. 30/7, 1988, 835-842.

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57.	Rates for CLT via new ideal metrics (with J. Yukich).	Annals of Probability, 17, 1989, 775-788.
58.	Estimates of the rate of convergence for max-stable processes (with L. de Haan).	Annals of Probability, 17, 1989, 651-677.
59.	Classification problem for probability metrics (with R.M. Shortt).	Contemporary Mathematics, 94, 1989, 221-262.
60.	Stable distributions for asset returns (with S. Mittnik).	Appl. Math. Lett. 2/3, 1989, 301-304.
61.	Analysis of the survival rate after the combined radiation effect. Synergism and antagonism of the effects of two factors (with E. M. Myasnikova, A. Yu. Yakovlev et al.).	Radiology, Vol. 4, 1989, 478-483 (in Russian).
62.	Precise upper bounds for the functionals describing tumor treatment efficiency (with L.G. Hanin, R.E. Goot, and A. Yu Yakovlev).	Lecture Notes in Math., Vol. 1412, Springer-Verlag, 1989, 50-62.
63.	A characterization of random variables with minimum L_2 -distance (with L. Rüschendorf).	J. Mult. Analysis, Vol. 132, 1989, 48-54.
64.	On the products of a random number of random variables in connection with a problem from mathematical economics (with L.B. Klebanov and J.A. Melamed).	Lecture Notes in Math., Vol. 1412, Springer-Verlag, 1989, 103-109.
65.	The problem of stability in queueing theory (Invited paper).	Queueing Systems Theory and Applications, Vol 4, 1989, 287-318.
66.	New duality theorems for marginal problems with some applications in stochastics (with V.L. Levin).	Lecture Notes in Math., Vol. 1412, Springer-Verlag, 1989, 137-170.
67.	Smoothing metrics for measures on groups (with J. Yukich).	Annales de l'Institut Henri Poincare, 25, 1989, 429-441

68.	Maximum likelihood estimation of the bimodal failure rate for censored and tied observations (with A. Yu. Yakovlev and N.O. Kadyrova).	Statistics, Vol.20, 1989. 135-140
69.	Isotonic maximum likelihood estimation of the bimodal failure rate - a computer-based study (with N.O. Kadyrova and A. Yakovlev).	Statistics, Vol. 20, 1989, 271-278
70.	Explicit solutions of moment problems (with I. Kuznezova-Sholpo).	Probability and Math. Statistics, Vol. 10, 1989, 297-312.
71.	Approximation of a random queue by means of deterministic queueing models (with G. Anastassiou).	Approximation Theory VI, C.K. Chui, L.L. Schumaker, J.D. Ward, Eds., Academic Press, New York, 1989, 1-4.

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73.	A counterexample to a.s. constructions (with L. Rüschendorf).	Statistics and Probability Letters 9, 1990, 307-309.
74.	Approximation of sums by compound Poisson distributions with respect to stop-loss distances (with L. Rüschendorf).	Adv. Appl. Prob. 22, 1990, 350-374.
75.	A transformation property of minimal metrics (with L. Rüschendorf).	Theory Prob. Appl. 35, 1990, 131-137.
76.	Duality theorems for Kantoroivich-Rubenstein and Wasserstein functionals (with R.M. Shortt).	Dissertationes Mathematicae,Vol. 299, 1990.
77.	A note on the stability of the estimation of the exponential distribution (with L. Baxter).	Statistics and Probability Letters Vol. 10, 1990, 37-41.
78.	Association of stable random variables (with Mei-Ling Ting Lee and G. Samorodnitski).	Annals of Probability, 18, 4, 1990, 1759-1764.
79.	Volume functions of historical texts and the amplitude correlation principle (with A.T. Fomenko).	Computers and Humanities, 24, 3, 1990, 187-206.
80.	Some statistical test associated with the concept of delta-stochastic ordering of two random variables (with R. E. Good, A. Yu. Yakovlev, N. O. Kadyrova and G. M. Zharinov).	Serdica, Bulgaricae mathematicae publicationes, 16, 1990, 240.245.

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81.	Rates of convergence of alpha-stable random motions (with J.E. Yukich).	Journal of Theoretical Prob.4, No. 2, 1991, 333-352.
82.	Alternative multivariate stable distributions nd their applications to financial modeling (with S. Mitnik).	Stable Processes and Related Topics. Preceedings of MSI Workshop, Ed. S. Cambanis et al., Birkhauser, Boston. 1991.

83.	Approximate independence of distributions on spheres and their stability properties (with L. Rüschendorf).	Annals of Probability Vol. 19, 1991, 1311-1337
84.	Max-geometric infinite divisibility and stability (with S. Resnick).	Stochastic Models 2, 1991, 191-218
85.	Rates of convergence in multivariate extreme value theory (with E. Omey).	Journal of Multivariate Analysis 37, 1991, 36-50
86.	The stability of a characterization of the bivariate Marshall-Olkin distribution (with L. Baxter).	Journal of Mathematical Analysis and Applications V 160, 1991, 563-571
87.	Recent results in the theory of probability metrics (with L. Rüschendorf).	Statistics and Decisions 9, 1991, 327-373
88.	Mass transshipment problems and ideal metrics.	Numer. Funct. Anal. and Optimiz., 12, (5 & 6), 1991, 563 - 573.
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91.	Moment problems and their applications to characterization of stochastic processes, queueing theory and rounding problems (with G.A. Anastassiou).	Proceedings of the 6th SEA meeting "Approximation Theory", (Lecture Notes in Pure and Applied Mathematics), v. 138, 1992, 1-77. Marcel Dekker, New York.
92.	Kantorovich's functionals in space of measures (with M. Taksar).	Applied Stochastic Analysis, Proceedings of the US-French Workshop, Lecture Notes in Control and Information Science, v. 177, 1992, 248-261.
93.	Geometric stable distributions and Laplace-Weibull mixtures (with A. Sengupta).	Statistics and Decisions, v. 10, 1992, 251-271.
94.	Moment problems and their applications to the stability of queueing models (with G. Anastassiou).	Computers and Mathematics with Applications, v. 24, No. 8/9, 1992, 229-246.
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96.	A probabilistic approach to optimal quality usage (with B. Dimitrov and Z. Khalil).	Computers and Mathematics with Applications, 24, No.8/9, 1992, 219-227.
97.	Rate of convergence for sums and maxima and doubly ideal metrics (with L. Rüschendorf).	Theory of Probab. Appl., 37, 2, 1992, 276-289.
98.	Theory of probability metrics and recursive algorithms.	Distancia '92, Proceedings of Congress International sur Analyse en Distance, (ed. S. Joly and G. le Calve), Universite de Haute Bretagne, Rennes, 1992, 339-403.

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100.	Dependence of stable random variables (with Lee, M.L.T. and G. Samorodnitsky).	Stochastic Inequalities, IMS Lecture Notes-Monograph Series, 22, 1993, 219-234.
101.	On the optimal control of cancer radiotherapy for nonhomogeneous cell populations (with L. Hanin and A. Yu. Yakovlev).	Advances of Applied Probability, 25, 1993, 1-23.
102.	Random minima scheme and carcinogenic risk estimation (with A. Yu. Yakovlev).	Mathematical Scientist, 18, 1993, 20-36.
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