December 2011

# CURRICULUM VITAE GENNADY SAMORODNITSKY

Date of birth:		September 12, 1957	
Citizenship:		U.S.A.	
Address	HOME: OFFICE:	<ul> <li>126 West Lexington Drive</li> <li>Ithaca, NY 14850</li> <li>(607) 257-1085</li> <li>School of Operations Research</li> <li>and Information Engineering</li> <li>Cornell University</li> <li>Ithaca, NY 14853</li> <li>(607) 255-9141</li> </ul>	
Marital Status:		Married, sons Eric (1984) and Daniel (1988), daughter Sarah-Nathalie (1996)	
Academic Deg	grees		
B.Sc. (in Computer Science) Moscow Steel and Alloys Institute, 1978			
M.Sc. (in Op	perations Resear	rch) Technion - Israel Institute of Technology, 1983	
D.Sc. (in Sta	atistics)	Technion - Israel Institute of Technology, 1986	
Academic and	Professional A	ppointments	
9/80 - 6/86	Graduate Student/Teaching Assistant Technion - Israel Institute of Technology		
7/86 - 8/87	Post-Doctoral Fellow Center for Stochastic Processes University of North Carolina at Chapel Hill		
9/87 - 8/88	Visiting Assist Department of Boston University	ant Professor Mathematics sity	

8/88 - 6/94	Assistant Professor School of Operations Research & Industrial Engineering Cornell University
7/94 - 6/00	Associate Professor, with tenure School of Operations Research & Industrial Engineering Cornell University
7/00 - present	Full Professor, with tenure School of Operations Research & Industrial Engineering Cornell University

Visiting Appointments

8/94	Visiting Scholar Department of Mathematics Chalmers Technological University
9/94 - 5/95	Visiting Scholar Forschungsinstitut für Mathematik & Institut für Operations Research ETH Zürich
6/95	Visiting Scholar Department of Mathematics Chalmers Technological University
1/03	Member Mathematical Sciences Research Institute Berkeley
2/03-6/03	Visiting Professor Department of Operaions Research Naval Postgraduate School Monterey, Ca
10/04-11/04	Visiting Fellow Mittag-Leffler Insitute of Mathematics Swedish Academy of Science Stockholm Sweden
01/05	Invited Professor Laboratoire de Statistique et Probabilites Universite Paul Sabatier
05/06	Invited Professor Department of Mathematics Universite Lille 1 Lille France
06/07	Invited Professor Department of Mathematics Universite Paris X Paris, France
08/08-07/09	Visiting Professor Department of Mathematics University of Copenhagen
06/11	Invited Professor Institut de Science Financiere et d'Assurances Universite Claude Bernard Lyon 1 Lyon, France
03/09-07/09	Visiting Professor Department of Stochastic Modeling Technical University of Denmark

Honorary Appointments

02/2010-present Advisory Board Leibnitz Lab of Insurance and Financial Mathematics University of Hanover

### Teaching Experience

- (1) Undergraduate Courses:
  - (a) Sampling Design
  - (b) Discrete Event Simulation
  - (c) Stochastic Processes for Engineers
  - (d) Introduction to Probability
  - (e) Advanced Stochastic Processes for Engineers
  - (f) Applied Time Series
  - (g) Probability and Statistics for Engineers II
- (2) Graduate Courses:
  - (a) Introduction to Stable Processes
  - (b) Probability
  - (c) Sample Path Properties of Stochastic Processes
  - (d) Applied Stochastic Processes
  - (e) Advanced Applied Stochastic Processes
  - (f) Long Range Dependence
  - (g) Statistical Principles
  - (h) Palm Calculus and Queues
  - (i) Time Series Analysis
  - (j) Weak Convergence

# Special Invited Courses

- 1. Advanced Concentrated Course on Long Range Dependence, Heavy Tails and Rare Events with Applications to Finance and Telecommunications. A 16-hour course, May 6, 2002 -May 10, 2002, University of Copenhagen. Organized by MaPhySto, Centre for Mathematical Physics and Stochastics.
- 2. Autumn School on Risk Management. A 4.5-hour course "Lévy processes and modelling issues", September 29, 2003 October 2, 2003, Herrsching, Germany. Organized by the Graduate Program "Applied Algorithmic Mathematics", Center for Mathematical Sciences, Technische Universität München.
- 3. Power laws in probability and statistics, a workshop at CIRM, Luminy, France, March 22-26, 2004. A 4.5-hour course "Power laws and the boundary between short and long memory".

- 4. Summer School in Probability, Bocconi University, Milano. A 30-hour course "Lévy processes" (Torgnon (Aosta), Italy).
- Advanced Concentrated Course on Long Range Dependence. A 16-hour course, October 20, 2008 - October 23, 2008, University of Copenhagen

Prizes, Awards and Honors

1986 Chaim Weizmann Fellowship1987 Chaim Weizmann Fellowship2000 S. Yau '72 Teaching Award2000 Fellowship in the Institute of Mathematical Statistics2009 First Annual Applied Probability Trust Speaker

Presently Running Grants

Random Fields over Manifolds: Some Geometry, Theory and Applications (with R. Adler and Jonathan Taylor). Binational Israeli - USA Science Foundation.

### Professional Activities

Member of the Institute of Mathematical Statistics and Bernoulli Society.

Associate Editor, Probability and Mathematical Statistics, Stochastic Models, Extremes, Annals of Probability, Apllied Probability journals.

NSF panels in 2000, 2004.

Doctoral Students

Fang Xue (1998)

Barbara Gonzales (2002)

Bernardo D'Auria (visiting) (2003)

Joerg Rothenbühler (2004)

Tuncay Alparslan (2006)

Florian Milanovici (2006)

Parthanil Roy (2007)

Souvik Ghosh (2008)

Arijit Chakrabarty (2010)

Post-doctoral Students

Milan Borkovec (1999-2000) Amites Dasgupta (1999-2000) Henrik Hult (2005-2006)

Chrtsian Menn (2005-2006)

Vicky Fasen (2006-2007)

# Participation in Scientific Conferences

# **Organized:**

Mathematical Sciences Institute Workshop on Stable Processes and Related Topics, Ithaca, January 1990.

Meeting on Stable Processes and Highly Volatile Phenomena, a satellite meeting to the 4th World Congress of Bernoulli Society. Wroclaw, August 1996.

Conference on Lévy Processes and Stable Laws. Warwick University, Coventry, April 2001.

Conference on Stable Laws, Processes and Applications. Oberwolfach, October 2001.

National Science Foundation Workshop on Heavy Tails and Long Range Dependence, Ithaca, April 2005.

5th International Conference on Lévy Processes: Theory and Applications, Copenhagen, August 13-17, 2007.

Workshop on Infinitely Divisible Processes, CIMAT, Guanajuato, Mexico, March 16-20, 2009.

# **Invited Papers:**

Conference on Probability and Stochastic Processes, Knoxville, April 1987. "Suprema of Stable Processes."

Symposium on Probability and Its Applications, Institute of Mathematical Statistics, Fort Collins, August 1988. "Asymptotic Behavior of the Distribution of the Maxima of Stochastic Processes Represented by Multiple Stable Integrals."

SIAM Conference on Applied Probability in Science and Engineering, New Orleans, March 1990. "Stability Distributions in Modeling Soil Erosion Processes."

Conference on Stable Processes at International Banach Center for Mathematics, Warsaw, May-June 1990. "Slepian Inequality for Stable and Infinitely-Divisible Laws."

Institute for Mathematics and Its Applications Workshop on New Directions in Time Series Analysis, Minneapolis, July 1990. "Integrability of Sample Paths of Stable Processes."

American Mathematical Society Eastern Section Meeting, Bethlehem, April 1992. "Rice Formula: The Expected Number of High and Low Level Crossings for Stationary Stable Processes."

Workshop on Multiple Wiener-Itô Integrals and Their Applications at Centro de Investigacion en Matematicas, A.C., Guanajuato, Mexico, July 1992. "Zero-One Laws for Multiple Integrals."

VI Congreso Latinoamericano de Investigacion de Operaciones, Mexico City, Mexico, October, 1992. "Inequalities for Non-Gaussian Models."

Second International Symposium: Probability and Applications, Bloomington, March, 1993. "New Results on the Slepian Inequality for Non-Gaussian Processes."

American Mathematical Society Meeting, Knoxville, March, 1993. "Stable Processes with Sample Paths in Orlicz Spaces."

The International Conference on Approximation, Probability and Related Fields, Santa Barbara, May 1993. "Stable Processes with Sample Paths in Orlicz Spaces."

23d Lunteren Meeting in Probability and Statistics, Lunteren, Holland, November 1994. "Concentration Inequalities and 0-1 laws for Lévy Chaos".

AIO-Network Stochastics Workshop, Lunteren, Holland, November 1994. "Stochastic Processes with Heavy Tails".

1st International Conference in Applied Probability and Time Series Analysis, Athens, Greece, March 1995. "A Class of Shot Noise Models for Financial Applications".

21st European Meeting of Statisticians, Aarhus, Denmark, August 1995. "Lower tails of self-similar stable processes".

Workshop "Future of Applied Stable Time Series Models". Santa Barbara, December 1995. "Level Crossings of Absolutely Continuous Stationary Stable Processes".

Meeting on Stable Processes and Highly Volatile Phenomena, a satellite meeting to the 4th World Congress of Bernoulli Society. Wroclaw, August 1996. "Long memory and heavy tails in communication networks".

AMS Regional meeting, Chattanooga, October 1996. "Symmetric infinitely divisible processes with sample paths in Orlicz spaces and absolute continuity of infinitely divisible processes".

Joint IMS meeting and Anniversary Conference for UNC CHapel Hill. Chapel Hill, October 1996. "Level crossings of stable processes".

Annual Meeting of AMS, San Diego, January 1997. "Long range dependence and heavy tails".

Workshop on Scaling, Long Range Dependence and Self-Similarity. Guanajuato, Mexico, March 1997. "Long range dependence caused by heavy tails".

INFORMS meeting, San Diego, May 1997. "Effect of long range dependence on network performance".

Symposium on Stable processes and their Applications, Okayama, Japan, August 1997. "Level

crossings of stable processes".

Workshop on Extreme Values and Heavy Tails. Rotterdam, Holland, December 1997. "Heavy tails, long range dependence, large deviations and performance of certain fluid queues".

Meeting "Extremes – Risk and Safety". Gothenburg, Sweden, August 1998. "Overflow/ruin probabilities when the input in the queue is heavy tailed and there is dependence in the tails".

Workshop "Stochastic Modelling and Analysis of Communication Networks", Lund, Sweden, October 1998. "Heavy tails and long-range dependence in communication networks" (keynote lecture).

Conference "Lévy Processes: Theory and Applications", Centre for Mathematical Physics and Stochastics, Aarhus University, Aarhus, Denmark, January 1999. "Certain probabilistic aspects of semistable laws".

Workshop "Heavy Tails and Queues". Eindhoven, The Netherlands, April 1999. "Steady state probabilities for fluid queues" (keynote talk).

Conference "Applications of Heavy Tailed Distributions in Economics, Engineering and Statistics". American University, Washington, DC, June 1999. "Ruin probability with claims modeled by a stationary ergodic stable process".

German Open Conference on Probability and Statistics. Hamburg, March , 2000. "Long strange segments of a stochastic process and long range dependence".

International Symposium "Extreme Value Analysis. Theory and Practice". Leuven, August 2001. "Limits of On/Off hierarchical product models for data transmission".

2nd Conference "Lévy Processes: Theory and Applications", Centre for Mathematical Physics and Stochastics, Aarhus University, Aarhus, Denmark, January 2002. "Tails of solutions of certain nonlinear stochastic differential equations driven by heavy tailed Lévy motions".

International Conference on Mathematics in Finance. Berg-en-Dal, Kruger National Park, South Africa, August 4-9, 2002. "Multivariate extremes, risk estimation and aggregation".

24th European Meeting of Statisticians, Prague, August 2002 (a session organizer). "Tails of solutions of certain nonlinear stochastic differential equations driven by heavy tailed Lévy motions".

American Mathematical Society Fall 2002 Western Sectional Meeting. "Storage processes with a self-similar and infinitely divisible input". Salt Lake City, October 26-27, 2002.

3d Conference on Lévy processes. "Extreme value theory, ergodic theory, and the boundary between short memory and long memory for stationary stable processes". Paris, June 23-27, 2003.

American Mathematical Society Fall 2003 Eastern Sectional Meeting. "Point processes associated with stationary stable processes". Binghamton, , October 11-12, 2003.

Applied Probability Day 2004. "Measuring the length of memory for infinite variance stationary stable processes". Center for Applied Probability, Columbia University, New York, May 10, 2004.

VI Joint Meeting of American Mathematical Society and Sociedad Matematica Mexicana. "Ex-

treme value theory, ergodic theory, and the boundary between short memory and long memory for stationary stable processes". Houston, May 13-15, 2004.

Workshop on Risk Analysis in Finance and Insurance. "Asymptotic distribution of unbiased linear estimators in the presence of heavy tailed stichastic regressors and residuals". Ludwig-Maximilians-Universitaet M"unchen and TU M"unchen, Sonderforschungsbereich 386 "Statistical Analysis of Discrete Structures". Munich, June 18-19, 2004.

The Third International Symposium on Extreme Value Analysis. Keynote talk "Extremes of stationary stable processes". Aveiro, Portugal, July 19-23, 2004

Fourth Symposium on Levy Processes: Theory and Applications, "Ergodicity of stationary stable processes". Manchester, January 10 - 14 2005.

2<br/>e Colloque Autosimilarité & Applications. Plenary talk "Long memory and self-similar processes". Toulouse, June 20-24, 2005.

13th INFORMS Applied Probability Conference. Tutorial talk "Long range dependence". Ottawa, July 6-8, 2005.

Second International Conference on Mathematics in Finance. Berg-en-Dal, Kruger National Park, South Africa, August 7-12, 2005. Keynote talk "Asymptotic distribution of unbiased linear estimators in the presence of heavy-tailed stochastic regressors and residuals".

4th Conference on Extreme Value Analysis: Probabilistic and Statistical Models and their Applications. "Poisson cluster process as a model for teletraffic arrivals and its extremes". Gothenburg, Sweden, August 15-19, 2005.

Deutsche Bundesbank Conference on Heavy Tails and Stable Paretian Distributions in Finance and Macroeconomics. "Asymptotic distribution of unbiased linear estimators in the presence of heavy-tailed stochastic regressors and residuals". Eltville, Germany, November 10-12, 2005.

The Lousiana Chapter meeting of ASA. Keynote talk "What does the internet traffic look like?" Lafayette, LA, January 20, 2006.

Conference on "Stochastic Processes and Random Fractals". Keynote talk "Random rewards, Fractional Brownian local times and stable self-similar processes". Lille, March 22-24, 2006.

International Workshop on Applied Probability. Keynote talk "Fractional Brownian local times and stable self-similar processes". University of Connecticut, Storrs, May 15-18, 2006.

9th International Vilnius Conference on Probability Theory and Mathematical Statistics. "Functional large deviations for heavy tailed processes". Vilnius, Lithuania, June 25-30, 2006.

Conference on Inverse Problems in Stochastic Differential Equations. "Long memory in stochastic processes and related statistical issues" (3 hours). University of Southern California, Los Angeles, May 22-26, 2007.

International Workshop on Empirical Processes and Asymptotic Statistics. "Asymptotic distribution of unbiased linear estimators in the presence of heavy-tailed stochastic regressors and residuals". Rennes, France, June 18-20, 2007. 5th Conference on Extreme Value Analysis: Probabilistic and Statistical Models and their Applications. "Ergodic theory, group theory and extrema of stable random fields". Bern, Switzerland, July 23-27, 2007.

Workshop "Queueing theory without limits: transient and asymptotic analysis". "Long range dependence". EURANDOM, Eindhoven, The Netherlands, October 17-19, 2007.

Workshop "Limit Theorems and Applications. " Inverse problems for regular variation, linear filters, functional equations and a cancellation property for sigma-finite measures". Universities of Paris 1 and 5, Pantheon-Sorbonne, Paris, January 16-18, 2008.

Workshop "Extremes: Events, Models and Mathematical Theory". "Inverse problems for regular variation, linear filters, functional equations and a cancellation property for sigma-finite measures". SAMSI, Research Triangle Park, January 22-24, 2008.

Oberwolfach Conference "The mathematics and statistics of quantitative risk management". "The effect of memory on large deviations and ruin probabilities". Oberwolfach, Germany, March 16-22, 2008.

Annual Meeting of Danish Society for Theoretical Statistics. "The tails of infnite sums. Aarhus, Denmark, November 11-12. 2008.

34th Lunteren Conference on the Mathematics of Operations Rsearch, Lunteren, Holland, January 13-15, 2009. "A bird-eye view of fluid queues in communication network models: heavy tails and long memory".

Banff International Research Center workshop "Random Fields and Stochastic Geometry", February 22 to February 27, 2009. "Geometric characteristics of the excursion sets over highl levels of non-Gaussian infinitely divisible random fields".

Erlang Centennial Conference, April 1-3, 2009, Copenhagen. "Large deviations for point processes based on stationary sequences with heavy tails" (keynote talk).

Stochastic Networks and Related Topics II, a conference organized by the Institute of Matjematics of the Polish Academy of Sciences, Bedlewo, Poland, May 17-22, 2009. "Large deviations for point processes based on stationary sequences with heavy tails".

6th International Conference on Extreme Value Analysis, Fort Collins, CO June 22-26, 2009. "Geometric characteristics of the excursion sets over highl levels of non-Gaussian infinitely divisible random fields"

International Conference on self-similar processes and their applications, Angers, France, July 20-24, 2009. Keynote talk "What self-similar processes best describe the input to communication network models?"

33d Conference on Stochastic Processes and their Applications, Berlin, July 27-31, 2009. Invited talk "Long range dependence and large deviations".

Conference on Latest Developments in Heavy-Tailed Distributions, Brussels, March 26-17, 2010. Invited talk: "Do financial returns have finite or infinite variance? A paradox and an explanation". Workshop "Modelling spatial and temporal dependence. Applications to risk". CIRM, Luminy, France, April 26-30, 2010. Invited talk "Long Strange Segments, Ruin Probabilities and the Effect of Memory on Moving Average Processes".

6th International Conference on Levy Processes: Theory and Applications, Dresden, July 26-30, 2010. Invited talk: "Geometric characteristics of the excursion sets over highl levels of non-Gaussian infinitely divisible random fields".

73d Annual Meeting of the Institute of Mathematical Statistics, Gothenburg, August 9-13, 2010. Invited talk: "Do financial returns have finite or infinite variance? A paradox and an explanation".

Stochastic Networks and Related Topics III, a conference organized by the Institute of Matjematics of the Polish Academy of Sciences, Bedlewo, Poland, May 22-29, 2011. "What is the effect of heavy tails in random environment"?

16th Workshop on Stochastic Geometry, Stereology and Image Analysis, Sandjberg Manor, Denmark, June 5-10, 2011. "Large deviations for Minkowski sums of heavy-tailed random compact sets".

2nd NTH Workshop on Financial and Insurance Mathematics, Technical University of Braunschweig, Germany, June 30 - July 2, 2011. "Tail inference: where does the tail begin?"

Workshop "Computational Methods in Applied Sciences", Columbia University, September 23 - 25, 2011. Talk: "Is the location of the supremum of a stationary process nearly uniformly distributed?"

# **Contributed Papers:**

Annual Meeting of Institute of Mathematical Statistics, Maastricht, August 1985. "The Supremum Distribution of Gaussian Processes."

Annual Meeting of Israeli Statistical Association, Jerusalem, May 1986. "Sample Moduli of Continuity of Gaussian Processes - Metric Entropy Approach."

Annual Meeting of American Mathematical Society, San Antonio, January 1987. "Continuity of Gaussian Processes."

Stochastic Processes and Their Applications, 16th Conference, Stanford, August 1987. "Extrema of Stable Processes."

Annual Meeting of American Mathematical Society, Atlanta, January 1988. "The Tail of a Multiple Stable Integral."

Stochastic Processes and Their Applications, 20th Conference, Naharia, June 1991. "Distribution of Sublinear Functionals of Infinitely Divisible Processes."

Stochastic Processes and Their Applications, 21st Conference, Toronto, June 1992. "Subexponentiality of the product of independent random variables".

Stochastic Processes and Their Applications, 23st Conference, Chapel Hill, June 1994. "Association of infinitely divisible random vectors".

1st International Conference on High Frequency Data in Finance, Zürich, March 1995. "Shot Noise Models in Finance".

4th World Congress of Bernoulli Society. Vienna, August 1996. "Level crossings of stable processes".

List of Publications

(a) <u>Theses</u>:

- 1. M.Sc. Thesis: "Common and Antithetic Random Numbers in Simulation of Complex Stochastic Systems," 1983. Under the supervision of Professor Reuven Rubinstein.
- 2. D.Sc. Thesis: "Bounds on the Supremum Distribution of Gaussian Processes Metric Entropy Approach," 1986. Under the supervision of Professor Robert Adler.

(b) Books, Lecture Notes and Special Volumes:

- 1. Cambanis, S., Samorodnitsky, G. and Taqqu, M.S. (eds.) Stable Processes and Related Topics. A Selection of Papers from MSI Workshop, 1990. Birkhauser, Boston, 1991.
- 2. Samorodnitsky, G. and Taqqu, M.S. Stable Non-Gaussian Random Processes. Stochastic Models with Infinite Variance. Chapman and Hall, New York London, 1994.
- 3. Klüppelberg, K., Samorodnitsky, G. and Weron, A. (eds.) Special Issue of *Stochastic Models* on Heavy Tails and Highly Volatile Phenomena. Volume 14, Number 4, 1997.
- 4. Samorodnitsky, G. Long Range Dependence, Heavy Tails and Rare Events. Lecture notes. MaPhySto, Centre for Mathematical Physics and Stochastics, Aarhus, 2002.
- 5. Samorodnitsky, G. Long Range Dependence. Foundantions and Trends in Stochastic Systems, vol. 1, no. 3 2006.
- (c) Original Papers:
- (I) Published
  - 1. Rubinstein, R.Y. and Samorodnitsky, G. "The Efficiency of the Random Search Method," Mathematics and Computers in Simulation XXIV, 257-268, 1982.
  - Samorodnitsky, G., Weismann, I. and Rubinstein, R.Y. "An Efficient Mixture Method," Operations Research Letters 1, 198-200, 1982.
  - Rubinstein, R.Y., Samorodnitsky, G. and Shaked, M. "Antithetic Variables, Multivariate Dependence and Simulation of Complex Stochastic Systems," *Management Sciences* 31, 66-77, 1985.
  - Rubinstein, R.Y. and Samorodnitsky, G. "Antithetic and Common Random Numbers in Simulation of Stochastic Systems," *Journal of Statistical Computation and Simulation* 22, 161-180, 1985.

- Rubinstein, R.Y. and Samorodnitsky, G. "Optimal Coverage of Convex Regions," Journal of Optimization Theory and Applications 51, 321-343, 1986.
- Rubinstein, R.Y. and Samorodnitsky, G. "A Modified Version of Handcomb's Antithetic Variates Theorem," SIAM Journal of Scientific and Statistical Computing 8, 82-98, 1987.
- 7. Adler, R.J. and Samorodnitsky, G. "Tail Behavior for the Suprema of Gaussian Processes with Applications to Empirical Processes," *Annals of Probability* 15, 1339-1351, 1987.
- Samorodnitsky, G. "Continuity of Gaussian Processes," Annals of Probability 16, 1019-1033, 1988.
- Samorodnitsky, G. "Extrema of Skewed Stable Processes." Stochastic Processes and Their Applications 30, 17-39, 1989.
- Samorodnitsky, G. and Taqqu, M.S. "The Various Linear Fractional Lévy Motions," Probability, Statistics and Mathematics: Papers in Honor of Samuel Karlin. T.W. Anderson, K.B. Athreya and D.L. Iglehart, editors, Academic Press, 1989.
- 11. Samorodnitsky, G. and Szulga, J. "An Asymptotic Evaluation of the Tail of a Multiple Symmetric-Stable Integral." Annals of Probability 17, 1503-1520, 1989.
- Samorodnitsky, G. "Local Moduli of Continuity for some Classes of Gaussian Processes." Stochastics 28, 269-292, 1989.
- Lee, M.-L.T., Rachev, S.T. and Samorodnitsky, G. "Association of Stable Random Variables." Annals of Probability 18, 1990.
- Adler, R., Cambanis, S., Samorodnitsky, G. "Stable Markov Processes." Stochastic Processes and Their Applications 34, 1-17, 1990.
- Samorodnitsky, G. and Taqqu, M.S. "Multiple Stable Integrals of Banach-Valued Functions." Journal of Theoretical Probability 3, 267-287, 1990.
- Samorodnitsky, G. and Taqqu, M.S. "Existence of Joint Moments of Stable Random Variables." Statistics and Probability Letters 10, 167-172, 1990.
- Samorodnitsky, G. and Taqqu, M.S. "1/α-Self-Similar α-Stable Processes with Stationary Increments." Journal of Multivariate Analysis 35, 308-313, 1990.
- Samorodnitsky, G. "Probability Tails of Gaussian Extrema." Stochastic Processes and Their Applications 38, 55-84, 1991.
- Samorodnitsky, G. and Taqqu, M.S. "Construction of Multiple Stable Measures and Integrals Using LePage Representation." In: *Stable Processes and Related Topics. A Selection of Papers from MSI Workshop, 1990*. S. Cambanis, G. Samorodnitsky, and M.S. Taqqu, eds., Birkhauser, Boston, 121-141, 1991.
- Hardin, C., Samorodnitsky, G. and Taqqu, M.S. "Numerical Computation of Non-linear Stable Regression Functions." In: Stable Processes and Related Topics. A Selection of Papers from MSI Workshop, 1990. S. Cambanis, G. Samorodnitsky, and M.S. Taqqu, eds., Birkhauser, Boston, 143-180, 1991.

- Rosinski, J., Samorodnitsky, G. and Taqqu, M.S. "Sample Path Properties of Stochastic Processes Represented in the Form of Multiple Stable Integrals." *Journal of Multivariate Analysis* 37, 115-133, 1991.
- Samorodnitsky, G. and Taqqu, M.S. "Probability Laws with 1-Stable Marginals are 1-Stable." Annals of Probability 19, 1777-1780, 1991.
- Hardin, C., Samorodnitsky, G. and Taqqu, M.S. "Non-linear Regression of Stable Random Variables." Annals of Applied Probability 1, 582-617, 1991.
- Samorodnitsky, G. and Taqqu, M.S. "Conditional Moments of Stable Random Variables." Stochastic Processes and Their Applications 39, 183-199, 1991.
- 25. Samorodnitsky, G. and Taqqu, M.S. "Linear Models with Long-range Dependence and with Finite or Infinite Variance." New Directions in Time Series Analysis, Part II, IMA Volumes in Mathematics and Its Applications 46, Springer-Verlag, 1992.
- Cambanis, S., Maejima, M. and Samorodnitsky, G. "Characterization of linear and harmonizable fractional stable motions." *Stochastic Processes and Their Applications* 42, 91-110, 1992.
- Samorodnitsky, G. "Integrability of Stable Processes." Probability and Mathematical Statistics 13, 191-204, 1992.
- Lee, M.-L. T., Rachev, S.T. and Samorodnitsky, G. "Dependence of Stable Random Variables." In: *Proceedings of the Conference on Stochastic Inequalities*, M. Shaked and Y.L. Tong, eds., 219-234. IMS, 1993.
- 29. Samorodnitsky, G. and Taqqu, M.S. "Stochastic Monotonicity and Slepian-type Inequalities for Infinitely Divisible and Stable Random Vectors." *Annals of Probability* 21, 143-160, 1993.
- Rosinski, J. and Samorodnitsky, G. "Distributions of Subadditive Functionals of Sample Paths of Infinitely Divisible Processes." Annals of Probability 21, 996-1014, 1993.
- Adler, R.J., Samorodnitsky, G. and Gadrich, T. "The Expected Number of Level Crossings for Stationary, Harmonizable, Symmetric Stable Processes." Annals of Applied Probability 3, 553-575, 1993.
- Rosinski, J., Samorodnitsky, G. and Taqqu, M.S. "Zero-one Laws for Multilinear Forms in Gaussian and Other Infinitely Divisible Random Variables." *Journal of Multivariate Analysis* 46, 61-82, 1993.
- Rachev, S.T. and Samorodnitsky, G. "Option Pricing Formulae for Speculative Prices Modeled by Subordinated Stochastic Process." *Serdica* 19, 175-190, 1993.
- Rosinski, J. and Samorodnitsky, G. "Zero-One Laws for Multiple Stochastic Integrals." Chaos Expansions, Multiple Wiener-Itô Integrals and Their Applications, 233-259. C. Houdré and V. Pérez-Abreu, editors. CRC Press, 1994.
- 35. Cline, D.B.H. and Samorodnitsky, G. "Subexponentiality of the Product of Independent Random Variables." *Stochastic Processes and Their Applications* 49, 75-98, 1994.
- Samorodnitsky, G. "Possible Sample Paths of Self-Similar α-Stable Processes." Statistics and Probability Letters 19, 233-237, 1994.

- Rachev, S.T. and Samorodnitsky, G. "Geometric Stable Distributions in Banach Spaces." Journal of Theoretical Probability 7, 351-374, 1994.
- Samorodnitsky, G. and Taqqu, M.S. "Lévy Measures of Infinitely Divisible Random Vectors and Slepian Inequalities." Annals of Probability 22, 1930-1956, 1994.
- Norvaiša, R. and Samorodnitsky, G. "Stable Processes with Sample Paths in Orlicz Spaces." Annals of Probability 22, 1904-1929, 1995.
- Rachev, S.T. and Samorodnitsky, G. "Limit Laws for a Stochastic Process and Random Recursion Arising in Probabilistic Modeling ." Advances in Applied Probability 27, 185-202, 1995.
- Samorodnitsky, G. "Association of infinitely divisible random vectors." Stochastic Processes and Their Applications 55, 45-56, 1995.
- Braverman, M. and Samorodnitsky, G. "Functionals of infinitely divisible processes with exponential tails". Stochastic Processes and Their Applications 56, 207-231, 1995.
- Adler, R.J. and Samorodnitsky, G. "Super Fractional Brownian Motion, Fractional Super Brownian Motion and Related Self-Similar (Super) Processes." Annals of Probability 23, 743-766, 1995.
- Cioczek-Georges, R., Mandelbrot, M.M., Samorodnitsky, G. and Taqqu, M.S. "Stable fractal classes of pulses: the cylindrical case". *Bernoulli* 1, 201-216, 1995.
- Embrechts, P. and Samorodnitsky, G. "Sample quantiles of heavy tailed stochastic processes". Stochastic Processes and Their Applications 59, 217-233, 1995.
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# (VI) Technical Reports

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