

## CURRICULUM VITAE, PATRIK ALBIN.

Born 19 July 1960 in Sweden. Swedish citizen with 'birth number' 600719-3912. Living in Gothenburg (south-west Sweden). Unmarried (and without children).

### 1. Academic Degrees.

Master of Science in Engrg. Physics, Lund Institute of Technology (LIT), 1985;

Mathematics,  $1\frac{1}{2}$  years of full time studies, University of Lund (UL), 1985;

Ph.D. degree in Mathematical Statistics, LIT, 1987;

Docent in Mathematical Statistics, LIT, 1992;

Art History,  $1\frac{1}{2}$  years of full time studies, University of Gothenburg, 2002;

Classical Archaeology and Ancient History,  $\frac{1}{2}$  years of full time studies, University of Gothenburg, 2002.

### 2. Academic and Professional Appointments.

#### 2.1. Academic Appointments.

Teaching Assistant 50% (of full time engagement), Dept. of Mathematics LIT, January 1981 - December 1984;

Development and teaching of course in statistical data analysis on PC at Lund University Hospital, spring 1984;

Teaching Assistant 50%, Dept. of Mathematical Statistics LIT and UL, July - December 1984;

Teaching Assistant 100%, Dept. of Mathematical Statistics LIT and UL, January - March 1985;

Teaching Assistant 20%, Dept. of Mathematical Statistics LIT and UL, April - June 1985;

Teaching Assistant 30%, Dept. of Mathematical Statistics LIT and UL, July 1985 - June 1988;

Assistant Professor, Dept. of Mathematical Statistics LIT and UL, July - December 1988;

Research Associate, Dept. of Mathematical Statistics LIT and UL, January 1989 - December 1992;

Associate Professor, Dept. of Mathematics Chalmers University of Technology (CUT), January 1993 - present.

#### 2.2. Experience of Practical Statistical Work.

Part time engagement as statistician at Lund University Hospital, September 1984 - November 1988.

### 3. Examples of Domestic and International Scientific Contacts.

#### 3.1. Participation in Conferences with Contributed Talks.

11th Nordic Conference on Mathematical Statistics, Uppsala Sweden, June 1986;

5th European Meeting for Young Statisticians, Aarhus Denmark, August 1987;

17th Conference on Stochastic Processes, Rome Italy, June 1988;

18th Conference on Stochastic Processes, Madison USA, June 1989;  
 2nd World Conference of the Bernoulli Society, Uppsala Sweden, August 1990;  
 19th Conference on Stochastic Processes, Jena Germany, September 1990;  
 20th Conference on Stochastic Processes, Nahariya Israel, June 1991;  
 21st Conference on Stochastic Processes, Toronto Canada, June 1992;  
 Conference on Extreme Value Theory, Gaithersburg USA, May 1993;  
 22nd Conference on Stochastic Processes, Amsterdam Netherlands, June 1993;  
 Conference on the Interaction between Functional Analysis, Harmonic Analysis,  
 and Probability; Columbia USA, June 1994;  
 3rd World Conference of the Bernoulli Society, Chapel Hill USA, June 1994;  
 23rd Conference on Stochastic Processes, Singapore, June 1995;  
 21st European Meeting of Statisticians, Aarhus Denmark, August 1995;  
 4th World Conference of the Bernoulli Society, Vienna Austria, August 1996;  
 Conference on the Teaching of Statistics, Lund Sweden, April 1997;  
 9th International Summer School in Probability Theory and Mathematical Sta-  
 tistics, Sozopol Bulgaria, June 1997;  
 25th Conference on Stochastic Processes, Corvallis USA, July 1998;  
 Extremes - Risk and Safety, Gothenburg Sweden, August 1998;  
 Extreme Values and Additive Laws, Lisboa Portugal, October 1999;  
 Workshop on Mathematical Modelling in Finance and Telecommunications, Åbo  
 Finland, August 2000;  
 Symposium on Stochastic Partial Differential Equations & Related Topics 2000-  
 2001: Workshop on Lévy Processes, Coventry England, April 2001 (invited spea-  
 ker);  
 27th Conference on Stochastic Processes, Cambridge England, July 2001;  
 23rd European Meeting of Statisticians, Funchal Portugal, August 2001 (invited  
 speaker);  
 Long Range Dependence, Heavy Tails and Rare Events, Copenhagen Denmark,  
 May 2002 (invited speaker).

### **3.2. Participation in Conferences without Contributed Talk.**

Sattelite Meeting of the 45th ISI Conference, Maastricht Netherlands, August 1985;  
 25th Anniversary Conference of the Swedish Statistical Association, Umeå Swe-  
 den, oktober 1987.  
 24th Winter Conference of the Swedish Statistical Association, Kittelfjäll Swe-  
 den, March 1992;  
 30th Anniversary Conference of the Swedish Statistical Association, Gothenburg  
 Sweden, oktober 1992;  
 25th Winter Conference of the Swedish Statistical Association, Hemavan Sweden,  
 March 1993;  
 26th Winter Conference of the Swedish Statistical Association, Hemavan Sweden,  
 March 1994;

15th Nordic Conference on Mathematical Statistics, Lund Sweden, August 1994;  
 28th Winter Conference of the Swedish Statistical Association, Hemavan Sweden,  
 March 1996;

Conference on Stochastic Differential and Differential Equations, Győr Hungary,  
 August 1996;

International Workshop on Computational and Statistical Issues for Stochastic  
 Processes, Cremona Italy, September 1996;

29th Winter Conference of the Swedish Statistical Association, Hemavan Sweden,  
 March 1997;

51st Session of the ISI, Istanbul Turkey, August 1997;

30th Winter Conference of the Swedish Statistical Association, Hemavan Sweden,  
 March 1998;

3rd St.Petersburg Workshop on Simulation, St.Petersburg Russia, June 1998;

14th Compstat Symposium, Bristol UK, August 1998;

Colloquium on Limit Theorems, Balatonlelle Hungary, June 1999;

Paul Erdős and his Mathematics, Budapest Hungary, July 1999;

15th International Workshop on Statistical Modelling, Bilbao Spain, July 2000;

Conference on Stochastic Inequalities, Barcelona Spain, June 2002;

Summerschool on Lévy Processes, Aarhus Denmark, August 2002;

33rd Winter Conference of the Swedish Statistical Association, Ammarnäs Swe-  
 den, March 2003;

Conference on Lévy processes, Paris France, June 2003;

Conference on Quantum Measurements and Quantum Stochastics, Aarhus Den-  
 mark, August 2003.

### **3.3. Lectures/Seminars held outside homedepartment.**

Dept. of Mathematics, Oslo Univ. Norway, March 1988;

Norske Veritas (Insurance Company), Oslo Norway, March 1988;

Dept. of Mathematics, Chalmers Univ. of Tech. Göteborg Sweden, March 1988;

Dept. of Mathematical Statistics, Umeå Univ. Sweden, May 1988;

Dept. of Mathematics, Technion (Israel Institute of Technology) Haifa Israel,  
 April 1989;

Course on general Gaussian processes, Umeå Univ. Sweden, March 1990;

Center for Stochastic Processes, Univ. of North Carolina Chapel Hill USA, June  
 1990;

Dept. of Mathematics, Technion Haifa Israel, May 1991;

Hugo Steinhaus Center for Stochastic Methods in Science and Technology, Wro-  
 claw Technical Univ. Polen, November 1991;

Dept. of Mathematical Statistics, Lyngby Technical Univ. Denmark, oktober  
 1992;

Center for Stochastic Processes, Univ. of North Carolina Chapel Hill USA, De-  
 cember 1996;

Center for Stochastic Processes, Univ. of North Carolina Chapel Hill USA, December 1997;

Center for Stochastic Processes, Univ. of North Carolina Chapel Hill USA, January 1999;

Dept. of Mathematics, Technical University Delfts, the Netherlands, October 1999;

Dept. of Mathematics, Royal Inst. of Tech. Stockholm Sweden, March 2000;

School of ORIE, Cornell Univ. Ithaca USA, April 2000;

Dept. of Mathematical Statistics, Lund University Sweden, October 2002;

Dept. of Mathematics, Charles University, Prag (Tjeckien), October 2003.

### **3.4. Visiting Researcher at Other Universities.**

Faculty of Industrial Engrg. and Manag., Technion, Haifa Israel, March - May 1989;

Dept. of Mathematical Statistics, Umeå Univ., March 1990;

Dept. of Statistics, Univ. of North Carolina, Chapel Hill USA, May - July 1990;

Faculty of Industrial Engrg. and Manag., Technion, Haifa Israel, May - June 1991;

Hugo Steinhaus Center for Stochastic Methods, Wroclaw Polen, November 1991;

Dept. of Statistics, Univ. of North Carolina, Chapel Hill USA, November 1996 - January 1997;

Dept. of Statistics, Univ. of North Carolina, Chapel Hill USA, November 1997 - January 1998;

Dept. of Statistics, Univ. of North Carolina, Chapel Hill USA, January - April 1999;

Dept. of Mathematics, Technical University Delfts, the Netherlands, October 1999;

School of Operations Research and Industrial Engrg., Cornell University, Ithaca USA, April - June 2000;

Dept. of Mathematics, Charles University, Prag (Tjeckien), October 2003.

### **4. Larger Grants Received.**

70.000 Skr from Swedish Natural Research Council (F-FU 09207-300) for research July - December 1988 about extreme value theory for stochastic processes;

110.000 Skr from Swedish Natural Research Council (F-FU 09207-302) for research January - June 1993 about asymptotic properties for stochastic processes;

220.000 Skr from Swedish Natural Research Council (F-FU 09207-304) for research July 1993 - June 1994 about asymptotic properties for stochastic processes;

200.000 Skr from (of which 111.000 Skr were later returned to) Swedish Natural Research Council (F-GF 09207-305) for invitation of guest researcher Gennady Samorodnitsky 1994-1995;

246.000 Skr from Swedish Natural Research Council (F-AA/MA 09207-307) for research July 1994 - June 1995 about asymptotic properties for stochastic processes;

414.000 Skr from Swedish Natural Research Council (M-AA/MA 09207-308) for research July 1995 - December 1996 about asymptotic properties for stochastic processes;

290.000 Skr from Swedish Natural Research Council (M-AA/MA 09207-309) for research January 1997 - December 1997 about asymptotic properties for stochastic processes;

327.000 Skr from Swedish Natural Research Council (M-AA/MA 09207-310) for research January 1998 - December 1998 about asymptotic properties for stochastic processes;

327.000 Skr from Swedish Natural Research Council (M-AA/MA 09207-311) for research January 1999 - December 1999 about asymptotic properties for stochastic processes;

327.000 Skr from Swedish Natural Research Council (M 650-19981841/2000) for research January 2000 - December 2000 about asymptotic properties for stochastic processes.

280.000 Skr from Swedish Natural Research Council (M 650-19981841/2000) for research January 2001 - December 2001 about asymptotic properties for stochastic processes.

280.000 Skr from Swedish Natural Research Council (M 650-19981841/2000) for research January 2002 - December 2002 about asymptotic properties for stochastic processes.

280.000 Skr from Swedish Natural Research Council (M 650-19981841/2000) for research January 2003 - December 2003 about asymptotic properties for stochastic processes.

1.400.000 Skr from Swedish Research Council (621-2003-5214) for research January 2004 - December 2006 about asymptotic and related properties for stochastic processes, with applications to risk.

1.100.000 Skr from Gothenburg Environmental Center for graduate student position in extreme value theory in climate and mobility.

## 5. Awards.

Recipient of pedagogical award (20.000 Skr) from the School of Electrical Engineering at Chalmers University of Technology October 1999.

## 6. Book.

*Stokastiska processer*. Studentlitteratur (2003).

## 7. Reviews for Mathematical Reviews.

review of "V.I. Pitebarg: High excursions for nonstationary generalized chi-square processes. Stochastic Process. Appl. 53 (1994) 307-337", *Math. Rev.* **95j** (1995) 60079;

review of "Dan Yu: Asymptotic behavior of the estimates of higher order spectra under truncated window. Systems Sci. Math. Sci. 8 (1995) 37-45", *Math. Rev.* **96e** (1996) 62164;

- review of “M.A. Arcones: On the law of iterated logarithm for Gaussian processes. *J. Theoret. Probab.* 8 (1995) 877-903”, *Math. Rev.* **96h** (1996) 60052;
- review of “R. Giuliano Antonini: On the asymptotic behaviour of stationary Gaussian processes. *Ann. Math. Blaise Pascal* 2 (1995) 35-42”, *Math. Rev.* **96k** (1996) 60095;
- review of “J. Steinebach and V.R. Eastwood: Extreme value asymptotics for multivariate renewal processes. *J. Multivariate Anal.* 56 (1996) 284-302”, *Math. Rev.* **97f** (1997) 60058;
- review of “M.A. Lifshits: On the lower tail probabilities of some random series. *Ann. Probab.* 25 (1997) 424-442”, *Math. Rev.* **98b** (1998) 60100;
- review of “R.J. Adler and G. Samorodnitsky: Level crossings of absolutely continuous stationary symmetric  $\alpha$ -stable processes. *Ann. Appl. Probab.* 7 (1997) 460-493”, *Math. Rev.* **98f** (1998) 60072;
- review of “G. Haiman, N. Mayeur, V. Nevzorov and M.L. Puri: Records and 2-block records of 1-dependent stationary sequences under local dependence. *Ann. Inst. H. Poincaré Probab. Statist.* 34 (1998) 481-503”, *Math. Rev.* **99i** (1999) 60069;
- review of “C. Berzin, J.R. León and J. Ortega: Level crossings and local time for regularized Gaussian processes. *Probab. Math. Statist.* 18 (1998) 39-81”, *Math. Rev.* **99i** (1999) 60087;
- review of “G. Haiman: Upper and lower bounds for the tail of the invariant distribution of some AR(1) processes. *Asymptotic methods in probability and statistics* (Ottawa, ON, 1997), 723-730, North-Holland, Amsterdam, 1998.” *Math. Rev.* **99k** (1999) 60132;
- review of “N. Cappuccio, M. Ferrante and G. Fonseca: A note on the stationarity of a threshold first-order bilinear process. *Statist. Probab. Lett.* 40 (1998) 379-384”, *Math. Rev.* **99k** (1999) 62154;
- review of “J. Hüsler and V. Piterbarg: Extremes of a certain class of Gaussian processes. *Stochastic Process. Appl.* 83 (1999) 257-271”, *Math. Rev.* **00h** (2000) 60057;
- review of “J.-M. Azaïs, C. Cierco-Ayrolles and A. Croquette: Bounds and asymptotic expansions for the distribution of the maximum of a smooth stationary Gaussian process. *Probab. Statist.* 3 (1999) 107-129”, *Math. Rev.* **01f** (2001) 60055;
- review of “M. Braverman: Suprema of compound Poisson processes with light tails. *Stochastic Process. Appl.* 90 (2000) 145-156”, *Math. Rev.* **01j** (2001) 60099;
- review of “G. Hooghiemstra and H.P. Lopuhaä: An extremal limit theorem for the argmax process of Brownian motion minus a parabolic drift. *Extremes* 1 (2000) 215-240”, *Math. Rev.* **01m** (2001) 60119;
- review of “M.B. Marcus: Probability estimates for lower levels of certain Gaussian processes with stationary increments. *High dimensional probability II*, *Progr. Probab.* 47 (2000) 173-179, Birkhäuser Boston”, *Math. Rev.* **02h** (2002) 60075;
- review of “D. Neuenschwander: Petrov’s law of the iterated logarithm on simply connected nilpotent Lie groups. *Publ. Math. Debrecen* 60 (2000) 23-28”, *Math. Rev.* **03b** (2003) 60015;
- review of “Marco Ferrante, Giovanni Fonseca, Paolo Vidoni: Geometric ergodicity, regularity of the invariant distribution and inference for a threshold bilinear Markov process. *Statist. Sinica* 13 (2003) 367-384”, submitted to *Math. Rev.*;

review of “Zhengyan Lin, Wensheng Wan, Yong-Kab Choi: Strassen-type Laws of Iterated Logarithm for a Fractional Brownian Sheet. *Stochastic Anal. Appl.* 22 (2004) 193-210”, to appear in *Math. Rev.*

## 8. Submitted Manuscripts.

“On extremes of stationary Gaussian processes”, submitted to *Stochastic Process. Appl.*;

“On extremes of infinitely divisible Ornstein-Uhlenbeck processes”, submitted to *Stochastic Process. Appl.*;

“Large deviations of stationary infinitely divisible processes, given as stochastic integrals wrt. Lvy processes”, submitted to *Stochastic Process. Appl.*;

“Upper and Lower Classes of Stochastic Processes, with Application to Storage Processes and Infinitely Divisible Processes” (with Gennady Samorodnitsky);

All these manuscripts are available in the form they were submitted at  
<http://www.math.chalmers.se/palbin/manuscripts.html>

## 9. Published Articles.

*On Extremal Theory for Nondifferentiable Stationary Processes*, Ph.D. thesis, Dept. of Mathematical Statistics UL and LIT (1987);

on extremal theory for stationary processes, *Ann. Probab.* **18** (1990) 92-128;

upper and lower classes for Gaussian random fields and the general LIL, *Teor. Veroyatnost. i Primenen.* **37** (1992) 5-10 [in Russian];

on the general law of iterated logarithm with application to selfsimilar processes and to Gaussian processes in  $\mathbb{R}^n$  and Hilbert space, *Stochastic Process. Appl.* **41** (1992) 1-31;

extremes and crossings for differentiable stationary processes with application to Gaussian processes in  $\mathbb{R}^m$  and Hilbert space, *Stochastic Process. Appl.* **42** (1992) 119-147;

extremes of diffusions over fixed intervals, *Stochastic Process. Appl.* **48** (1993) 211-235;

extremes of totally skewed stable motion, *Statist. Probab. Lett.* **16** (1993) 219-224;

on the upper and lower classes for a stationary Gaussian stochastic process, *Ann. Probab.* **22** (1994) 77-93;

on LIL behaviour for moving averages of some infinitely divisible random measures, *Stochastic Process. Appl.* **49** (1994) 99-110;

upper and lower classes for  $L^2$ - and  $L^p$ -norms of Brownian motion and norms of  $\alpha$ -stable motion, *Stochastic Process. Appl.* **58** (1995) 91-103;

minima of  $H$ -valued Gaussian processes, *Ann. Probab.* **24** (1996) 788-824;

extremes for smooth nonanticipating moving averages of totally skewed  $\alpha$ -stable motion, *Statist. & Probab. Lett.* **36** (1997) 289-297;

on extremal theory for self-similar processes, *Ann. Probab.* **26** (1998) 743-793;

a note on Rosenblatt distributions, *Statist. Probab. Lett.* **40** (1998) 83-91;

extremes of totally skewed  $\alpha$ -stable processes, *Stochastic Process. Appl.* **79** (1999) 185-212;

asymptotic behaviour of conditional laws and moments of  $\alpha$ -stable random vectors, with application to upcrossing intensities (with M.R. Leadbetter). *Ann. Probab.* **27** (1999)1468-1500;

extremes and upcrossing intensities for  $\mathbf{P}$ -differentiable stationary processes, *Stochastic Process. Appl.* **87** (2000) 199-234;

on extremes and streams of upcrossings, *Stochastic Process. Appl.* **94** (2001) 271-300;

on a test statistic for linear trend (with D. Jaruskova), *Extremes* **6** (2003) 247-258;

on overload in a storage model, with a self-similar and infinitely divisible input (with G. Samorodnitsky), *Ann. Appl. Probab.* **14** (2004) 820-844;

on sampling of stationary increment processes, *Ann. Appl. Probab.* **14** (2004) 2016-2037;

extreme value theory, In: *Encyclopedia of Actuarial Science, Vol. 2*, J.L. Teugels, B. Sundt Ed:s., pp. 650-654, Wiley (2004);

on lower tail probabilities of positive random sums, *Extremes* **7** (2004) 199-220.

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Patrik Albin