CHALMERS

Extremes - Risk and Safety

August 18-22, 1998
Gothenburg, Sweden

Scientific Program

Participants

Belkacem Abdous
Robert Adler
Patrik Albin
Clive W. Anderson
Magnus Arnér
Søren Asmussen
Claudio E Baraldi
Jan Beirlant
Patricia Bermudez
Alexandre M. Berred
Christer Borell
Milan Borkovec
Paula Bortot
Adri Buishand
Philippe Capéra
C. Chandran
Stuart Coles
Rama Cont
Richard Davis
Goedele Dierckx
Daniel Dietrich
Ove Ditlevsen
Mark Dixon
Holger Drees
Debbie Dupuis
John Einmahl
Ola Engvall
Gordon Fenton
Ana Ferreira
Anne-Laure Fougères
Kilani Ghoudi
Yuri Goegebeur
Ivette Gomes
Charles-Antoine Guerin
Armelle Guillou
Laurens de Haan
George Haiman
Andreia Hall
Margrét Halldòrsdòttir
Ulf Hansson
Enkelejd Hashorva
Jaakko Helminen
Klas Hjelmgren
Urban Hjort
Lars Holst
Tailen Hsing
Jürg Hüsler
Bjarne Højgaard
Richard W. Katz
Edgar Kaufmann
Claudia Klüppelberg
Yuriy Kozachenko
Marie Kratz
Ross Leadbetter
Anthony Ledford
Georg Lindgren
Jacques de Maré
Anders Martin-Löf
Maria João Martins
David Mason
Gunther Matthys
Angelika May
Rostyslav E. Mayboroda
Thomas Mikosch
Mikhail Moklyachuk
Marianne Månsson
Manuela Neves
Tommy Norberg
Serguei Novak
Olena Obushna
Teresa Pereira
Olivier Perrin
Vladimir Piterbarg
Mikael Raab
Rolf Reiss
Sid Resnick
Holger Rootzén
Dan Rosbjerg
Mats Rudemo
Igor Rychlik
Gennady Samorodnitsky
Martin Schlather
Manuel Scotto
Johan Segers
Richard Smith
Cătălin Stărică
Jery Stedinger
Thomas Svensson
Nader Tajvidi
Rinya Takahashi
Jef Teugels
Kamil Turkman
Casper de Vries
David Walshaw
Walter Willinger
Nadiya Zinchenko

Program Committee

P. Albin, L. de Haan, M. R. Leadbetter, H. Rootzén

Organising Committee

K. Hjelmgren, J. de Maré, D. Mattsson, T. Norberg, H. Rootzén, M. Rudemo, I. Sandman, C. Stărică, N. Tajvidi

Workshop program

Unless otherwise indicated, the lectures are in the Aula, the Nordic School of Public Health

Monday, Aug 17		
Time	**Event**	**Location**
16.00–19.00	Registration	Main entrance, Nordic School of Public Health
19.00–	Reception	Göteborgsrummet, Nordic School of Public Health

Tuesday, Aug 18		
Time	**Event**	**Location**
8.00–8.45	Registration	Main entrance, Nordic School of Public Health
8.45–9.00	Opening	
	Stochastic processes Chairman: Sid Resnick	
Time	**Speaker**	**Title of talk**
9.00–9.30	Jef Teugels	Limit Theorems for Extremes with Random Sample Size
9.35–10.05	David Mason	Some extreme value behavior associated with the Hopfield model
10.10–10.40	Robert Adler	Euler Characteristics and Exceedence Probabilities
10.40–11.10	Coffee	
11.10–11.40	Tailen Hsing	Some extreme value problems in geometric probability
11.45–12.15	Laurens de Haan	Penultimate approximations for (sums of) extremes
12.15–12.40	Discussion	
12.40–14.30	Lunch	
	Oceanography, hydrology Chairman: Dan Rosbjerg	
Time	**Speaker**	**Title of talk**
14.30–15.00	Ross Leadbetter	Reliability of ocean structures—a problem in “penultimate extremes”
15.05–15.35	Jery Stedinger	Generalized Maximum Likelihood GEV quantile estimators from Partial Duration and Annual Maximum Series employing complete and censored information
15.35–16.00	Coffee	
16.00–16.30	Georg Lindgren	Extremes of sea state variables as seen from earth observing satellites—some problems with spatial and temporal coverage
16.35–17.05	D. J. Dupuis	Exceedances over High Thresholds: A Guide to Threshold Selection
17.05–17.30	Discussion	

Wednesday, Aug 19

Statistics: Chairman: John Einmahl

Time	Speaker	Title of talk
9.00–9.30	Stuart Coles	Bayesian Inference for Extreme Value Modelling
9.35–10.05	Ivette Gomes	The Bootstrap Methodology in Statistical Extremes
10.10–10.40	Holger Drees	Asymptotic Minimax Risk Bounds in Univariate Extreme Value Statistics
10.40–11.10	Coffee	

Heavy-tailed modeling Chairman: Walter Willinger

Time	Speaker	Title of talk
11.10–11.40	Richard Davis	Limit Theory for Autocorrelations of Heavy-Tailed Nonlinear Time Series Models
11.45–12.15	Gennady Samorodnitsky	Overflow/ruin probabilities when the input in the queue is heavy tailed and there is dependence in the tails
12.15–12.40	Discussion	
12.40–14.30	Lunch	

Telecommunication Chairman: Richard Davis

Time	Speaker	Title of talk
14.30–15.00	Walter Willinger	Data network traffic: Heavy tails are here to stay!
15.05–15.35	Sidney I. Resnick	Fluid Queues, On-Off Processes and Teletraffic Modeling
15.35–16.00	Coffee	
16.00–16.30	Søren Asmussen	Extreme value theory for M/G/1 type queueing models with subexponential increments
16.30–16.55	Discussion	
17.45–19.00	Buffet, Göteborgsrummet Nordic School of Public Health	

Extreme value software Chairman: Nader Tajvidi

Time	Speaker	Title of talk
19.00–19.20	Clive Anderson	Introduction and general remarks
19.25–19.50	Rolf Reiss	Old and New Features of XTREMES
19.55–20.10	Jan Beirlant	Annex
20.15–20.30	Stuart Coles	Some S+ routines for extreme value analysis

Thursday, Aug 20, Session I, the Aula

Financial risk, catastrophe insurance Chairman: Rolf Reiss

Time	Speaker	Title of talk
9.00–9.30	Casper de Vries	Second Order Diversification Effects
9.35–10.05	Nader Tajvidi	Confidence and prediction intervals computed from Poisson sequences of extreme events
10.10–10.40	Rama Cont	Clustering and dependence in extreme market returns
10.40–11.10	Coffee	

Probability Chairman: Robert Adler

Time	Speaker	Title of talk
11.10–11.40	Andreia Hall	Extremes of Integer-valued Moving Average Models
11.45–12.15	Marie-France Kratz	Central limit theorems for non-smooth functionals related to crossings (via the Hermite polynomial expansion)
12.15–12.45	Patrik Albin	Extremes and Upcrossing Intensities for P-differentiable Stationary Processes
12.45–13.10	Discussion	
15.15–appr. 17.30	Excursion to Älvsborgs fästning	Starts and ends on dock at Nordic Schoolof Public Health

Thursday, Aug 20, Session II, the Aula of the Nordic Folk Academy

Statistics Chairman: Holger Drees

Time	Speaker	Title of talk
9.00–9.30	Theresa Pereira	Efficient Estimation of the Extreme Value Index
9.35–10.05	Paola Bortot	Models for Extremes of Markov Chains under Asymptotic Independence
10.10–10.40	Edgar Kaufmann	Approximation of the Hill Estimator Process
10.40–11.10	Coffee	

Probability Chairman: Milan Borkovec

Time	Speaker	Title of talk
11.10–11.40	C. Chandran	Clustered Models for Gaussian Extremes
11.45–12.15	Armelle Guillou	On the Influence of Weights on Extremes
12.15–12.40	Discussion	
15.15–appr. 17.30	Excursion to Älvsborgs fästning	Starts and ends on dock at Nordic Schoolof Public Health

Friday, Aug 21, Session I, the Aula

Stochastic processes Chairman: Lars Holst

Time	Speaker	Title of talk
9.00–9.30	Jürg Hüsler	Extremes of some Gaussian processes
9.35–10.05	Sergei Novak	On the limiting distribution of extremes
10.10–10.40	Vladimir Piterbarg	ℓ_p-valued Gaussian processes: large deviations
10.40–11.10	Coffee	
11.10–11.40	Thomas Mikosch	The extremes of the periodogram
11.45–12.15	Christer Borell	A Brownian motion approach to log-concave measures and an application to the option on the minimum of several assets
12.15–12.40	Discussion	
12.40–14.30	Lunch	

Metal fatigue, geophysics Chairman: Thomas Svensson

Time	Speaker	Title of talk
14.30–15.00	Rinya Takahashi	Prediction of the maximum size in Wicksell's corpuscle problem
15.05–15.35	Clive Anderson	The Largest Inclusions Within a Piece of Steel
15.35–16.00	Coffee	
16.00–16.30	Ove Ditlevsen	Lévy noise driven system — with applications in geophysics
16.30–16.55	Discussion	
19.00–19.30	Guided walking tour of Kulturreservatet Klippan	Starts and ends at Sjömagasinet
19.30–	Conference dinner at Sjömagasinet	

Friday, Aug 21, Session II, the Aula of the Nordic Folk Academy		
Statistics, multivariate Chairman: Ivette Gomes		
Time	**Speaker**	**Title of talk**
9.00–9.30	Belkacem Abdous	Non-parametric estimation of the limit dependence function of multivariate extremes
9.35–10.05	Saraleesan Nadarajah	Multivariate Declustering Techniques
10.10–10.40	John Einmahl	Nonparametric estimation of the spectral measure of an extreme value distribution
10.40–11.10	Coffee	
11.10–11.40	Patricia Bermudez	Bayesian approach to extreme quantile estimation through threshold methods
11.45–12.15	Anthony Ledford	Modelling dependence in joint tails
12.15–12.40	Discussion	
12.40–14.30	Lunch	
Statistical methods Chairman: Kamil Turkman		
Time	**Speaker**	**Title of talk**
14.30–15.00	Mark Dixon	Finite sample inference for extreme value distributions
15.05–15.35	Alexandre M. Berred	Tolerance regions for record values
15.35–16.00	Coffee	
Probability Chairman: Jürg Hüsler		
Time	**Speaker**	**Title of talk**
16.00–16.30	Martin Schlather	Limit distributions of l_α-norms of vectors of positive i. i. d. random variables
16.35–17.05	George Haiman	Records and 2-block records of 1-dependent stationary sequences under local dependence
17.10–17.35	Discussion	
19.00–19.30	Guided walking tour of Kulturreservatet Klippan	Starts and ends at Sjömagasinet
19.30–	Conference dinner at Sjömagasinet	

Saturday, Aug 22

Hydrology, climatology Chairman: Jery Stedinger

Time	Speaker	Title of talk
9.00–9.30	Adri Buishand	Generation of daily precipitation in the Rhine basin as part of a new methodology to estimate extreme river discharges
9.35–10.05	Dan Rosbjerg	Recent advances in modelling of extreme hydrologic events
10.10–10.40	Richard W. Katz	Extreme Weather Events and Climate Change
10.40–11.10	Coffee	

Climatology Chairman: Adri Buishand

Time	Speaker	Title of talk
11.10–11.40	David Walshaw	Assessing the Risk of Frost Damage
11.45–12.15	Jaakko Helminen	Absolute Maximum and Minimum Temperature Extreme-Value Distributions vs. Circulation Regimes over Nordic Countries
12.15–12.40	Discussion	
12.40–14.30	Lunch	

Financial risk, catastrophe insurance Chairman: Thomas Mikosch

Time	Speaker	Title of talk
14.30–15.00	Jan Beirlant	Linear Models in Extreme Value Modelling
15.05–15.35	Cătălin Stărică	Estimation of the extreme value distribution for Constant Conditional Correlation models
15.35–16.00	Coffee	
16.00–16.30	Claudia Klüppelberg	Risk management in finance: an application of extreme value theory
16.30–16.40	Closing	

Discussants:

Søren Asmussen, Alexandre Berred, Holger Drees, Ove Ditlevsen, Peter Jagers, Richard W. Katz, Claudia Klüppelberg, Anthony Ledford, Jacques de Maré, Anders Martin-Löf, Angelika May, Vladimir Piterbarg, Mats Rudemo, Igor Rychlik, Gennady Samorodnitsky, Tailen Hsing, Kamil Turkman, David Walshaw

Seminars on extreme values, the fall of 1998

Date	**Time & place**		**Speaker**	**Title**
980825	15.15	S2	Angelika May	
980827	15.15	S1	Ross Leadbetter	On extremes and central limit theory for random fields
980903	14.15	??	Tailen Hsing	
980903	15.15	S1	Laurens de Haan	
980908	15.15	??	Holger Rootzén	
980910	15.15	S1	Lars Holst	
980917	15.15	??	Vladimir Piterbarg	
980924	15.15	??	Holger Drees	