

# PROGRAMME COMPSTAT 2014

## Schedule

Canceled talks: C1517, C1341, C1661

## KEYNOTE TALKS

<b>Keynote talk 1</b>	Tuesday 19.08.2014	10:00 - 10:45	<i>Room: 1</i>
<i>Inhomogeneous large-scale data: maximin effects and their statistical estimation</i>			
<i>Speaker: P. Buehlmann</i>			<i>Chair: Manfred Gilli</i>
<b>Keynote talk 2</b>	Wednesday 20.08.2014	14:15 - 15:00	<i>Room: 1</i>
<i>Statistics of complex extremes</i>			
<i>Speaker: A. Davison</i>			<i>Chair: Gil Gonzalez-Rodriguez</i>
<b>Keynote talk 3</b>	Thursday 21.08.2014	10:30 - 11:15	<i>Room: 1</i>
<i>Scalable Bayesian model selection methods</i>			
<i>Speaker: X. He</i>			<i>Chair: Elvezio Ronchetti</i>

## PARALLEL SESSIONS

<b>Parallel session A:</b>	Tuesday 19.08.2014	11:15 - 13:00
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<b>Session IS05 - Invited</b>	<i>Room: 3</i>
<b>Advances in filtering methods</b>	<i>Tuesday 19.08.2014 11:15 - 13:00</i>
<i>Chair: Elvezio Ronchetti</i>	<i>Organizer: Elvezio Ronchetti</i>
<b>C1363: N. Polson</b>	
Recursive Bayesian computation	
<b>C1524: V. Czellar, L. Calvet, E. Ronchetti</b>	
Robust filtering	
<b>C1713: S. Singh, T. Dean</b>	
Asymptotic behaviour of approximate Bayesian estimators	
<b>Session OS09 - Organized</b>	<i>Room: 4</i>
<b>Multi-set and multi-way models I</b>	<i>Tuesday 19.08.2014 11:15 - 13:00</i>

*Chair:* Marieke Timmerman

*Organizer:* Marieke Timmerman , Eva Ceulemans , Alwin Stegeman

**C1307: R. Bro**

Second-order calibration

**C1477: N. Sidiropoulos, E. Papalexakis, C. Faloutsos**

Multi-way Compressed Sensing and Parallel Computation of the CANDECOMP-PARAFAC Decomposition

**C1455: L. Bocci, D. Vicari**

GINDCLUS: generalized INDCLUS including external information

**C1446: K. De Roover, J. Vermunt, M. Timmerman, E. Ceulemans**

Mixture simultaneous factor analysis for modeling multivariate multilevel data

**C1443: M. Meulders, J. Vermunt, I. Van Mechelen**

Probabilistic latent feature models with rater differences in feature selection

**Session CS42**

**Room: 6**

**Contributions to statistics and optimization in finance I**

*Tuesday 19.08.2014 11:15 - 13:00*

*Chair:* Dietmar Maringer

*Organizer:* COMPSTAT 2014

**C1310: R. Neck, D. Blueschke, V. Blueschke-Nikolaeva**

Algorithms for optimal control of econometric models

**C1384: J. Zhang, D. Maringer**

Automating transition functions: a way to improve trading profits with recurrent reinforcement learning

**C1544: N. Le Roux, S. Nel, W. Bruwer**

Market-based valuations in an emerging market from a biplot perspective.

**C1701: S. Papadopoulos, G. Papadopoulos**

Early warning systems and stress testing for macroprudential policy

**Session CS58**

**Room: 19**

**Computational statistics I**

*Tuesday 19.08.2014 11:15 - 13:00*

*Chair:* Giampiero Marra

*Organizer:* COMPSTAT 2014

**C1291: K. Manalaysay, E. Barrios**

Semiparametric principal components Poisson regression on clustered data

**C1295: M. Lucagbo, E. Barrios**

Estimation of isotonic spatio-temporal model with clustering

**C1714: A. Karaivanova, S. Ivanovska, T. Gurov**

Probability density estimation using Monte Carlo

**C1556: K. Knight**

The penalized analytic centre estimator

**C1503: G. Marra, R. Radice, P. Filippou**

Testing the hypothesis of exogeneity in regression spline bivariate probit models

**Session CS63**

**Room: 5**

**Sparse models**

*Tuesday 19.08.2014 11:15 - 13:00*

*Chair:* Maria-Pia Victoria-Feser

*Organizer:* COMPSTAT 2014

**C1438: M. Victoria-Feser, S. Guerrier**

A Prediction divergence criterion for model selection

**C1478: K. Adachi, N. Trendafilov**

Penalty-free sparse PCA

**C1508:** S. Ng, G. McLachlan

Mixture of regression models with latent variables and sparse coefficient parameters

**C1642:** R. Takahashi

Reduced K-means with sparse loadings

**C1665:** T. Gebru, N. Trendafilov

Function constrained sparse linear discriminant analysis

**Session CS67**

**Room: 13**

**Classification**

*Tuesday 19.08.2014 11:15 - 13:00*

*Chair:* Gilbert Saporta

*Organizer:* COMPSTAT 2014

**C1598:** G. Saporta

Supervised classification and experimental designs

**C1285:** Y. Chang, Y. Chang

Multiple-class classification

**C1323:** C. Jiang, C. Liu, X. Zhou, H. Huang

Optimal ranking in multi-label classification using local precision rates

**C1511:** J. Chen

Data mining methods for subgroup identification and prediction

**C1674:** L. Frigau, C. Conversano, F. Mola

A bivariate cost-sensitive classifier performance index

**Parallel session B:**

*Tuesday 19.08.2014*

**14:00 - 15:45**

**Session IS06 - Invited**

**Room: 4**

**Developments in multi-set modeling**

*Tuesday 19.08.2014 14:00 - 15:45*

*Chair:* Marieke Timmerman

*Organizer:* Marieke Timmerman

**C1485:** E. Ceulemans, K. De Roover, J. De Leersnyder, B. Mesquita, M. Timmerman

What is hampering measurement invariance? detecting outlying variables using clusterwise simultaneous component analysis

**C1409:** H. Heungsun

Three-way generalized structured component analysis

**C1512:** M. Timmerman, H. Hoefsloot, A. Smilde, E. Ceulemans

Scaling in ANOVA-simultaneous component analysis

**Session TS1**

**Room: 3**

**Tutorial 1**

*Tuesday 19.08.2014 14:00 - 15:45*

*Chair:* Manfred Gilli

*Organizer:* COMPSTAT 2014

**C1719:** D. Maringer

Heuristic methods for model selection and estimation

**Session CS60**

**Room: 6**

**Computational statistics II**

*Tuesday 19.08.2014 14:00 - 15:45*

*Chair:* Philip Reis

*Organizer:* COMPSTAT 2014

**C1616:** D. Flores Agreda, E. Cantoni

Bootstrap-based uncertainty measures for empirical best predictors in generalized linear mixed models

**C1593:** N. Niki, Y. Ono, H. Hashiguchi

Inflated bootstrap

**C1529: H. Murakami**

The moment-based approximation with a skew-normal polynomial: a numerical comparison

**C1547: K. Yamamoto, H. Murakami**

Performance of the skew normal distribution type symmetry model for analyzing square ordinal tables

**C1656: A. Abbruzzo, L. Augugliaro, A. Mineo, E. Wit**

Cyclic coordinate for penalized Gaussian graphical models with symmetry restrictions

**Session CS62**

**Room: 5**

**High-dimensional statistics**

*Tuesday 19.08.2014 14:00 - 15:45*

*Chair:* Peter Buehlman

*Organizer:* COMPSTAT 2014

**C1304: J. Kalina, Z. Valenta, J. Duintjer Tebbens**

Computation of regularized linear discriminant analysis

**C1325: H. Szymanowski, J. Mielińczuk**

Generalized information criterion for sparse, high-dimensional logistic regression

**C1505: J. Lansangan, E. Barrios**

Simultaneous dimension reduction and variable selection in modeling high dimensional data

**C1514: E. Barrios, R. Guiatco**

Nonparametric estimation of a switching regression model

**C1594: T. Nishiyama, M. Hyodo**

Pairwise comparisons among mean vectors in high dimension under non-normality

**Session CS55**

**Room: 20**

**Contributions to financial time series**

*Tuesday 19.08.2014 14:00 - 15:45*

*Chair:* Richard Gerlach

*Organizer:* COMPSTAT 2014

**C1490: M. Basta**

Wavelets and their use in the analysis of financial time series

**C1468: A. Schröder, P. Fryzlewicz**

Change-point adaptive multiscale decomposition and forecasting of nonstationary financial time series

**C1433: I. Wilms, C. Croux**

Modeling the term structure with sparse cointegration

**C1316: J. Wu, G. Dhaene**

A sparse generalized DCC-GARCH model and its application to international stock returns

**C1376: J. Reynolds**

Commonality in liquidity dimensions: a generalized dynamic factor model approach

**Session CS80**

**Room: 19**

**Applied statistics and data analysis I**

*Tuesday 19.08.2014 14:00 - 15:45*

*Chair:* Shu-Kay Ng

*Organizer:* COMPSTAT 2014

**C1545: M. Nagashima, N. Watanabe**

Intervention analysis for volatility of stock returns based on the GARCH model

**C1654: A. Sarra, L. Fontanella, S. Di Zio, P. Valentini**

Varying levels of anomie in Europe: a multilevel analysis based on multidimensional IRT models

**C1624: N. Allab**

Anomaly detection in CONTINENTAL data

**C1370: H. Vorkauf**

Unravel: a method and a program to analyze contingency tables, unveiling confounders

**C1509: N. Jacot, E. Cantoni, P. Ghisletta**

Goodness-of-fit measures in linear mixed-effects models

**Session CS76**

**Room: 13**

**Multivariate statistics I**

*Chair:* Peter Filzmoser

*Tuesday 19.08.2014 14:00 - 15:45*

*Organizer:* COMPSTAT 2014

**C1389: J. Antoch**

Local analysis of structural anisotropy

**C1540: S. Fontanella, N. Trendafilov, K. Adachi**

Sparse exploratory factor analysis

**C1571: D. Hernandez Ramirez, M. Becue-Bertaut**

Tracking changes in scientific bibliography: a novel statistical approach using a multifactorial analysis

**C1487: A. Roy, C. Hao, Y. Liang**

Same, but better: comparing centers-coupled-with-radii and vertices principal component analyses for symbolic data

**C1578: P. Filzmoser, P. Brito, A. Duarte Silva**

Outlier detection in interval data

**Parallel session C:**

*Tuesday 19.08.2014*

**16:15 - 18:00**

**Session OS10 - Organized**

**Room: 6**

**Longitudinal exploratory data mining**

*Tuesday 19.08.2014 16:15 - 18:00*

*Chair:* John J. McArdle

*Organizer:* John J. McArdle

**C1341: J. McArdle, G. Ritschard, P. Ghisletta, A. Brandmaier (canceled)**

Introduction to longitudinal exploratory data mining

**C1366: A. Brandmaier, J. Prindle, J. McArdle, U. Lindenberger**

Variable importance in structural equation model forests

**C1465: P. Ghisletta, S. Aichele, P. Rabbitt**

Longitudinal data mining to predict survival in a large sample of adults

**C1404: G. Ritschard, M. Studer, E. Rousseaux**

Experiences with some longitudinal exploratory data mining problems

**Session CS15**

**Room: 4**

**Regression models I**

*Tuesday 19.08.2014 16:15 - 18:00*

*Chair:* Ana M. Aguilera

*Organizer:* COMPSTAT 2014

**C1284: J. Zhou**

Model averaging for Poisson regression

**C1299: L. Chen, T. Wan, K. Tso**

Frequentist model averaging for ordered probit and nested logit models

**C1372: C. Taverne, P. Lambert**

Inflated discrete beta regression model for Likert and discrete rating scale outcomes

**C1543: M. Hannay, E. Ronchetti**

Weighted estimation for prediction in the linear model

**C1500: R. Radice, G. Marra, M. Wojtys**

Copula regression spline models for binary outcomes

**Session CS17**

**Room: 5**

## Multivariate statistics II

Chair: Henry Wynn

Tuesday 19.08.2014 16:15 - 18:00

Organizer: COMPSTAT 2014

### C1480: H. Ogasawara

On the estimator of the canonical parameter in the exponential family

### C1456: P. Winker, A. Staszewska-Bystrova, H. Luetkepohl

Confidence bands for impulse responses: Bonferroni versus Wald

### C1640: T. Yamada, T. Himeno, T. Sakurai

Confidence interval of log odds ratio for the posterior probabilities for large dimension

### C1651: S. Suraphee, S. Ahmed, I. Kareev, I. Volodin, A. Volodin

Confidence sets based on the positive part James-Stein estimator with the asymptotically constant coverage probability.

### C1722: J. Karlowska-Pik, J. Koronacki, J. Mielniczuk, P. Teisseire

Classification and variable selection in logistic regression via random subspace method

## Session CS44

Room: 13

### Contributions to copula-based modeling I

Tuesday 19.08.2014 16:15 - 18:00

Chair: F. Marta L. Di Lascio

Organizer: COMPSTAT 2014

### C1417: S. Mudakkar, J. Uppal

Spill over effects and contagion in financial turbulence- evidence from global financial crisis

### C1517: T. Vatter, V. Chavez (canceled)

Generalized additive models for conditional copulas

### C1648: P. Amphantong, P. Busababodhin

Modeling and prediction of exchange rate and billion gold price of Thailand

### C1647: P. Busababodhin, P. Amphantong

Modeling of rainfall and temperature: extreme value copula analyses

### C1401: E. Perrone, W. Mueller

Optimal designs for copula models

## Session CS66

Room: 20

### Statistical process control

Tuesday 19.08.2014 16:15 - 18:00

Chair: Fernanda Figueiredo

Organizer: COMPSTAT 2014

### C1345: S. Yang, J. Lin, C. Yang

A cusum average loss control chart for monitoring process variation

### C1405: M. Casquilho, E. Carolino

Sampling inspection by (Gaussian) variables via estimation of the lot fraction defective: a computational approach

### C1539: F. Coelho, M. Casquilho

Behaviour of the quality index in acceptance sampling by variables: computation and Monte Carlo simulation

### C1606: F. Figueiredo, M. Gomes, A. Figueiredo

Monitoring the shape parameter of a Weibull distribution

### C1626: A. Figueiredo, F. Figueiredo

Monitoring the process variability using STATIS

## Session CS79

Room: 19

### Applied statistics and data analysis II

Tuesday 19.08.2014 16:15 - 18:00

Chair: Heungsun Hwang

Organizer: COMPSTAT 2014

### C1659: S. Kim, K. Hayashi, K. Kurihara

The optimal number of lags in variogram estimation in spatial data analysis

**C1716: J. Wilk**

The applications of symbolic data analysis in regional and spatial research

**C1646: A. Irpino, A. Balzanella, R. Verde**

Spatial dependence monitoring over distributed data streams

**C1676: R. Hochreiter, C. Waldhauser**

Effects of sampling methods on prediction quality: The case of classifying land cover using decision trees.

**C1423: N. Mushkudiani**

Estimation of household income based on asset ownership in Georgia

**Parallel session D:**      Wednesday 20.08.2014      09:15 - 10:45

**Session IS04 - Invited**

**Room: 3**

**Applied Bayesian statistics**

*Wednesday 20.08.2014 09:15 - 10:45*

*Chair:* Anne Philippe

*Organizer:* Anne Philippe

**C1550: A. Todeschini, F. Caron, M. Fuentes, P. Legrand, P. Del-Moral**

BiiPS: software for inference in Bayesian graphical models with sequential Monte Carlo methods

**C1521: A. Philippe**

A hierarchical Bayesian approach for dating in archaeology.

**C1402: M. Marbac, C. Biernacki, V. Vandewalle**

Mixture model of Gaussian copulas to cluster mixed-type data

**Session OS08 - Organized**

**Room: 5**

**Dependence models**

*Wednesday 20.08.2014 09:15 - 10:45*

*Chair:* F. Marta L. Di Lascio

*Organizer:* F. Marta L. Di Lascio , Fabrizio Durante

**C1373: G. Mazo, S. Girard, F. Forbes**

Weighted least square inference for multivariate copulas based on dependence coefficients

**C1411: P. Jaworski**

The univariate conditioning and tail dependence; two ways of studying the extreme events

**C1340: O. Okhrin, N. Hautsch, A. Ristig**

Efficient iterative maximum likelihood estimation of high-parameterized time series models

**C1422: M. Iaco, V. Balaz, M. Hofer, O. Strauch, R. Tichy**

Optimal dependence structures for integrals involving the sine

**Session OS30 - Organized**

**Room: 4**

**Infinite dimensional data analysis**

*Wednesday 20.08.2014 09:15 - 10:45*

*Chair:* Alicia Nieto-Reyes

*Organizer:* Alicia Nieto-Reyes , Gil Gonzalez-Rodriguez

**C1473: J. Romo, R. Lillo, N. Mingotti**

Random walk testing for time series of functions

**C1458: S. Nagy**

Functional theorem of Glivenko-Cantelli with application to data depth for functions

**C1437: B. Powell**

Bayesian non-parametric spectral density estimation: with application to under-sampled time series

**C1425: A. Nieto-Reyes, J. Cuesta-Albertos, F. Gamboa**

A study of Gaussianity in stationary processes

**Session CS53**

**Room: 19**

## Contributions to computational methods in finance I

Chair: Peter Winker

Wednesday 20.08.2014 09:15 - 10:45

Organizer: COMPSTAT 2014

**C1318:** P. Fischer, A. Hilbert

Fast detection of structural breaks

**C1553:** P. Foschi

Forecasting forward price curves in electricity markets: a factor model

**C1595:** J. Portela, A. Munoz, E. Alonso

Forecasting residual demand time series in electricity markets: a functional approach

## Session CS51

Room: 20

### Contributions of computational statistics to environmental and

life sciences

Wednesday 20.08.2014 09:15 -

10:45

Chair: Raphael Huser

Organizer: COMPSTAT 2014

**C1667:** R. Fernandez Pascual, R. Espejo, M. Ruiz Medina

Estimation of spatially correlated ocean temperature curves including depth dependent covariates

**C1679:** A. Wawrzynczak-Szaban, A. Wawrzynczak, P. Kopka, M. Jaroszyski, M. Borysiewicz

Efficiency of sequential Monte Carlo and genetic algorithm in Bayesian estimation of the atmospheric contamination source

**C1685:** T. Kernane, S. Becheket, H. El Maroufy

Parametric inference for stochastic SIS epidemic model in random environment

**C1564:** M. Arisido

Functional data modeling to measure exposure to ozone

## Session CS65

Room: 13

### Clustering I

Wednesday 20.08.2014 09:15 - 10:45

Chair: Luca Bagnato

Organizer: COMPSTAT 2014

**C1683:** P. Michel, B. Ghattas

Clustering ordinal data using binary decision trees

**C1599:** H. Frick, C. Strobl, A. Zeileis

To split or to mix? Tree vs. mixture models for detecting subgroups

**C1615:** F. Tenorio de Carvalho, M. Portela Ferreira

Variable-wise kernel-based clustering algorithms for interval-valued data with kernelization of the metric

**C1568:** Z. Sulc, H. Rezankova

Comparison of selected similarity measures used for clustering of nominal variables

## Session PS01

Room: Espace Motta

### Poster session I

Wednesday 20.08.2014 09:15 - 10:45

Chair: Francisco de Asss Torres Ruiz

Organizer: COMPSTAT 2014

**C1280:** J. Liu, C. Chiang

Sample size determination for inferences based on functions of second moments using nonlinear minimization techniques

**C1351:** C. Henriques, A. Matos, D. Moreira

Regression modelling to explain adverse events after acute myocardial infarction

**C1377:** T. Yamamoto, H. Chigira, C. Yamamoto

Forecasting mortality: some analytical, experimental and empirical evidences

**C1479:** D. Maina, B. Namwiba, J. Onyari, J. Boman, K. Shepherd

Chemometric analysis of macro and micronutrients in soils and associated medicinal plants from Maasai region, Kenya

**C1692:** K. Yamaguchi, T. Ohkawauchi, K. Ohashi

A course on introductory statistics using interactive educational tools

**C1331:** G. Konczak

On the modification of the non-parametric test for comparing locations of two populations

**C1710:** M. Maumy-Bertrand, J. Magnanensi, N. Meyer, F. Bertrand

Bootstrap technique and number of PLS or PLSGLR components selection.

**C1709:** F. Bertrand, P. Bastien, M. Maumy-Bertrand

Cross-validated partial least squares models and their extensions with censored data

**C1699:** A. Michna, H. Braselmann, H. Zitzelsberger, K. Unger

Identification of molecular targets and signaling networks associated with radiation sensitivity

**C1687:** H. Pickova, J. Picek

Partial correlation based on L-comoments

## Session PS02

**Room:** Espace Motta

### Poster session II

*Wednesday 20.08.2014 09:15 - 10:45*

*Chair:* Francisco de Asis Torres Ruiz

*Organizer:* COMPSTAT 2014

**C1397:** F. Torres-Ruiz, A. Barrera-Garcia, P. Roman-Roman

A general Weibull diffusion process

**C1418:** W. Wu, C. Lim

Some estimation approaches on smoothness of a stationary Gaussian random field

**C1489:** P. Li

Classification of functional data with covariate adjustment

**C1486:** Y. Chang, M. Zhu

L1-penalized ordinal regression with applications to consumer preference data and survey data

**C1504:** V. Chen

A geographically weighted autoregressive regression technique to model spatial dependence and nonstationarity

**C1528:** K. Tahata, R. Auchi, S. Tomizawa

On decomposition of refined estimator of measure for symmetry in square contingency tables

**C1530:** C. Perez, L. Naranjo, Y. Campos-Roca, J. Martin

Bayesian regression models to address replications of recordings for disease of Parkinson tracking

**C1531:** J. Linares-Perez, R. Caballero-Aguila, A. Hermoso-Carazo

Filtering algorithm in networked systems from uncertain observations with sensor random delays and packet dropouts

**C1634:** M. Montero Alonso, A. Lara-Aparicio, J. Luna-del-Castillo

Statistical analysis platform based on webserver with R

## Session PS03

**Room:** Espace Motta

### Poster session III

*Wednesday 20.08.2014 09:15 - 10:45*

*Chair:* Cristian Gutu

*Organizer:* COMPSTAT 2014

**C1655:** R. Sawae, Y. Mori, D. Ishii

A search for new solutions of a to the p-1 equal to 1 modulo p squared with a probabilistic computation algorithm

**C1638:** K. Nittono

Modeling of text accumulation system for collective knowledge with text mining methods

**C1627:** E. Thibaud, A. Davison

Bayesian hierarchical modelling of spatial extremes: an application to extreme low temperatures in Northern Finland

**C1613: K. Na Bangchang**

A variable selection in linear regression models based on Tabu Search method

**C1607: M. Fujiki**

An attitude survey of statistics and an analysis of the basic skills of mathematics in charge subjects

**C1592: T. Chotisathiensup**, K. Budsaba, S. Lisawadi

The efficiency comparison of tests for equality of two variances

**C1569: R. Caballero-Aguila**, H. Aurora, L. Josefa

Estimation based on covariances from multiple one-step randomly delayed measurements with noise correlation

**C1408: J. Roldan Nofuentes**

Estimation of the weighted kappa coefficient subject to case-control design

**C1715: K. Chinna**, A. Aldrin, Y. Wong

Spatial analysis of tuberculosis using space-time scan statistics to detect disease clusters

**C1691: M. Souto de Miranda**, C. Amado, M. Silva

Robust profiling of site index

**Session PS04**

**Room: Espace Motta**

**Poster session IV**

*Wednesday 20.08.2014 09:15 - 10:45*

*Chair:* Cristian Gatu

*Organizer:* COMPSTAT 2014

**C1570: M. Koch**, A. Maerkens, R. Kley, J. Uszkoreit, M. Vorgerd, K. Marcus, M. Eisenacher

Classification and biomarker identification for myopathic disorders.

**C1581: F. Almendra-Arao**, D. Sotres-Ramos, M. Zuniga-Estrada

Extindint the exact test of Barnard to non-inferiority

**C1584: T. Monleon-Getino**, J. Frias-Lopez

New statistical function to discriminate metagenomic microbial community relative species abundance profiles

**C1587: A. Laouar**, K. Bouketala, R. Sabre

Stable variables in car insurance

**C1588: Y. Pornpakdee**, K. Budsaba, W. Panichkitkosolkul

An empirical comparison of homogeneity of variance tests

**C1589: U. Intarasat**, K. Budsaba, S. Chaimongkol

The efficiency comparison of test for differences among several population means under heterogeneity of variances

**C1591: T. Ueno**, S. Tatsunami

Consideration of probability of failure in antiretroviral therapy using a stochastic model

**C1690: M. Cattelan**

Maximum simulated likelihood estimation of Thurstonian models

**C1730: O. Kaiser**, I. Horenko

FEM-EVA framework for statistical regression analysis of extreme events

**C1731: D. Igdalov**, S. Gerber, I. Horenko

FEM framework for time series analysis with missing data

**Parallel session E:**    Wednesday 20.08.2014

11:15 - 13:00

**Session CS16**

**Room: 3**

## Robust regression

Chair: Stefan Van Aelst

Wednesday 20.08.2014 11:15 - 13:00

Organizer: COMPSTAT 2014

**C1319:** A. Atkinson, M. Riani, A. Cerioli, D. Perrotta

Random start forward searches for detecting mixtures of regression models

**C1484:** E. Lima Neto, F. De Carvalho, M. Ferreira, P. Almeida Junior

A kernel based robust regression

**C1575:** J. Visek

Robust test of restricted model

**C1334:** K. Jung

Robust penalized regression estimator

**C1618:** M. Avella-Medina, E. Ronchetti

Robust and consistent variable selection for generalized linear and additive models

## Session CS19

**Room: 6**

### Methodological statistics I

Wednesday 20.08.2014 11:15 - 13:00

Chair: Jose E. Chacon

Organizer: COMPSTAT 2014

**C1342:** L. Bagnato, A. Punzo, M. Zoia

Generalizing the multivariate normal distribution for accounting excess kurtosis: an application to model-based clustering

**C1346:** A. Shelef

A Gini-based stationarity test

**C1492:** C. Hirotsu, H. Tsuruta

Unifying approach to the shape and change-point hypotheses in a general exponential family

**C1451:** Z. Hlavka, M. Huskova

Change-point approach to multiple testing

**C1548:** K. Hayashi, K. Kurihara

Sequential statistical sensitivity analysis for detecting a change point

## Session CS41

**Room: 20**

### Contributions to statistics of extreme values I

Wednesday 20.08.2014 11:15 - 13:00

Chair: Armelle Guillou

Organizer: COMPSTAT 2014

**C1300:** A. Maharaj, P. DUrso, A. Alonso

Grouping seasonal time series using extreme value analysis

**C1488:** T. Lugrin, A. Davison, J. Tawn

Bayesian semiparametrics for modelling the clustering of extreme values

**C1519:** J. El Methni, L. Gardes, S. Girard

Kernel estimation of extreme risk measures for all domains of attraction

**C1673:** M. Neves, C. Cordeiro

Statistical modelling in time series extremes: An overview and new steps

**C1386:** A. Dematteo, N. Vayatis, M. Mougeot, S. Clemenccon

Sloshing in the LNG shipping industry: risk modelling through multivariate heavy-tail analysis

## Session CS43

**Room: 13**

### Contributions to applied Bayesian statistics

Wednesday 20.08.2014 11:15 - 13:00

Chair: Anne Philippe

Organizer: COMPSTAT 2014

**C1306:** S. Cheung, T. Cheung

Bayesian regression model with a random network

**C1552:** R. Magiera, A. Jokiel-Rokita

Bayes estimation of parameters for trend-renewal processes

**C1675: L. Evers**

Skewed Laplace approximation for censored data

**C1663: K. Okada, S. Mayekawa**

Noncompensatory multiple logistic regression model and its application

**C1688: K. Illner, C. Fuchs, F. Theis**

Bayesian blind source separation applied to the lymphocyte pathway

**Session CS56**

**Room: 4**

**Computational statistics III**

*Wednesday 20.08.2014 11:15 - 13:00*

*Chair:* Andreas Alfons

*Organizer:* COMPSTAT 2014

**C1579: H. Cevallos, S. Van Aelst**

Tree-based prediction on incomplete data

**C1650: F. Di Lascio, S. Giannerini, A. Reale**

Imputation of complex dependent data by conditional copulas: analytic versus semiparametric approach

**C1498: A. Charkhi, G. Claeskens, B. Hansen**

Weight choice by minimizing MSE for general likelihood averaging

**C1495: P. Rochet, F. Lavancier**

A general procedure to combine estimators

**C1585: P. Economou, A. Batsidis, G. Tzavelas**

Goodness of fit tests for the lognormal distribution

**Session CS64**

**Room: 5**

**Clustering II**

*Wednesday 20.08.2014 11:15 - 13:00*

*Chair:* Kim De Roover

*Organizer:* COMPSTAT 2014

**C1344: B. Lafuente, J. Vilar**

Time series clustering based on quantile autocovariances

**C1705: I. Batmaz, A. Yetere Kursun, C. Iyigun**

Consensus clustering of time series data

**C1631: F. Durante**

Tail-dependence clustering of financial time series

**C1574: C. Anderson, D. Lee, N. Dean**

Bayesian cluster detection via adjacency modelling

**Session CS81**

**Room: 19**

**Contributions to statistics and optimization in finance II**

*Wednesday 20.08.2014 11:15 - 13:00*

*Chair:* Marguerita Giuzio

*Organizer:* COMPSTAT 2014

**C1450: M. Giuzio, D. Ferrari, S. Paterlini**

A generalized description length approach for sparse and robust index tracking

**C1350: E. Ossola, P. Gagliardini, O. Scaillet**

A diagnostic criterion for approximate factor structure

**C1516: B. Seo, D. Kim**

On singular and spurious solutions in finite mixture models

**C1680: M. Knefati, F. Beninel**

Transfer of semiparametric single index model in binary classification

**C1702: M. Ludwig, F. Audrino, R. Huitema**

An empirical analysis of the Ross recovery theorem

**Parallel session F:** Wednesday 20.08.2014 15:15 - 16:45

**Session IS01 - Invited**

**Room: 3**

**Volatility modelling and forecasting**

*Wednesday 20.08.2014 15:15 - 16:45*

*Chair:* Alessandra Amendola

*Organizer:* Alessandra Amendola

**C1321: J. Rombouts**

Option pricing with asymmetric heteroskedastic normal mixture models

**C1395: F. Audrino, L. Camponovo, C. Roth**

A conservative test for the lag structure of assets realized volatility dynamics

**C1471: A. Amendola, G. Storti**

Combining information at different frequencies in multivariate volatility prediction

**Session OS25 - Organized**

**Room: 4**

**Functional regression models and applications**

*Wednesday 20.08.2014 15:15 - 16:45*

*Chair:* Ana M. Aguilera

*Organizer:* Ana M. Aguilera

**C1390: S. Brockhaus, F. Scheipl, T. Hothorn, S. Greven**

The functional linear array model estimated by boosting

**C1466: M. Wilhelm, L. Sangalli**

Generalized linear models for spatial functional data analysis

**C1407: P. Reiss, L. Huang, H. Chen, S. Colcombe**

Varying-smoother models for functional responses

**C1441: A. Aguilera, M. Aguilera-Morillo**

Linear discriminant analysis based on penalized functional PLS

**Session OS29 - Organized**

**Room: 5**

**Survey sampling**

*Wednesday 20.08.2014 15:15 - 16:45*

*Chair:* Alina Matei

*Organizer:* Alina Matei

**C1406: Y. Berger**

Empirical likelihood confidence intervals for complex sampling designs using R

**C1354: E. Graf**

Variance estimation for regression imputed quantiles and inequality indicators

**C1534: C. Hasler, A. Matei**

Adjustment for nonignorable nonresponse using latent homogeneous response groups

**C1555: B. Hulliger, M. Bill**

Multivariate outliers in incomplete survey data

**Session OS36 - Organized**

**Room: 6**

**Statistics in medicine**

*Wednesday 20.08.2014 15:15 - 16:45*

*Chair:* Valentin Rousson

*Organizer:* Valentin Rousson

**C1393: V. Bremhorst, P. Lambert**

Flexible models for cure interval-censored data

**C1453: I. Locatelli, V. Rousson**

Using an intraclass odds-ratio as an alternative to kappa to assess the inter-rater reliability of binary measurements

**C1427: L. Held, D. Sabanes Bove**

Approximate Bayesian model selection with the deviance statistic

**C1533: A. Chaouch, A. Randriamiharo, V. Rousson**

Showing statistically the existence of disease subtypes using model based clustering: how feasible is it?

**Session CS48**

**Room: 20**

**Contributions to longitudinal data analysis I**

*Wednesday 20.08.2014 15:15 - 16:45*

*Chair:* Anuradha Roy

*Organizer:* COMPSTAT 2014

**C1296: X. Song**

Statistical analysis of multivariate longitudinal data

**C1536: W. Fung**

Robust estimation in joint mean-covariance regression model for longitudinal data

**C1563: H. Sakurai, M. Taguri**

Comparison of block bootstrap testing methods of mean difference for paired longitudinal data

**C1611: J. Li**

Nonparametric dynamic screening system for monitoring longitudinal data

**Session CS14**

**Room: 13**

**Computational statistics IV**

*Wednesday 20.08.2014 15:15 - 16:45*

*Chair:* Paolo Foschi

*Organizer:* COMPSTAT 2014

**C1538: P. Catani, N. Ahlgren**

Finite-sample multivariate tests for ARCH in vector autoregressive models

**C1482: E. Nikolic-Djoric, Z. Lozanov Crvenkovic**

Different approaches to differential entropy estimation

**C1502: J. Durand, Y. Guedon**

Quantifying and localizing state uncertainty in hidden Markov models using conditional entropy profiles

**C1562: P. Bhuyan, A. Dewanji**

Dynamic stress-strength modeling with cumulative stress and strength degradation

**Session CS50**

**Room: 19**

**Contributions to dependence models**

*Wednesday 20.08.2014 15:15 - 16:45*

*Chair:* Piotr Jaworski

*Organizer:* COMPSTAT 2014

**C1358: H. Huang, W. Wang**

Regularized principal component analysis for spatial data

**C1499: R. Verbelen, K. Antonio, G. Claeskens**

Modeling dependence under censoring and truncation using multivariate mixtures of Erlangs

**C1671: P. Fernique, J. Durand, Y. Guedon**

Estimation of discrete partially directed acyclic graphical models in multitype branching processes

**C1281: T. Fan, T. Hsu**

Life tests of series systems under copula based lifetime distributions

**Parallel session G:**

**Thursday 21.08.2014**

**08:45 - 10:00**

**Session OS13 - Organized**

**Room: 6**

**Multiple nonparametric regression**

*Thursday 21.08.2014 08:45 - 10:00*

*Chair:* Joachim Schnurbus

*Organizer:* Joachim Schnurbus

**C1289: J. Racine, H. Tristen**

Nonparametric kernel estimation: an exact parallel kd-tree approach

**C1459: C. Schellhase, F. Spanhel**

Estimation of non-simplified vines using (nonparametric) trivariate copula constructions

**C1430:** J. Schnurbus, H. Haupt

Smoothing matrix analysis for mixed kernel regression

**Session OS22 - Organized**

**Room: 13**

**Statistics in medical imaging: Geometry, inference and computations**

*Thursday 21.08.2014 08:45 - 10:00*

*Chair:* Vic Patrangenaru

*Organizer:* Vic Patrangenaru

**C1527:** S. Huckemann, A. Hartmann, J. Dannemann, O. Laitenberger, C. Geisler, A. Egner, A. Munk

Stochastic deconvolution for drift-estimation in photoactivated nanomicroscopy imaging of microtubulin networks

**C1561:** R. Maitra, W. Chen

Clustering Approaches to Improved Activation Detection in fMRI

**C1608:** V. Patrangenaru, M. Qiu, L. Ellingson

How far is the corpus callosum of an average individual from the corpus callosum of Albert Einstein?

**Session OS23 - Organized**

**Room: 19**

**Statistics in life sciences**

*Thursday 21.08.2014 08:45 - 10:00*

*Chair:* Athanassios Kondylis

*Organizer:* Athanassios Kondylis

**C1369:** S. Tavakoli, V. Panaretos

Dynamics of DNA minicircles in motion via Fourier analysis of functional time series

**C1424:** D. Kraus

Analysis of incomplete functional data

**C1717:** V. Esposito Vinzi

Predictive component-based multi-block path modeling

**Session OS26 - Organized**

**Room: 5**

**Large scale portfolio allocation in a non-elliptical universe** *Thursday 21.08.2014 08:45 - 10:00*

*Chair:* Simon Broda

*Organizer:* Marc Paolella

**C1475:** J. Krause, M. Paolella

A fast and accurate method for value at risk and expected shortfall calculation using the noncentral t distribution

**C1467:** M. Gambacciani, M. Paolella

Asset returns density forecasting with MCD algorithms

**C1442:** S. Broda, M. Paolella, J. Krause

Saddlepoint approximation of expected shortfall for transformed means

**Session OS28 - Organized**

**Room: 4**

**Symbolic/algebraic methods in computational statistics I**

*Thursday 21.08.2014 08:45 - 10:00*

*Chair:* Elvira di Nardo

*Organizer:* Elvira di Nardo

**C1380:** P. Zwiernik

Tree cumulants for latent two-state tree models

**C1392:** E. Riccomagno, C. Fassino, L. Torrente

Performance analysis of an algorithm from computational algebra for implicit regression

**C1410:** H. Wynn

Confidence nets based on finite reflection groups

**Session OS33 - Organized**

**Room: 3**

**Nonparametric methods for high dimensions**

*Thursday 21.08.2014 08:45 - 10:00*

*Chair:* Maria Lucia Parrella*Organizer:* Maria Lucia Parrella**C1349: N. Huang, P. Fryzlewicz**

Large precision matrix estimation via pairwise tilting

**C1670: M. Di Marzio, S. Fensore, A. Panzera, C. Taylor**

Local likelihood estimation for multivariate directional data

**C1660: F. Giordano, S. Lahiri, M. Parrella**

GRID for variable selection in high dimensional regression

**Parallel session H:** Thursday 21.08.2014 11:30 - 13:00**Session IS02 - Invited****Room: 3****Computer intensive methods in statistics of extremes**

Thursday 21.08.2014 11:30 - 13:00

*Chair:* Ivette Gomes*Organizer:* Ivette Gomes**C1324: A. Guillou, C. Dutang, Y. Goegebeur**

Robust and bias-corrected estimation of the coefficient of tail dependence

**C1668: F. Caeiro, M. Gomes**

On the bootstrap methodology for the estimation of the tail sample fraction

**C1557: I. Gomes, F. Caeiro**

Efficiency of partially reduced-bias mean-of-order-p versus minimum-variance reduced-bias extreme value index estimation

**Session OS11 - Organized****Room: 6****Advances and new methodologies in survival and reliability**

Thursday 21.08.2014 11:30 - 13:00

*Chair:* Juan Eloy Ruiz-Castro*Organizer:* Juan Eloy Ruiz-Castro**C1374: I. Bomze, A. Astorino, A. Fuduli, M. Gaudioso**

Robust spherical separation

**C1472: M. Zenga, F. Domma**

The Dagum distribution from a survival analysis point of view

**C1435: L. Azarang, J. de Una-Alvarez**

The jackknife estimate of variance for transition probabilities in the non-markov illness-death model

**C1371: J. Ruiz-Castro**

Preventive maintenance in a complex warm standby system. A transient analysis

**Session OS27 - Organized****Room: 4****Computational challenges in environmental statistics**

Thursday 21.08.2014 11:30 - 13:00

*Chair:* Marc Genton*Organizer:* Marc Genton**C1444: M. Genton**

Visualization of environmental data

**C1347: S. Castruccio, M. Genton**

Emulation of global 3D spatio-temporal temperature: a distributed computing approach to model one billion data points

**C1367: Y. Sun, M. Stein**

Statistically and computationally efficient estimating equations for large spatial datasets

**C1415: R. Huser**

High-order composite likelihood for spatial extremes

**Session OS32 - Organized****Room: 5****Financial time series**

Thursday 21.08.2014 11:30 - 13:00

Chair: Cathy W.S. Chen

Organizer: Cathy W.S. Chen

**C1457:** R. Gerlach, C. Wang

Realized GARCH models incorporating intra-day and realized range data

**C1414:** M. So

A multivariate mixture stochastic covariance model

**C1448:** S. Lee, Y. Lee, C. Chen

Parameter change test for zero-inflated generalized Poisson autoregressive models

**C1454:** C. Chen, R. Gerlach, E. Lin

Bayesian assessment of dynamic quantile forecasts

#### Session CS45

**Room: 19**

**Contributions to copula-based modeling II**

Thursday 21.08.2014 11:30 - 13:00

Chair: Ostap Okhrin

Organizer: COMPSTAT 2014

**C1383:** S. Orso, S. Guerrier, M. Victoria-Feser

Bounded-influence robust estimation of copulas

**C1649:** J. Picek, J. Kysely, T. Simkova

Multivariate L-moment homogeneity test based on copula modeling

**C1662:** S. Bhattacharya, V. Rajan

Unsupervised learning using Gaussian mixture copula model

**C1669:** S. Kuvattana, S. Sukparungsee, P. Busababodhin, Y. Areepong

Efficiency of bivariate copula on the Shewhart control chart

#### Session CS47

**Room: 13**

**Contributions to longitudinal data analysis II**

Thursday 21.08.2014 11:30 - 13:00

Chair: Juan Romo

Organizer: COMPSTAT 2014

**C1653:** R. Buergin, G. Ritschard

Tree-based algorithm for learning moderation in linear regression models

**C1666:** S. Pandolfi, F. Bartolucci, G. Montanari

A comparison of some estimation methods for latent Markov models with covariates

**C1399:** M. Cabral, M. Goncalves

A simulation study to assess statistical approaches for longitudinal count data

**C1330:** M. Goncalves, M. Cabral

Incomplete longitudinal binary responses in marginal model

#### Session CS52

**Room: 20**

**Contributions to computational methods in finance II**

Thursday 21.08.2014 11:30 - 13:00

Chair: Robert Kunst

Organizer: COMPSTAT 2014

**C1357:** L. Soegner, J. Jaroslava

Method of moments estimation and affine term structure models

**C1559:** N. Kunitomo, H. Misaki

The SIML estimation of Integrated covariances and hedging coefficient under micro-market noise and random sampling

**C1630:** L. Mercuri, S. Iacus

Estimation of levy carma models in the yuima package: application on the financial time series

**C1576:** B. Siliverstovs

Keeping a finger on the pulse of the economy: nowcasting Swiss GDP in real-time squared

**Parallel session I:**

Thursday 21.08.2014

14:00 - 15:45

<b>Session TS2</b>	<b>Room: 3</b>
<b>Tutorial 2</b>	<i>Thursday 21.08.2014 14:00 - 15:45</i>
<i>Chair: Gil Gonzalez-Rodriguez</i>	<i>Organizer: COMPSTAT 2014</i>
<b>C1718: S. Van Aelst</b>	
Robust estimation, inference and prediction	
<b>Session OS38 - Organized</b>	<b>Room: 20</b>
<b>The YSG-IASC session: robust methods in regression analysis</b>	<i>Thursday 21.08.2014 14:00 - 15:45</i>
<i>Chair: Han-Ming Wu</i>	<i>Organizer: Han-Ming Wu</i>
<b>C1560: Y. Terada</b>	
Asymptotic properties of factorial k-means clustering	
<b>C1396: V. Oellerer, C. Croux</b>	
Robust regression in high-dimensions: sparse S and sparse MM	
<b>C1507: A. Alfons, C. Croux, S. Gelper</b>	
An algorithm for robust groupwise least angle regression	
<b>C1523: H. Wu</b>	
Cumulative slicing estimation for multiple nonlinear manifolds learning	
<b>C1724: K. Lee, Y. Chen</b>	
Robust Bayesian variable selection to mixture regression models	
<b>Session CS18</b>	<b>Room: 19</b>
<b>Bayesian methods</b>	<i>Thursday 21.08.2014 14:00 - 15:45</i>
<i>Chair: Leonhard Held</i>	<i>Organizer: COMPSTAT 2014</i>
<b>C1365: S. Fu, G. Corani</b>	
A hierarchical Bayesian approach to negative binomial regression	
<b>C1412: C. Gutierrez Perez, M. Gonzalez Velasco, R. Martinez Quintana</b>	
ABC methodology for a Y-linked two-sex branching model	
<b>C1572: D. Chakrabarty</b>	
New state-space modelling based inverse Bayesian learning, in the absence of training data	
<b>C1694: C. Chanialidis, L. Evers, T. Neocleous</b>	
Bayesian density regression for count data	
<b>C1308: Y. Chen, C. Huang</b>	
Bayesian bioequivalence test based on robust linear mixed effect model for bioavailability measures	
<b>Session CS68</b>	<b>Room: 6</b>
<b>Variable selection</b>	<i>Thursday 21.08.2014 14:00 - 15:45</i>
<i>Chair: Francesco Giordano</i>	<i>Organizer: COMPSTAT 2014</i>
<b>C1315: S. Mueller, T. Garcia, R. Carroll</b>	
Structural and hierarchical variable selection using weighted regularization methods	
<b>C1491: H. Matsui</b>	
Variable selection in multivariate linear models for functional data	
<b>C1388: W. Rejchel</b>	
High-dimensional problems in ranking (ordinal regression) with Lasso	
<b>C1320: P. Teisseyre, J. Mieliaczuk</b>	
Model selection for misspecified logistic regression	

**C1637: H. Park, Y. Shiraishi, S. Imoto, S. Miyano**

Adaptive penalized logistic regression for uncovering biomarker

**Session CS70**

**Room: 4**

**Econometric models**

*Chair:* Joachim Schnurbus

*Thursday 21.08.2014 14:00 - 15:45*

*Organizer:* COMPSTAT 2014

**C1700: E. Zahnd, V. Rousson**

Improved parameter estimation and predictions using the generalized least squares in the presence of heteroskedasticity

**C1501: S. Sperlich, R. Theler**

Endogeneity and varying coefficient models

**C1513: M. Kyriacou, M. Chambers**

Jackknife estimation in the presence of a near-unit root

**C1476: S. Ranjbar, S. Sperlich**

Fancy non-(non)-linearities in applied economics

**C1360: A. Wolfe, W. Grabowski**

An exchange rate model with market pressures and contagion effect

**Session CS57**

**Room: 13**

**Computational statistics V**

*Chair:* Veronika Czellar

*Thursday 21.08.2014 14:00 - 15:45*

*Organizer:* COMPSTAT 2014

**C1617: P. Mozgunov**

Application of Kalman Filter with alpha-stable distribution

**C1426: G. Roussellet, A. Monfort, J. Renne**

A quadratic Kalman filter

**C1661: H. Nassar, B. Djehiche (canceled)**

A functional Hodrick Prescott filter

**C1678: D. Stasi, K. Sadeghi, A. Rinaldo, S. Petrovic, S. Fienberg**

Beta models for random hypergraphs with a given degree sequence

**C1658: D. Ishii, R. Sawae, Y. Mori**

Enumeration and statistics of the prime pairs computation

**Session CS77**

**Room: 5**

**Methodological statistics II**

*Chair:* Keith Knight

*Thursday 21.08.2014 14:00 - 15:45*

*Organizer:* COMPSTAT 2014

**C1625: E. Pelle, D. Hessen, P. van der Heijden**

Log-linear multidimensional Rasch model for capture-recapture

**C1602: K. Chatterjee, D. Mukherjee**

Estimating the homogeneous population size via empirical Bayes method in a complex dual-record system

**C1698: Z. Fabian**

Score function of distribution and heavy tails

**C1632: E. Kabzinska, Y. Berger**

Empirical Likelihood approach to combining information from multiple surveys

**C1352: T. Wu, C. Hsu, H. Chen, H. Yu**

Root n estimates of vectors of integrated density partial derivative functionals

**Parallel session J:**

*Thursday 21.08.2014*

*16:15 - 18:00*

<b>Session OS39 - Organized</b>	<b>Room: 4</b>
<b>Dimension reduction and classification</b>	<i>Thursday 21.08.2014 16:15 - 18:00</i>
<i>Chair:</i> Patrick Groenen	<i>Organizer:</i> Patrick Groenen
<b>C1684: P. Schoonees, P. Groenen</b>	
Two-way clustering with least-squares matrix decompositions	
<b>C1672: R. de Vlaming, P. Groenen</b>	
Genetic risk scores using ridge regression	
<b>C1652: M. van de Velden, A. Iodice D'Enza, F. Palumbo</b>	
Cluster correspondence analysis	
<b>C1636: P. Groenen, G. van den Burg</b>	
An extended comparison of multiclass support vector machines	
<b>C1348: G. van den Burg, P. Groenen</b>	
GenSVM: a general multiclass support vector machine	
<b>Session OS34 - Organized</b>	<b>Room: 5</b>
<b>Symbolic data analysis in the big data age</b>	<i>Thursday 21.08.2014 16:15 - 18:00</i>
<i>Chair:</i> Javier Arroyo	<i>Organizer:</i> Javier Arroyo and Antonio Irpino
<b>C1470: P. Brito, M. Ichino</b>	
The data accumulation graph (DAG): visualization of high dimensional complex data	
<b>C1464: J. Nakano, Y. Yamamoto, N. Shimizu, T. Fujiwara</b>	
Aggregated symbolic data description including real and categorical variables	
<b>C1460: M. Mizuta, Y. Matsui</b>	
Analysis of sensing data with moving functional methods	
<b>C1708: C. Drago, C. Lauro, G. Scepi</b>	
Model based symbolic description for big data analysis	
<b>C1706: Y. Matsui, M. Mizuta</b>	
SDA for mixed-type data and its application to analysis of environmental radio activity level data	
<b>Session CS74</b>	<b>Room: 13</b>
<b>Time series</b>	<i>Thursday 21.08.2014 16:15 - 18:00</i>
<i>Chair:</i> Jeroen Rombouts	<i>Organizer:</i> COMPSTAT 2014
<b>C1283: J. De Klerk</b>	
Time series outlier detection using singular spectrum analysis and robust principal component analysis	
<b>C1336: K. Kamijo</b>	
Analysis for multivariate time series using local fractal dimension in n-dimensional space	
<b>C1639: C. Derquenne</b>	
Modelling multivariate time series by structural equations modelling and segmentation approach	
<b>C1586: R. Kunst</b>	
A combined nonparametric test for seasonal unit roots	
<b>C1549: T. Tharanganie, R. Hyndman</b>	
Methods for estimating a time series of densities	
<b>Session CS71</b>	<b>Room: 6</b>
<b>Regression models II</b>	<i>Thursday 21.08.2014 16:15 - 18:00</i>
<i>Chair:</i> Stefan Sperlich	<i>Organizer:</i> COMPSTAT 2014

**C1518:** T. Misumi, S. Konishi

Model selection for functional mixed model via Gaussian process regression

**C1558:** J. Wishart

Data-driven wavelet resolution choice in multichannel box-car deconvolution with long memory

**C1356:** R. Navratil

Regression rank scores and testing of heteroscedasticity

**C1582:** I. Charlier, D. Paindaveine, J. Saracco

Conditional quantile estimation using optimal quantization: a numerical study

**C1317:** Y. Huang, C. Wen, Y. Hsu

The extensively corrected score for measurement error models

**Session CS82**

**Room: 20**

**Applied statistics and data analysis III**

*Thursday 21.08.2014 16:15 - 18:00*

*Chair:* Ludger Evers

*Organizer:* COMPSTAT 2014

**C1619:** B. Fichet

Combining sub(up)-approximations of different type to improve a solution

**C1723:** R. Sadika, M. Summa Gettler, S. Benammou

Joint analysis of closed and-open ended questions in a survey about the Tunisian revolution

**C1664:** A. Labenne, M. Chavent, V. Kuentz-Simonet, S. Jerome

Variable selection to construct indicators of quality of life for data structured in groups

**C1610:** K. Okusa, T. Kamakura

Statistical registration of frontal view gait silhouette with application to gait analysis

**C1551:** F. Fouedjio, N. Desassis, T. Romary, J. Rivoirard

Estimation of space deformation models for non-stationary random functions

**Session CS59**

**Room: 19**

**Computational statistics VI**

*Thursday 21.08.2014 16:15 - 18:00*

*Chair:* Jeffrey S. Racine

*Organizer:* COMPSTAT 2014

**C1612:** C. Gatu, M. Cosbuc, E. Kontoghiorghes

A computational efficient strategy for estimating the block recursive simultaneous equations model

**C1497:** J. Chacon, T. Duong

Recursive computation of higher order multivariate Gaussian density derivatives

**C1573:** C. Mante

Density and Distribution Function estimation through iterates of fractional Bernstein Operators

**C1394:** S. Wilson, T. Mai, P. Cogan, A. Bhattacharya, O. Robles Sanchez, L. Aslett, S. ORiordain

Using storm for scaleable sequential statistical inference

**C1537:** Y. Mori, M. Kuroda, M. Iizuka, M. Sakakihara

Performance of acceleration of ALS algorithm in nonlinear PCA

**Parallel session K:**

*Friday 22.08.2014*

*9:00 - 10:45*

**Session CS40**

**Room: 6**

**Contributions to statistics of extreme values II**

*Friday 22.08.2014 9:00 - 10:45*

*Chair:* Ivette Gomes

*Organizer:* COMPSTAT 2014

**C1416:** S. Wager, W. Fithian

Semiparametric exponential families for heavy-tailed data

**C1428:** C. Bormann, M. Schienle, J. Schaumburg

A test for the portion of bivariate dependence in multivariate tail risk

**C1641: M. Schindler**

Study on the choice of regression quantile threshold in a POT model

**C1333: I. Serra, J. Castillo, M. Padilla**

Comparison of techniques for extreme values using financial data

**C1644: C. Neves, I. Fraga Alves**

Estimation of the right endpoint of a light tailed distribution

**Session CS49**

**Room: 13**

**Contributions in survival and reliability**

*Friday 22.08.2014 9:00 - 10:45*

*Chair:* Polychronis Economou

*Organizer:* COMPSTAT 2014

**C1303: S. Tseng**

Joint modeling of laboratory and field data with application to warranty prediction

**C1339: C. Kustosz, C. Mueller**

Simplicial depth for growth models in construction engineering

**C1496: L. Dirick, G. Claeskens, A. Vasnev, B. Baesens**

Using mixture cure models with unobserved heterogeneity for the analysis of credit loan data.

**C1359: N. Hsu, S. Tseng, M. Chen**

Adaptive warranty prediction for highly reliable products

**C1305: J. Eustaquio, E. Barrios**

Nonparametric hypothesis testing for clustered survival model

**Session CS73**

**Room: 3**

**Robust methods**

*Friday 22.08.2014 9:00 - 10:45*

*Chair:* Anthony C. Atkinson

*Organizer:* COMPSTAT 2014

**C1335: P. Rodrigues, A. Monteiro, V. Lourenco**

Robust singular value decomposition with application to statistical genetics

**C1368: G. Tarr, S. Mueller, N. Weber**

Robust estimation of precision matrices under cellwise contamination

**C1620: C. de Porres, E. Ronchetti**

Robust moment selection in GMM

**C1621: M. Ernst, G. Haesbroeck**

Comparison of robust detection techniques for local outliers in multivariate spatial data

**C1622: R. Dyckerhoff, P. Mozharovskyi**

Exact computation of the halfspace depth in arbitrary dimension

**Session CS72**

**Room: 4**

**Regression models III**

*Friday 22.08.2014 9:00 - 10:45*

*Chair:* Rosalba Radice

*Organizer:* COMPSTAT 2014

**C1554: K. Bulteel, F. Tuerlinckx, E. Ceulemans**

To scale and how to scale: Interpreting the edges of a dynamic network

**C1580: M. Vervloet, W. Van den Noortgate, E. Ceulemans**

A further inspection of the role of the alpha parameter in principal covariates regression

**C1385: P. Kumar, F. Kashanchi**

Linear regression models using L1, L2 and L infinity norms

**C1623: J. Tsuchida, H. Yadohisa**

Partial least-squares logistic regression using F-measure

**C1481: M. Moeyaert, W. Van den Noortgate**

Combining several types of single-case experimental designs using three-level meta-analytic models

**Session CS75**

**Room: 5**

**Multivariate statistics III**

*Friday 22.08.2014 9:00 - 10:45*

*Chair:* Simon Wilson

*Organizer:* COMPSTAT 2014

**C1597: M. Yamamoto**

Functional multiple-set canonical correlation analysis for square integrable stochastic processes

**C1535: N. Taneichi, Y. Sekiya, J. Toyama**

Bartlett adjustment of deviance statistic for three types of binary response models

**C1520: S. Lubbe**

A quadratic discriminant analysis biplot

**C1541: E. Rousseaux, G. Ritschard**

An association rule miner for unbalanced data based on artificial bee colony optimization

**Session CS78**

**Room: 19**

**Graphical tools and visualization**

*Friday 22.08.2014 9:00 - 10:45*

*Chair:* Alicia Nieto-Reyes

*Organizer:* COMPSTAT 2014

**C1326: C. Albers, J. Gower**

A contribution to the visualisation of three-way arrays

**C1355: F. Phoa**

A graphical user interface platform of the stepwise response refinement screener for screening experiments

**C1577: W. Chantarangsi, W. Liu, F. Bretz, A. Hayter, S. Kiatsupaibul**

Q-Q plots with confidence

**C1686: T. Kubota, H. Tsubaki**

Visualization for reason-specified suicide data in Japan

**C1712: Y. Akimoto, T. Yanagimoto, T. Kamakura**

Advantages of molding results in data analysis

**Parallel session L:**

*Friday 22.08.2014*

**11:15 - 12:45**

**Session IS03 - Invited**

**Room: 3**

**Statistics and optimization in finance**

*Friday 22.08.2014 11:15 - 12:45*

*Chair:* Sandra Paterlini

*Organizer:* Sandra Paterlini

**C1387: C. Czado**

Vine copulas: statistical inference and model selection

**C1447: D. Maringer, S. Deininger**

Estimating time series models with heuristic methods: the case of economic parity conditions

**C1469: S. Paterlini, B. Fastrich, P. Winker**

Penalized least squares for optimal sparse portfolio selection

**Session OS54 - Organized**

**Room: 5**

**Symbolic/algebraic methods in computational statistics II**

*Friday 22.08.2014 11:15 - 12:45*

*Chair:* Elvira di Nardo

*Organizer:* Elvira di Nardo

**C1677: C. Rose, M. Smith**

Everything you always wanted to know about moments (but were afraid to derive)

**C1436: S. Petrovic, E. Gross, D. Stasi**

Goodness of fit for log-linear network models: dynamic Markov bases using hypergraphs

**C1378: C. Uhler**

Algebraic geometry meets causal inference

**C1353: E. Di Nardo**

Taking advantage of a symbolic representation of non-central Wishart distributions

**Session OS46 - Organized**

**Room: 4**

**Multi-set and multi-way models**

*Friday 22.08.2014 11:15 - 12:45*

**II**

*Chair:* Eva Ceulemans

*Organizer:* Marieke Timmerman , Eva Ceulemans , Alwin Stegeman

**C1421: E. Acar**

Structure-revealing unsupervised data fusion based on coupled matrix and tensor factorizations

**C1434: M. Sorensen, L. De Lathauwer**

Multiset analysis based on coupled tensor decompositions

**C1439: T. Wilderjans, E. Ceulemans**

Clusterwise parafac with varying complexities in latent variable structure

**C1510: P. Comon, S. Sahnoun**

Tensor polyadic decomposition for antenna array processing

**Session OS37 - Organized**

**Room: 6**

**Mixture modeling of longitudinal data**

*Friday 22.08.2014 11:15 - 12:45*

*Chair:* Andre Berchtold

*Organizer:* Andre Berchtold

**C1452: Z. Taushanov**

Finding Likelihood optimum by trials

**C1431: D. Bolano, A. Berchtold**

Hidden mixture distribution modeling: model selection and computation

**C1429: P. Adamopoulos, A. Berchtold, G. Ritschard**

DCMM for latent group identification with longitudinal data

**C1419: O. Maitre**

March: an R implementation of markovian models

**Session OS83 - Organized**

**Room: 20**

**Application of extreme value theory in computing systems**

*Friday 22.08.2014 11:15 - 12:45*

*Chair:* Petar Radojkovic

*Organizer:* Petar Radojkovic and Francisco Cazorla Almeida

**C1727: C. Lo**

Rationale to the application and tailoring of EVT in context

**C1726: F. Cazorla**

EVT in real-time systems: i.i.d properties emanating from the experimentation

**C1728: T. Vardanega**

EVT in real-time systems: i.i.d properties emanating from the computing system

**C1725: P. Radojkovic**

EVT in non-real-time systems: Tackling NP-complete computer-science problems

**Session CS20**

**Room: 19**

**Applied statistics and data analysis IV**

*Friday 22.08.2014 11:15 - 12:45*

*Chair:* Stan Azen

*Organizer:* COMPSTAT 2014

**C1361: V. Hofer**

Compositional data approach for statistical process control of railway ballast

**C1364:** J. Shiao, Y. Wu

Nonparametric profile monitoring and fault diagnosis via functional data analysis

**C1379:** S. Mirzaei, D. Sengupta

Nonparametric estimation of menarcheal age distribution based on recall data

**C1603:** M. Cannas, B. Arpino

Propensity score matching with clustered data: an application to birth register data

### Session CS69

**Room: 13**

#### Count data

*Friday 22.08.2014 11:15 - 12:45*

*Organizer: COMPSTAT 2014*

**C1329:** J. Vogler, R. Liesenfeld, J. Richard

Analysis of discrete dependent variable models with spatial correlation

**C1463:** E. Cantoni, J. Mills Flemming, A. Welsh

Modelling and predicting clustered count data with excess zeros

**C1628:** W. Aeberhard, E. Cantoni, S. Heritier

Maximum empirical likelihood estimation of mixing distributions for overdispersed count data modelling

**C1633:** C. Kleiber, A. Zeileis

Count data regression with excess zeros - a flexible framework using the GLM toolbox