Program

The R User Conference 2006

2nd International R User Conference
June 15–17 2006, Vienna, Austria

Program Overview

	Thursday, June 15	Friday, June 16	Saturday, June 17
	08:00-08:45 Registration 08:45-09:00 Opening		
09:00-10:30	**Keynote Lectures** (Room: Audimax) Chair: Paul Murrell John Chambers *A History of S and R (with some questions for the future)* Peter Rossi *Bayesian Statistics with Marketing Data in R*	**Keynote Lectures** (Room: Audimax) Chair: Luke Tierney Jan de Leeuw *R in Psychometrics and Psychometrics in R* Brian Everitt *Cluster Analysis: Past, Present and Future*	**Keynote Lectures** (Room: Audimax) Chair: Friedrich Leisch Trevor Hastie *Data Mining in R: Path Algorithms* Paul Murrell *Can R Draw Graphs?*
10:30-11:00	Coffee Break	Coffee Break	Coffee Break
11:00-12:30	**useR! Kaleidoscope** **Thursday 1** (Room: HS 0.1) Chair: Simon Jackman **Thursday 2** (Room: HS 0.2) Chair: Thomas Lumley **Thursday 3** (Room: HS 0.3) Chair: Anthony Rossini	**useR! Kaleidoscope** **Friday 1** (Room: HS 0.1) Chair: Martyn Plummer **Friday 2** (Room: HS 0.2) Chair: Duncan Murdoch **Friday 3** (Room: HS 0.3) Chair: Gerhard Tutz	**useR! Kaleidoscope** **Saturday** (Room: Audimax) Chair: Douglas Bates
12:30-13:00	Lunch	Lunch	Coffee Break
13:00-14:00			**Panel discussion** (Room: Audimax) Chair: Kurt Hornik
14:00-14:45	**Keynote Lecture** (Room: Audimax) Chair: Martin Mächler Stefano Iacus, Uwe Ligges and Simon Urbanek *R on Different Platforms: The useRs' Point of View*	**Keynote Lecture** (Room: Audimax) Chair: Peter Dalgaard John Fox and Sanford Weisberg *UseR! for Teaching*	
14:45-15:00	Coffee Break	Coffee Break	
15:00-18:30	**useR! Focus: Spotlights & Forum** *Bayesian Methods & Graphical Models* (Chair: Andrew Martin, Rooms: HS 0.1, Aula 1) *Connectivity, Web-based Computing and Parallelization* (Chair: Ramón Díaz-Uriarte, Rooms: HS 0.2, Aula 2) *Finance & Applied Time Series Modeling* (Chair: Dirk Eddelbuettel, Rooms: HS 0.3, Aula 3) *Applied & Medical Statistics (Chair: Frank Harrell, Rooms: HS 0.4, Festsaal 1)* *Ecology & Spatial Statistics* (Chair: Roger Bivand, Rooms: HS 0.5, Atrium) *Machine Learning* (Chair: Balasubramanian Narasimhan, Rooms: HS 0.7, Festsaal 2)	**useR! Focus: Spotlights & Forum** *Teaching & User Interfaces* (Chair: Uwe Ligges, Rooms: HS 0.1, Aula 1) *Visualization (Chair: Antony Unwin, Rooms: HS 0.2, Aula 2)* *Econometrics & Social Science* (Chair: Roger Koenker, Rooms: HS 0.3, Aula 3) *Omic Statistics: Genomics and Proteomics* (Chair: Axel Benner, Rooms: HS 0.4, Festsaal 1) *Business Analytics* (Chair: Peter Rossi, Rooms: HS 0.5, Atrium) *Robust Statistics* (Chair: Claudio Agostinelli, Rooms: HS 0.7, Festsaal 2)	
15:00-16:30	**Spotlights** (Rooms: HS 0.1-0.5, 0.7)	**Spotlights** (Rooms: HS 0.1-0.5, 0.7)	
16:30-16:45	Break	Break	
16:45-18:30	**Discussion and Exhibition Forum** (Rooms: Aula 1-3, Festsaal 1-2, Atrium)	**Discussion and Exhibition Forum** (Rooms: Aula 1-3, Festsaal 1-2, Atrium)	
Evening	Cocktail Reception	Conference Dinner	

Thursday, June 15

useR! Kaleidoscope Sessions

Thursday 15 11:00-12:30	**Kaleidoscope: Thursday 1** (Room: HS 0.1) Micah Altman, Jeff Gill and Michael McDonald *R Modules for Accurate and Reliable Statistical Computing, Perturb package* John M. Chambers, David A. James, Diane Lambert and Scott Vander Wiel *Computation and Aggregation of Quantiles from Data Streams* Rob Hyndman *Automatic time series forecasting* Christian Kleiber and Achim Zeileis *Applied Econometrics with R* Stefan Evert and Marco Baroni *ZipfR: Working with words and other rare events in R*
Thursday 15 11:00-12:30	**Kaleidoscope: Thursday 2** (Room: HS 0.2) Zubin Dowlaty, Dean Mao and Simon Urbanek *Enterprise Automatons with R* Douglas Wood, David Chang, Solomon Henry and Balasubramanian Narasimhan *Using R as a web service* Philippe Grosjean *Collaborative writing of R documentation using a Wiki* Tobias Wichtrey, Alexander Gouberman, Martin Theus and Simon Urbanek *iPlots 2.0* Hadley Wickham *An implementation of the grammar of graphics in R: ggplot*
Thursday 15 11:00-12:30	**Kaleidoscope: Thursday 3** (Room: HS 0.3) Heather Turner and David Firth *gnm: A Package for Generalized Nonlinear Models* Peter Dalgaard *Repeated measures tools for multivariate linear models* Gregory Warnes, Max Kuhn and Jim Rogers *Open Source Software in Pharmaceutical Research* Mike Smith, John Marioni, Natalie Thorne and Simon Tavaré *snapCGH (segmentation, normalisation and processing of arrayCGH data) and methods for combining with gene expression information* Alessandra R. Brazzale *Applied Asymptotics in R*

useR! Focus Sessions

Thursday 15 15:00-18:30	**Bayesian Methods and Graphical Models** (Spotlights: HS 0.1, Forum: Aula 1) Martyn Plummer *Bayesian Modeling in R with JAGS* Massimiliano Mascherini *MASTINO: A suite of R functions to learn Bayesian Networks from data.* Luca La Rocca, Jens Henrik Badsberg and Claus Dethlefsen *The giRaph package for graph representation in R* Giovanni Petris *Bayesian analysis of Dynamic Linear Models in R*
	Markus Kalisch *pcalg: Estimating and visualizing high-dimensional dependence structures using the PC-algorithm* Andrew Thomas *Extending BRugs* Ravi Varadhan, Christophe Roland and Hormuzd Katki *Accelerating Any EM Algorithm Without Sacrificing Simplicity and Stability* Regina Tüchler and Sylvia Frühwirth-Schnatter *Bayesian Covariance Selection in Hierarchical Linear Mixed Models* Yu-Sung Su *Applied Bayesian Multilevel Modeling: Remittances and Political Liberalization in the Developing Countries* David Lindelöf *Integrating R in an advanced buildin control system*

Thursday 15 15:00-18:30	**Connectivity, Web-based Computing and Parallelization** (Spotlights: HS 0.2, Forum: Aula 2) Jeffrey Horner *Using R/Apache as the Statistical Engine for Web Applications* Tom Short and Philippe Grosjean *Online Applications with Rpad* Justin Harrington and Matias Salibian-Barrera *Adventures in High Performance Computing and R: Going Parallel* Nick Carriero, J. Lai, Martin Schultz, S. Weston and Greg Warnes *Parallel Computing in R using NetWorkSpaces*
	Tim F. Liao *Using R as a Wrapper in Simulation Studies* Angelo Mineo and Alfredo Pontillo *Using R via PHP: R-php* Seisho Sato *Web Decomp and E-Decomp - Time Series Analysis using R* Ramon Díaz-Uriarte, Andres Cañada, Edward Morrissey and Oscar Rueda *Asterias: An example of using R in a web-based bioinformatics suite of tools*
Thursday 15 15:00-18:30	**Finance and Applied Time Series Modeling** (Spotlights: HS 0.3, Forum: Aula 3) Tomoaki Nakatani and Timo Teräsvirta *Testing volatility interactions in a constant conditional correlation GARCH model* Harald Schmidbauer and Vehbi Sinan Tunalioglu *mgarch: A Package for the Analysis of Multivariate GARCH Models* Thomas Jakobsen and Jeffrey Todd Lins *Sequential Monte Carlo Methods in R* Giulio Mignola and Roberto Ugoccioni *Statistical Approach to Operational Risk Management*
	Stefano Iacus and Davide La Torre *Iterated function system and simulation of Brownian motion* Lucas Julian Carbonaro *Studies on financial time series analysis* Javier López-de-Lacalle *The uroot and partsm R-Packages: Some Functionalities for Time Series Analysis* Svetlana Unkuri *Automated Lag Order Selection and Forecasting in VAR modeling* Robert Ferstl *Term structure and credit spread estimation with R* Jeffrey Lins and Thomas Jakobsen *Markov Decision Processes, Dynamic Programming, and Reinforcement Learning in R*
Thursday 15 15:00-18:30	**Applied and Medical Statistics** (Spotlights: HS 0.4, Forum: Festsaal 1) Zdenek Valenta *Estimating survival from Gray's flexible model* Ben B. Hansen *The Optmatch Package: Flexible, Optimal Matching for Observational Studies* Juha Karvanen *Visualizing covariates in proportional hazards model using R* Andrea Konnert *LabNetAnalysis - An instrument for the analysis of data from laboratory networks based on RExcel*
	Gemechis Dilba, Frank Schaarschmidt and Ludwig A. Hothorn *A Package for Inference about Ratios of Normal Means* Pierre-Alois Beitinger, Romain Beitinger, Stephany Fulda and Thomas-Christian Wetter *R in clinical practice - summarizing pharmacological data* Shusaku Tsumoto and Yuko Tsumoto *Construction of Statistical Models for Hospital Management* Elena Kulinskaya, Stephan Morgenthaler and Robert G. Staudte *Calibrating the evidence in experiments with applications to meta-analysis* Jake Bowers and Ben Hansen *The ritools package: Tools for Exact and Randomization Inference* Tim Hesterberg *Resampling Libraries in S-PLUS and R*
Thursday 15	**Ecology and Spatial Statistics** (Spotlights: HS 0.5, Forum: Atrium)

15:00-18:30	Philippe Grosjean, Richard Hillary, Ernesto Jardim, Laurie Kell, Iago Mosqueira, Jan Jaap Poos, Robert Scott and Hunter S. Thompson *Fisheries modelling in R: The FLR (Fisheries Library in R) project* Thomas Petzoldt, Karsten Rinke and Louis Kates *Population ecology modelling with R: A comparison of object oriented approaches* Daniel Doktor *Spatial and statistical modelling of phenological data* T. Laurent, A. Ruiz-Gazen, and C. Thomas-Agnan *GEOXP: An R package for interactive exploratory spatial data analysis*
	Vojtech Janousek, Vojtech Erban and Colin Farrow *Using the R language for graphical presentation and interpretation of compositional data in mineralogy: Introducing the package GCDkit-Mineral* Rudolf Dutter *Data Analysis System with Graphical Interface* Norbert Solymosi, Andrea Harnos, Jenő Reiczigel and Ferenc Speiser *RpostGIS an R-library for using PostGIS spatial structures and functions* A. Pedro Duarte Silva, Jorge Cadima, Manuel Minhoto and Jorge Orestes Cerdeira *Subselect0.99: Selecting variable subsets in multivariate linear models* Lisbeth Riis and Mikkel Grum *Using R to Reduce Pesticide Usage in the Horticultural Industry* Keiji Osaki *Spatial characteristics of vegetation index map in urban area derived by variogram analysis*
Thursday 15 15:00-18:30	**Machine Learning** (Spotlights: HS 0.7, Forum: Festsaal 2) Geoffrey Matthews and Robin Matthews *Riffle: An R Package for Nonmetric Clustering* Ralf Seger and Antony Unwin *Managing Large Sets Of Models* Carolin Strobl, Achim Zeileis, Anne-Laure Boulesteix and Torsten Hothorn *Variable Selection Bias in Classification Trees and Ensemble Methods* Marlene Müller *KernGPLM - A Package for Kernel-Based Fitting of Generalized Partial Linear and Additive Models*
	Harald Binder *Comparison of approaches for fitting generalized additive models* Stefan Neubauer and Georg Dorffner *Neural network algorithms and related models* Romain François and Florent Langrognet *Double Cross Validation for Model Based Classification* Eduardo San Miguel *3D Semantic Knowledge Retrieval* Clara Cordeiro, Alexandra Machás and Manuela Neves *Missing Data, PLS and Bootstrap: A Magical Recipe?*

Friday, June 16

useR! Kaleidoscope Sessions

Friday 16 11:00-12:30	**Kaleidoscope: Friday 1** (Room: HS 0.1) Martin Mächler and Andreas Ruckstuhl *Robust Statistics Collaborative Package Development: 'robustbase'* Claudio Agostinelli *Robust Estimation for Circular Data using R* Kevin Quinn and Andrew Martin *Applied Bayesian Inference in R using MCMCpack* Susan Thomas and Shobhana Vyas *Bringing transparency to commodity markets in India: A real-world mission-critical deployment of R* Patrick Burns *Using R to Evaluate Trading Strategies*
Friday 16 11:00-12:30	**Kaleidoscope: Friday 2** (Room: HS 0.2) Kosuke Imai, Gary King and Olivia Lau *A Unified User Interface for Single and Multi-Equation Models (aka "Zelig: Everyone's Statistical Software")* Thomas Baier, Richard Heiberger, Erich Neuwirth and Wilfried Grossmann *Using R for teaching statistics to nonmajors: Comparing experiences of two different approaches* François Husson and Sébastien Lê *SensoMineR: A package for sensory data analysis with R* Pedro Andrade Neto and Paulo Justinano Junior *aRT: R-TerraLib API* Tim Hesterberg and Chris Fraley *Least Angle Regression*
Friday 16 11:00-12:30	**Kaleidoscope: Friday 3** (Room: HS 0.3) Sören Sonnenburg, Fabio De Bona and Gunnar Rätsch *SHOGUN - A Large Scale Machine Learning Toolbox* Axel Benner *Statistical Learning for Analyzing Functional Genomic Data* Ron Wehrens, Egon Willighagen, Willem Melssen and Lutgarde Buydens *Supervised Self-Organising Maps* Göran Broström *A fixed effects approach to GLMs with clustered data* Mikis Stasinopoulos, Bob Rigby and Popi Akantziliotou *The generalized additive model for location, scale and shape*

useR! Focus Sessions

Friday 16 15:00-18:30	**Teaching and User Interfaces** (Spotlights: HS 0.1, Forum: Aula 1) Dirk Eddelbuettel *Use R fifteen different ways: R front-ends in Quantian* Adrian Bowman and Ewan Crawford *rpanel: Simple interactive controls for R functions using the tcltk package* Hutcha Sriplung, Edward McNeil, Apiradee Lim and Naratip Junsakul *R-ICE - A Modular R GUI* Rafael Pino Mejías and María Dolores Cubiles de la Vega *Teaching the Theory of Information and Coding with R*
	Vincent Goulet *Introduction to S programming: A teaching experience and a manual* Sigbert Klinke, Sibylle Schmerbach and Olga Troitschanskaia *Integration of R into Wikis* Mario Gellrich, Rudolf Gubler, Andreas Papritz and Andreas Schönborn *SimSurvey - An R-based E-learning tool for geo-statistical analyses* Pin Ng *RXL - A Free Excel Add-in for Introductory Business Statistics* Pascale Voirin, Omar Abou Khaled and Tadeusz Senn *R as integrated engine in blended learning environment* Gunther Maier *Simple-R - A Windows-based interface to R for basic statistics*

Friday 16 15:00-18:30	**Visualization** (Spotlights: HS 0.2, Forum: Aula 2) John Emerson, Walton Green, Avi Feller and John Hartigan *SparcMats and Generalized Pairs Plots* Ching-Fan Sheu and Cheng-Te Chen *Turing Output of IRT Data Analysis into Graphs with R* Gordon Blunt *Using Grid Graphics to produce linked micromap plots of large financial datasets* Heike Hofmann, Karen Kafadar and Hadley Wickham *Letter-Value Box Plots: Adjusting Box Plots for Large Data Sets*
	Jussi Klemelä *Visualization of multivariate functions, sets, and data with package "denpro"* Alexander Gribov *Interactive Glyph Analysis with R* Martin Theus and Simon Urbanek *Extending Interactive Statistical Graphics* Michael Lawrence and Hadley Wickham *Rggobi2 - Bringing R and GGobi Closer* Christophe Pouzat, Andrea Ridolfi and Pascal Viot *Spike Sorting with R and GGobi* Geoffrey Matthews *Four Dimensional Barycentric Plots in 3D* M. Rui Alves and M. Beatriz Oliveira *R algorithms for the calculation of markers to be used in the construction of predictive and interpolative biplot axes in routine multivariate analyses*
Friday 16 15:00-18:30	**Econometrics and Social Science** (Spotlights: HS 0.3, Forum: Aula 3) Arne Henningsen and Jeff D. Hamann *systemfit: A Package to Estimate Simultaneous Equation Systems in R* Jeff Racine *np: A Package for Nonparametric Kernel Smoothing with Mixed Datatypes* Yves Croissant *plm: Linear models for panel data* Christine Choirat, Paolo Paruolo and Raffaello Seri *GEAR: GNU Econometric Analysis with R*
	Arne Henningsen and Ott Toomet *Microeconomic Analysis with R* Achim Zeileis and Giovanni Millo *A framework for heteroskedasticity-robust specification and misspecification testing functions for linear models in R* Stefano Iacus and Giuseppe Porro *Matching and ATT Estimation via Random Recursive Partitioning* Martin Elff, Thomas Gschwend and Ron Johnston *How Much Can Be Inferred From Almost Nothing? A Maximum Entropy Approach to Fundamental Indeterminacy in Ecological Inference With an Application to District-Level Prediction of Split-Ticket Voting* Olivia Lau, Ryan Moore and Michael Kellermann *Ecological Inference and Higher Dimension Data Management* Katarzyna Kopczewska *Geograph ical benefits in socio-economics development in post-socialist countries*

Friday 16 15:00-18:30	**Omic Statistics: Genomics and Proteomics** (Spotlights: HS 0.4, Forum: Festsaal 1) Gregory Warnes, Scott Chasalow, Giovanni Montana, Michael O'Connell, David Henderson, Nitin Jain, Weiliang Qiu, Junsheng Cheng, and Ross Lazarus *The R Genetics Project: `Bioconductor' for Genetics* Mark Dunning, Natalie Thorne, Mike Smith and Simon Tavaré *Using R for the Analysis of BeadArray Microarray Experiments* Oscar Rueda and Ramón Díaz-Uriarte *RJaCGH, a package for analyisis of CGH arrays with Reversible Jump MCMC* Sukbir Singh, Loy Chen Change and Lai Weng Kin *Proteomic Mass Spectrometry Data Analysis Software Suite*
	Jan Budczies and Joachim Grün *oligoExpress - exploiting probe level information in Affymetrix GeneChip expression data* Gregoire R. Thomas, Sven Degroeve, Luc Krols and Koen Kas *Biomarker detection in LC-MALDI mass spectrometry proteomic profiles using R* Eberhard Korsching, Walter Nadler and Horst Bürger *Cancer research - R package to analyze genomic regulation and tumor pathways based on array data from single nucleotide polymorphism (SNP) and comparative genomic hybridization (CGH) experiments* Benjamin Saussen, Marc Kirchner, Hanno Steen, Judith A. J. Steen and Fred A. Hamprecht *The rpm package: Aligning LC/MS mass spectra with R* Katharine M. Mullen and Ivo H. M. van Stokkum *TIMP: A package for parametric modeling of multiway spectroscopic measurements*
Friday 16 15:00-18:30	**Business Analytics** (Spotlights: HS 0.5, Forum: Atrium) Jim Porzak *Data Profiling with R* Reinhold Hatzinger and Patrick Mair *eRm - extended Rasch modelling* Sylvia Frühwirth-Schnatter and Christoph Pamminger *Capturing Unobserved Heterogeneity in the Austrian Labor Market Using Finite Mixtures of Markov Chain Models* Marcello D'Orazio, Marco Di Zio and Mauro Scanu *Some experiments on statistical matching in the R environment*
	Yuji Nakayama, Tomonori Ishigaki and Nagateru Araki *Estimating Consumer Demand for Hedonic Portfolio Products: A Bayesian Analysis using Scanner-Panel Data of Music CD Stores* Joris De Wolf, Koen Bruynseels, Rindert Peerbolte and Willem Broekbaert *The use of R as part of a large-scale information management and decision system* Luis Huergo, Ralf Münnich and Michaela Saisana *Robustness assessment for composite indicators with R* Christine Choirat and Raffaello Seri *Computing Weighted Chi-square Distributions and Related Quantities*
Friday 16 15:00-18:30	**Robust Statistics** (Spotlights: HS 0.7, Forum: Festsaal 2) Valentin Todorov *Robust Location and Scatter Estimators for Multivariate Analysis* Peter Ruckdeschel and Bernhard Spangl *A Package on Robust Kalman Filtering* Andreas Baierl and Andreas Futschik *Implementation of robust methods for locating quantitative trait loci in R*
	Peter Filzmoser and Heinrich Fritz *Robust Principal Component Analysis by Projection Pursuit* Matthias Templ and Peter Filzmoser *Stability of Cluster Analysis* Jan Dienstbier and Jan Picek *Regression rank-scores tests in R* Peter Filzmoser *Outlier Detection with Application to Geochemistry*

Saturday, June 17

useR! Kaleidoscope Sessions

Saturday 17 11:00-12:30	**Kaleidoscope: Saturday** (Room: Audimax) Frank Harrell *Statistical Principles to Live By* Roger Koenker *Parametric link functions for binary response models: A Fisherian Holiday* Stephen Kaluzny *The S Package System* Brian D. Ripley *Can R speak your language?* Ivan Mizera *Graphical Exploratory Data Analysis Using Halfspace Depth*

Panel Discussion

Saturday 17 13:00-14:00	**Getting recognition for excellence in computational statistics** (Room: Audimax) Panelists include editors of well-established journals in computational statistics and leading representatives of the ASA sections on statistical computing and graphics: • Jan de Leeuw (Journal of Statistical Software) • Tim Hesterberg (ASA Section on Statistical Computing) • Martina Mittlböck (Computational Statistics & Data Analysis) • Paul Murrell (ASA Section on Statistical Graphics) • Erich Neuwirth (Computational Statistics) • Luke Tierney (Journal of Computational and Graphical Statistics) We discuss how recent developments in computational statistics impact the performance assessment in peer-reviewed journals and professional careers.