Program

The R User Conference, useR! 2010
July 21-23, 2010
Gaithersburg, Maryland, USA

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Welcome

Dear useRs,

The following pages provide you with information regarding the R User Conference, useR! 2010, taking place at the headquarters of the National Institute of Standards and Technology (NIST), July 21-23, 2010, with a day of pre-conference tutorials July 20, 2010.

Like R itself, the technical content of the conference benefits from contributions from useRs from all over the world. We hope that you find it stimulating, and also hope that you enjoy the social aspects of the conference.

With best regards from the useR! 2010 Organizing Committee:

Kevin Coakley, Nathan Dodder, David Gil, William Guthrie, Olivia Lau, Walter Liggett, John Lu, Katharine Mullen, Jonathon Phillips, Antonio Possolo, Daniel Samarov, Ravi Varadhan

Program Committee

Louis Bajuk-Yorgan, Dirk Eddelbuettel, John Fox, Virgilio Gómez-Rubio, Richard Heiberger, Torsten Hothorn, Aaron King, Jan de Leeuw, Nicholas Lewin-Koh, Andy Liaw, Uwe Ligges, Martin Mächler, Katharine Mullen, Heather Turner, Ravi Varadhan, H. D. Vinod, John Verzani, Alan Zaslavsky, Achim Zeileis

Conference Location / Contact Information

National Institute of Standards and Technology (NIST)
100 Bureau Drive
Gaithersburg, MD, 20899, USA

Webpage:
`http://www.R-project.org/useR-2010`

For Phone Inquiries:
NIST Public Inquiries Unit: (301) 975-6478
Conference Program Office: (301) 975-3881

Organizing Committee Contact:
address: Katharine Mullen
100 Bureau Drive, M/S 8520
Gaithersburg, MD, 20899, USA
phone: (301) 975-6890
email: useR-2010@R-project.org

Registration Desk Hours

Tuesday,	July 20	08:00 - 19:30
Wednesday,	July 21	08:00 - 19:30
Thursday,	July 22	08:00 - 18:00
Friday,	July 23	08:00 - 14:00

Local Information, Maps, and Transportation

NIST is located in suburban Maryland, 35 km northwest of Washington, DC. A map of the campus is given in Figure 1. The conference is being held on the first floor of the Administration building 101. Figure 2 is a map of this floor. A wireless network is available to conference participants; information on connecting is found in the conference bag. Conference attendees have the option of parking on campus. Bus transportation will also be provided to and from campus from the conference hotels (Motel 6, Gaithersburg; Crowne Plaza, Rockville; Sleep Inn, Rockville).

Public Transportation from Local Airports

Below is an outline of public transportation options. Taking a taxi from any of the airports is also possible.

From Ronald Reagan National Airport (DCA):
Metro and taxi: Take the metro to the Shady Grove stop on the Red Line. From Shady Grove, take a taxi to NIST or your hotel.
Van: Use the door-to-door van service SuperShuttle.

From Dulles International Airport (IAD):
Van: Use the door-to-door van service SuperShuttle.

From Baltimore/Washington International Airport (BWI):
Van: Use the door-to-door van service SuperShuttle.

Train, Metro and taxi: Take a train to Washington's Union Station; take the metro to the Shady Grove stop on the Red Line. From Shady Grove, take a taxi to NIST or your hotel.

SuperShuttle Contact Information:
Web: `http://www.supershuttle.com/`, phone: (800) 258-3826.

Taxi Service Contact Information:
Gaithersburg Taxicab and Reliable Airport Service,
Web: `http://www.gaithersburgreliabletaxi.com`, phone: (888) 827-3105
Regency Cab, Inc.,
Web: `http://www.regencycab.net`, phone: (301) 990-9000
Airport Connection Taxi
Web: `http://www.airportquickconnection.com`, phone: (301) 947-1666

Washington, DC, Metro

A map of the Washington, DC metro is included as Figure 3.
Website of metro with fares and schedules: `http://www.wmata.com/`
Shady Grove (Red Line): Stop closest to NIST
The following metro stops (among others) have a selection of restaurants within walking distance:

Stop on Red Line	Approximate Time to Shady Grove Stop
Rockville	5 minutes
Bethesda	15 minutes
Woodley Park	30 minutes
Dupont Circle	30 minutes

Conference-Provided Bus Transportation

Tuesday, July 20	
Loop between hotels and NIST	8:00 - 9:00
	12:00 - 14:00
	17:00 - 18:00
	19:15 - 20:00
Wednesday, July 21	
Loop between hotels and NIST	7:30 - 8:30
	19:15 - 20:00
Thursday, July 22	
Loop between hotels and NIST	7:30 - 8:30
Loop between NIST, hotels, metro	18:15 - 19:00
Loop between metro and hotels	21:00 - 22:00
To conference dinner	18:15
To hotels from conference dinner	21:30, 22:30
Friday, July 23	
Loop between hotels and NIST	7:30 - 8:30
	16:30 - 17:30

Food-Related Information

Continental breakfast, coffee breaks, and lunch are provided each day. The breakfast will begin approximately 30 minutes before the program starts each day. The morning and afternoon coffee breaks include snacks.

Restaurants close to NIST and conference hotels:
Dogfishhead Alehouse
(`http://www.dogfishalehouse.com/dogfish-head-alehouse-gaithersburg.html`) is directly across the street from NIST's main gate, and serves locally brewed beer.
That's Amore Restaurant (`http://www.thatsamore.com`) is within walking distance of the Crown Plaza and Sleep Inn hotels.

Social program

Tuesday,	July 20:	Opening Reception, NIST	18:00 - 19:30
Wednesday,	July 21:	Poster Session Reception, NIST	18:00 - 19:30
Wednesday,	July 21:	Revolution Analytics Presents: http://www.inside-R.org/ Launch Party Crowne Plaza Hotel, Rockville	20:00 - ?
Thursday,	July 22:	Conference Dinner, National Zoo	19:00 - 22:30
Friday,	July 23:	Closing Mixer, NIST	16:30 - 17:00

Tutorials

Participants are welcome to arrive at NIST 8:00 - 9:30 for registration. The morning tutorial will be held 9:30 - 13:00, with a half-hour break for coffee at 11:00. Lunch (provided for all tutorial participants) is scheduled 13:00 - 14:00. The afternoon tutorial is scheduled for 14:00 - 17:30, with a half-hour break for coffee at 15:30.

Note that the tutorials in rooms E and F are located one floor down from the main conference area, in the basement.

Morning tutorials:

- **Douglas Bates:** Fitting and evaluating mixed models using lme4 *(Room: Red)*
- **Peter Danenberg and Manuel Eugster:** Literate programming with Roxygen *(Room: PR)*
- **Karin Groothuis-Oudshoorn and Stef van Buuren:** Handling missing data in R with MICE *(Room: C)*
- **Frank Harrell Jr:** Statistical presentation graphics *(Room: Green)*
- **François Husson and Julie Josse:** Exploratory data analysis with a special focus on clustering and multiway methods *(Room: A)*
- **Uwe Ligges:** My first R package *(Room: B)*
- **Daniel Samarov, Errol Strain and Elaine McVey:** R for Eclipse *(Room: E)*
- **Jing Hua Zhao:** Genetic analysis of complex traits *(Room: B111)*
- **Alex Zolot:** Work with R on Amazon's Cloud *(Room: D)*

Afternoon tutorials:

- **Karim Chine:** Elastic-R, a google docs-like portal for data analysis in the cloud *(Room: C)*
- **Dirk Eddelbuettel:** Introduction to high-performance computing with R *(Room: A)*
- **Michael Fay:** Interval censored data analysis *(Room: B111)*
- **Virgilio Gómez-Rubio:** Applied spatial data analysis with R *(Room: B)*
- **Frank Harrell Jr:** Regression modeling strategies using the R package rms *(Room: Green)*
- **Olivia Lau:** A crash course in R programming *(Room: Red)*
- **Friedrich Leisch:** Sweave - Writing dynamic and reproducible documents *(Room: D)*
- **John Nash:** Optimization and related nonlinear modelling computations in R *(Room: E)*
- **Brandon Whitcher, Pierre Lafaye de Micheaux, Bradley Buchsbaum and Jörg Polzehl:** Medical image analysis for structural and functional MRI *(Room: PR)*

Information for Speakers and Session Chairs

Presenters of contributed talks, please note that your talk is scheduled for 15 minutes plus discussion. The format of discussion depends on the kind of session you are in:

useR! Kaleidoscope: These sessions with oral presentations of 15 minutes each will give a broad overview of the many different applications that should appeal to a broader

audience. Each talk is directly followed by a discussion.

useR! Focus Sessions: These sessions with oral presentations of 15 minutes each will focus on topics of special interest and their goal is to provoke fruitful discussions in the respective user communities. In focus sessions, time for discussion is at the end of the whole session (rather than after each talk).

useR! Invited Lectures: Each lecture (except that of Richard Stallman, which has a longer format to allow for discussion and debate) will last 40 minutes, with 5 minutes at the end of the lecture reserved for questions.

Technical details: All lecture rooms are equipped with a computer or laptop and an LCD projector. All presenters should have sent a PDF with their presentation slides to the chair of their session by July 15, 2010 (unless the presenters plan to use their own laptop for software demonstrations).

Information for Session Chairs: Please ensure that the files of the presentations associated with your session are transferred to the computer in the room where your session is located well before the start of the session. Please make sure that each talk is finished on time in order to allow a smooth realization of the program.

Conference sponsors

We thank the following sponsors of the conference for their support:

Statistical Engineering Division, NIST, **travel funding**
National Science Foundation, **travel funding**
Google, **conference dinner sponsor**
TIBCO, **opening reception sponsor**
Mango Solutions, **t-shirt sponsor**
Revolution Analytics, **reception and bag sponsor**
Zircon Computing, **coffee break sponsor**
Ritter and Danielson Consulting, **coffee break sponsor**
Cambridge University Press, **book sponsor**
Springer, **book sponsor**

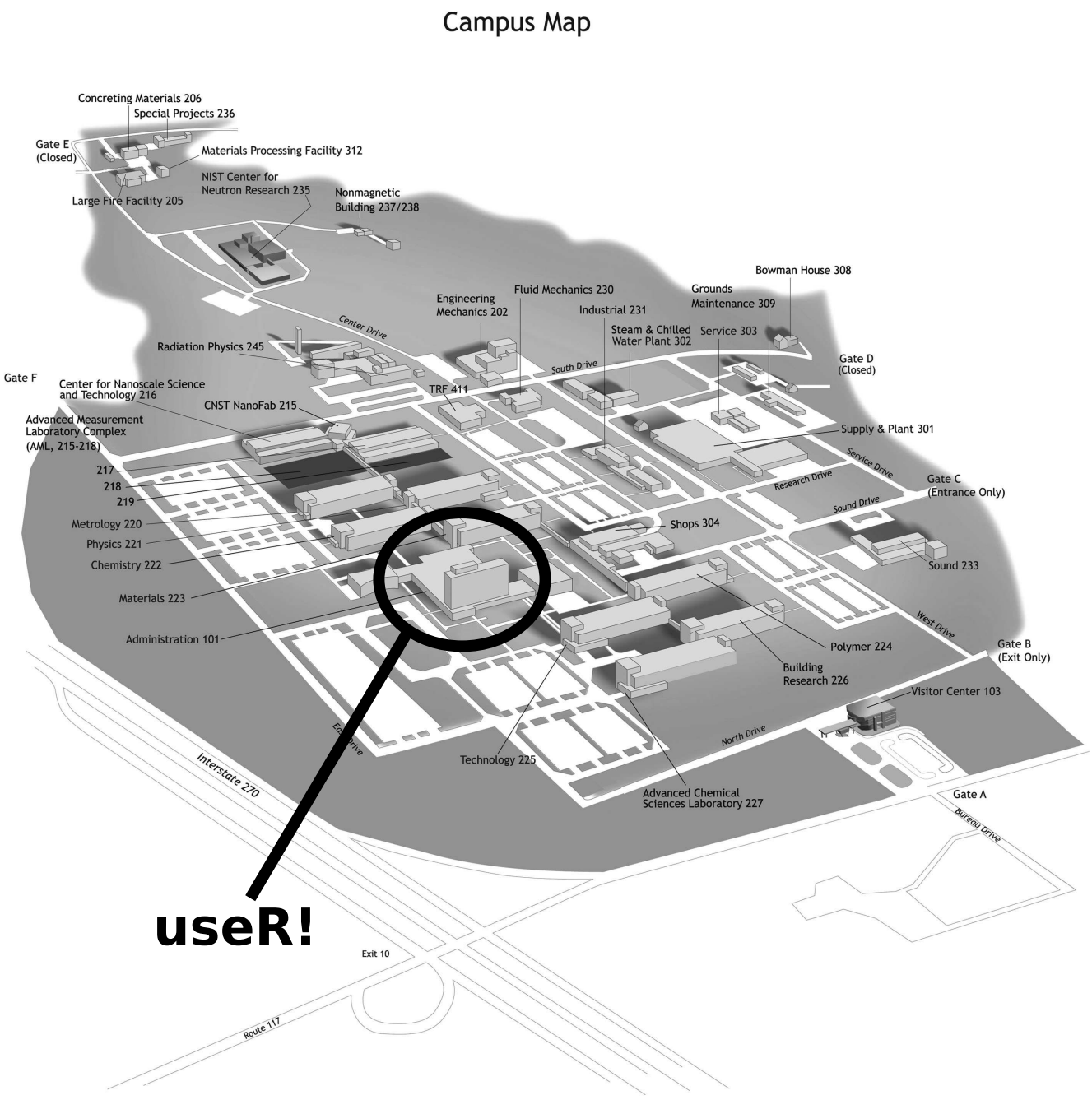

Figure 1: Map of NIST headquarters in Gaithersburg, Maryland. The useR! conference is being held in the Administration building 101.

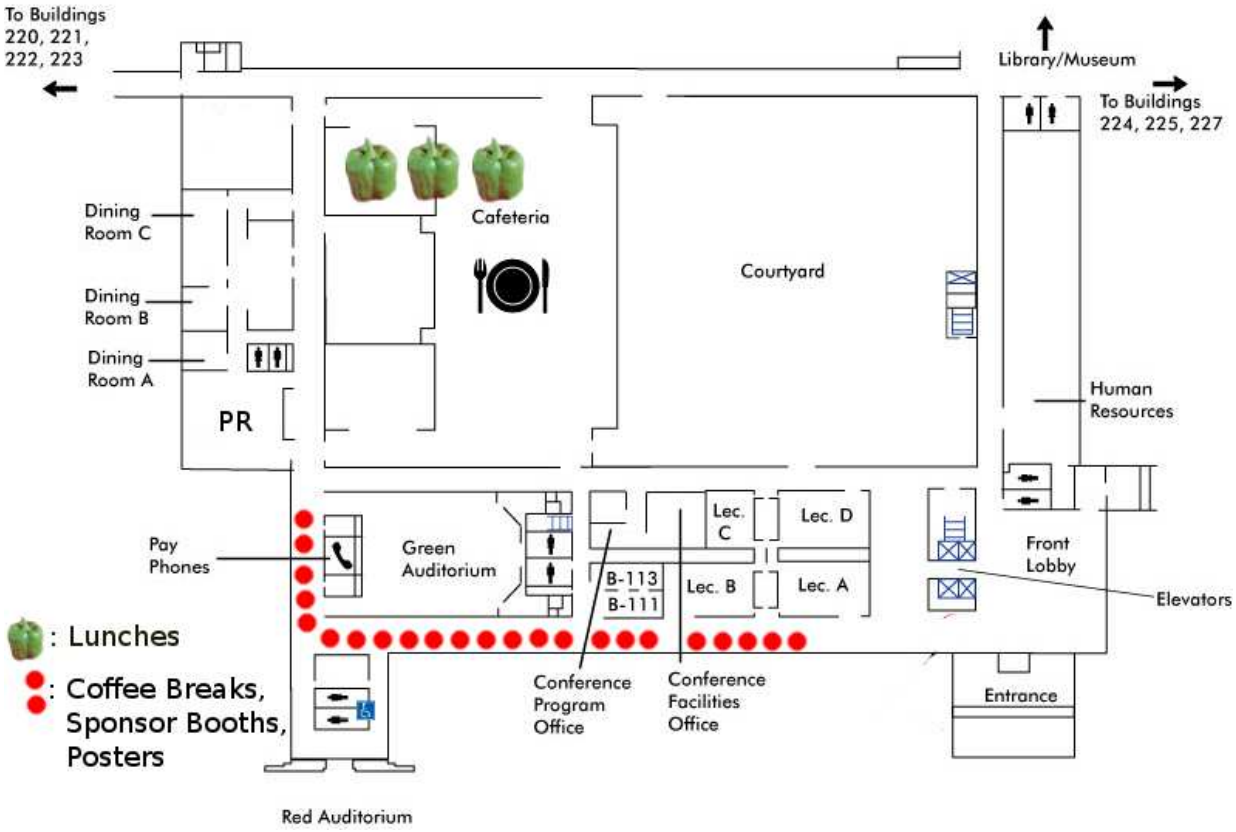

Figure 2: Map of the first floor of the Administration building 101.

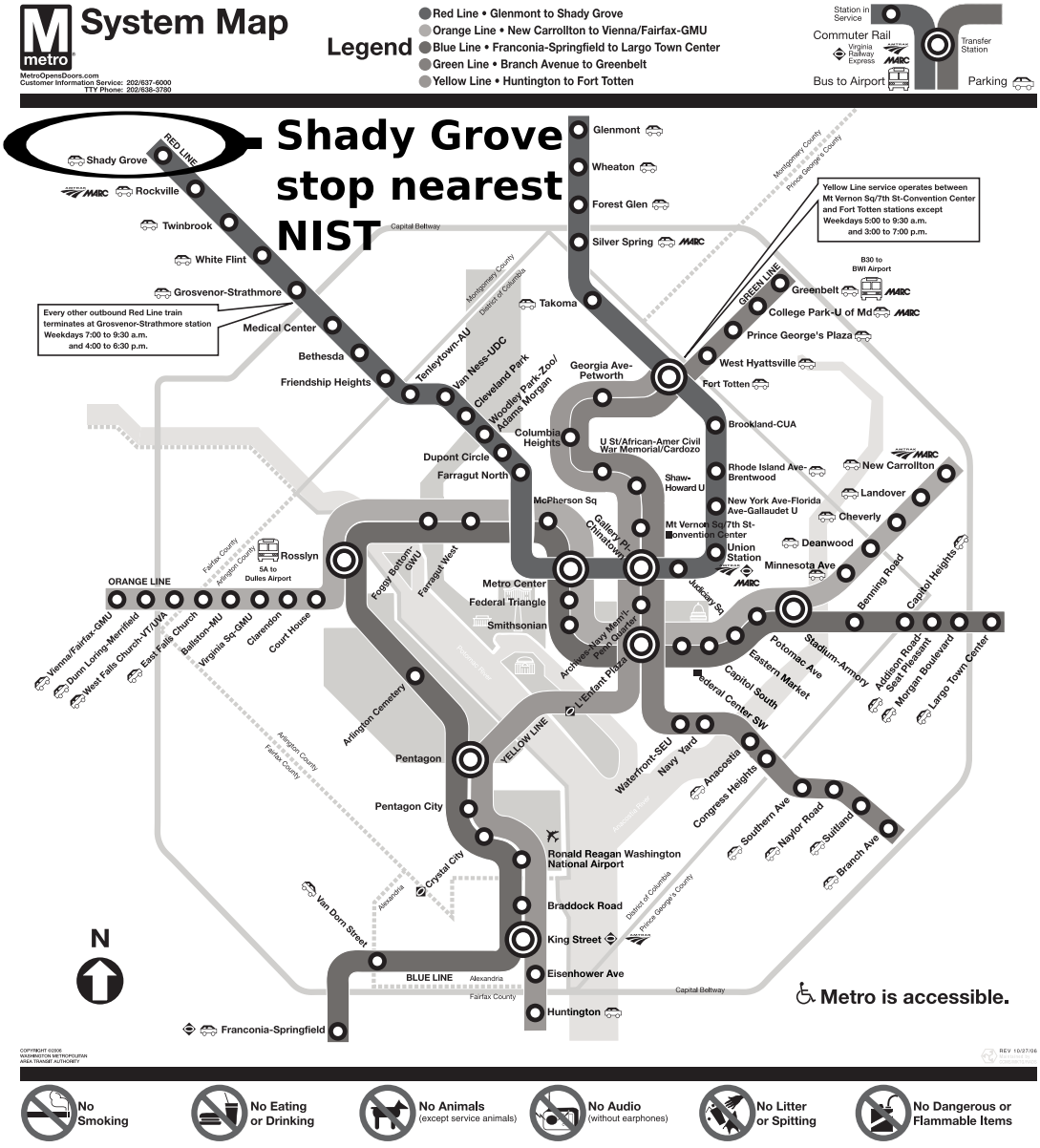

Figure 3: Washington, DC, metro lines. The Shady Grove stop on the Red Line is closest to NIST.

Technical Program Overview

The day of tutorials takes place on Tuesday, July 20. All conference participants are welcome to arrive at NIST on Tuesday, July 20 to pick up their conference packets prior to the Opening Reception.

Time	Wednesday, July 21	Time	Thursday, July 22	Time	Friday, July 23
08:00 - 08:45	Registration	08:00 - 09:00	Registration	08:00 - 09:00	Registration
08:45 - 09:15	Welcome (Red)	09:00 - 09:45	Invited Lecture (Red): Luke Tierney	09:00 - 09:45	Invited Lecture (Red): Friedrich Leisch
09:15 - 10:00	Invited Lecture (Red): Frank E. Harrell Jr	09:45 - 10:30	Invited Lecture (Red): Diethelm Würtz	09:45 - 10:30	Invited Lecture (Red): Uwe Ligges
10:00 - 10:45	Invited Lecture (Red): Mark S. Handcock	10:30 - 11:00	Coffee Break	10:30 - 11:00	Coffee Break
10:45 - 11:00	Coffee Break	11:00 - 12:30	useR! Focus	11:00 - 12:30	useR! Focus
			Biostatistics 3 (A)		Reproducible research and generating reports (A)
			Business intelligence (B)		Finance and resource allocation (B)
			Modeling (D)		Commercial applications 1 (D)
			Spatio-temporal data analysis (Green)		Data mining, machine learning (Red)
			Interfaces (PR)		metRology (PR)
11:00 - 12:00	useR! Focus	12:30 - 13:30	Lunch Break	12:30 - 13:30	Lunch Break
	Pedagogy 1 (A)				
	Biostatistics 1 (B)				
	GUIs 1 (D)				
	Grid computing (Green)				
	Gene expressions, genetics (PR)				
	Computer experiments and simulation (Red)				
12:00 - 13:00	Panel Discussion (Red)	13:30 - 15:00	useR! Kaleidoscope	13:30 - 13:45	Closing remarks (Red)
			Kaleidoscope I (Red)		
			Kaleidoscope II (Green)		
			Kaleidoscope III (PR)		
13:00 - 14:00	Lunch Break	15:00 - 15:25	Coffee Break	13:45 - 16:30	Invited Lecture (Red): Stallman
14:00 - 15:30	useR! Kaleidoscope	15:25 - 16:55	useR! Focus		
	Kaleidoscope I (Red)		fMRI (Green)		
	Kaleidoscope II (Green)		Time series (B)		
	Kaleidoscope III (PR)		RuG panel discussion (Red)		
			Social sciences (D)		
			Spreadsheets and RExcel (PR)		
15:30 - 15:55	Coffee Break	17:00 - 18:00	useR! Focus		
			Data manipulation and classification (A)		
			Optimization (Green)		
			Commercial applications 2 (B)		
			Lists and objects (D)		
			Cloud computing (PR)		
			Real-time computing (Red)		
15:55 - 16:55	useR! Focus				
	Pedagogy 2 (A)				
	Biostatistics 2 (B)				
	GUIs 2 (D)				
	High-performance computing (Green)				
	Bioinformatics workflows (PR)				
	Workflows (Red)				
17:00 - 18:00	useR! Focus				
	Pedagogy 3 (A)				
	Biostatistics workflows (B)				
	Visualization (D)				
	Parallel computing (Green)				
	Longitudinal data analysis (PR)				
	R social networks (Red)				
18:00 - 19:30	Poster session				

Program

Wednesday, July 21

08:45 - 09:15 Welcome (Room: Red)

09:15 - 10:00 Invited Lecture (Room: Red, Chair: Richard Heiberger), **Frank E. Harrell Jr:** Information Allergy

10:00 - 10:45 Invited Lecture (Room: Red, Chair: William Guthrie), **Mark S. Handcock:** Statistical Modeling of Networks in R

10:45 - 11:00 Coffee Break

11:00 - 12:00 **useR! Focus**

Pedagogy 1 (Room: A, Chair: Jay Emerson)

Brian A. Danielak, Andrew Elby, Eric Kuo, Michael M. Hull: Using R to Assess Mathematical Sense-Making in Introductory Physics Courses

Richard M. Heiberger: An Intermediate Course in Statistical Computing

G. Jay Kerns: The IPSUR package: an Introduction to Probability and Statistics Using R

Biostatistics 1 (Room: B, Chair: Ying Yun Liu)

Christopher Bilder, Boan Zhang, Frank Schaarschmidt, Joshua Tebbs: binGroup: A Package for Group Testing

Michael Fay: Two-sided Exact Tests and Matching Confidence Intervals for Discrete Data

Bill Pikounis, John Oleynick: The cg package for comparison of groups

GUIs 1 (Room: D, Chair: John Fox)

Ralf Bierig, Jacek Gwizdka, Michael Cole, Nicholas Belkin: An Experiment Data Analysis Framework: Evaluating Interactive Information Behaviour with R

Dedi Rosadi: Teaching Time Series analysis course using RcmdrPlugin.Econometrics

John Verzani: The traitr package

Grid computing (Room: Green, Chair: Dirk Eddelbuettel)

Karim Chine: User friendly distributed computing with R

Yann Richet, David Ginsbourger, Olivier Roustant, Yves Deville: A Grid Computing Environment for Design and Analysis of Computer Experiments

Gene expressions, genetics (Room: PR, Chair: Jing Hua Zhao)

Tal Galili, Shaul Shaul, Yoav Benjamini: Analyzing the Operational RNA Code for Amino Acids - Using R

John Kloke, Joseph McKean, Patrick Kimes, Hilary Parker: Adaptive Nonparametric Statistics with Applications to Gene Expression Data

Computer experiments and simulation (Room: Red, Chair: Robin Hankin)

Andreas Alfons, Matthias Templ, Peter Filzmoser: The R package simFrame: An object-oriented approach towards simulation studies in statistics

Neil Diamond: Using R for the Visualisation of Computer Experiments

12:00 - 13:00 Panel Discussion (Room: Red, Chair: Lou Bajuk-Yorgan): Challenges Bringing R into Commercial Environments, Panelists: **Lou Bajuk-Yorgan, Thomas Filloon, Bret Musser, Norman Nie, Jim Porzak, Richard Pugh**

13:00 - 14:00 Lunch Break

14:00 - 15:30 useR! Kaleidoscope I (Room: Red, Chair: Uwe Ligges)

John Fox: The RcmdrPlugin.survival Package: A Survival-Analysis GUI for R

Christian Gunning: Using Rwave to detect synchrony of influenza between U.S. states

Z.Q. John Lu, F. Potra, A. J. Wang: Fitting Multiphase Regression Models in R with Applications in Microarray Experiments

Heather Turner, David Firth: BradleyTerry2: Flexible Models for Paired Comparisons

Jing Hua Zhao: Use of R in Genetic Epidemiology Designs

useR! Kaleidoscope II (Room: Green, Chair: François Husson)

Dirk Eddelbuettel, Romain Francois: Rcpp: Seamless R and C++ integration

Landon Jensen: steReoscopy

Jeffrey Ryan: Column Databases Made Easy with R

Yihui Xie: Creating Animations with R

useR! Kaleidoscope III (Room: PR, Chair: Jörg Polzehl)

Jonathan Lees: The Haiti Earthquake: Seismological Analysis Using R

Martin Mächler, Douglas Bates: Sparse Model Matrices for (Generalized) Linear Models

Paul Rustomji, Brent Henderson, Katie Mills, Bai Qifeng: R as a statistical engine for a water quality trend analysis web-service

Daniel V. Samarov: Generalized Significance in Scale Space: The GS3 Package

Matthias Templ, Karel Hron, Peter Filzmoser: robCompositions: An R-package for robust statistical analysis of compositional data

15:30 - 15:55 Coffee Break

15:55 - 16:55 **useR! Focus**

Pedagogy 2 (Room: A, Chair: G. Jay Kerns)

Ken Aho: Teaching statistics to biologists: the R-library asbio

Daniel Kaplan: Computers and the Teaching of Statistics

Thomas Roth, Joachim Herrmann: Teaching Statistics in Quality Science using the R-Package qualityTools

Biostatistics 2 (Room: B, Chair: Frank E. Harrell)

Nelson Afanador: Using R for Data Mining in Vaccine Manufacturing: Finding Needles in Biological Haystacks

Michael Halter, Daniel R. Sisan, K. M. Mullen, Z. Q. John Lu: Statistical Analysis of Cell Population Data

Yingyun Liu: Using R for Data Simulation and Regression of Isothermal Titration Calorimetry of Proteins with Alternative Conformations

GUIs 2 (Room: D, Chair: Szilard Pafka)

Ian Fellows: Deducer: A Graphical useR interface for everyone

Sheri Gilley: Designing a Flexible GUI for R

High-performance computing (Room: Green, Chair: Stefan Theussl)

Mario Inchiosa, Cezary Dendek, Przemysaw Biecek: Scalable linear algebra with the nzmatrix package

Muriel Mewissen, Thorsten Forster, Terry Sloan, Savvas Petrou: SPRINT: a Simple Parallel INTerface to High Performance Computing and a Parallel R Function Library

Neil Shah, Guruprasad Kora, Paul Breimyer, Yekaterina Shpanskaya: pR: Enabling Automatic Parallelization of Data-Parallel Tasks and Interfacing Parallel Computing Libraries in R with Application to Fusion Reaction Simulations

Bioinformatics workflows (Room: PR, Chair: Andy Liaw)

Leslie Aichaoui-Deneve, Vincent Fromion, Matthieu Jules, Ludovic Le Chat: BaSyLiCA: A web interface for automatic process of Live Cell Array data using R

Michal Figurski, Leslie Shaw: Estimation of the Area-Under-the-Curve of Mycophenolic Acid using population pharmacokinetic and multi-linear regression models simultaneously

Setia Pramana, Dan Lin, Philippe Haldermans, Ziv Shkedy: IsoGeneGUI: a graphical user interface for analyzing dose-response studies in microarray experiments

Workflows (Room: Red, Chair: Richard Heiberger)

Xuefei Mi, H. Friedrich Utz, Albrecht E. Melchinger: Integrated Development of the Software with Literate Programming: An Example in Plant Breeding

Anup Parikh, Kyle Covington: Red-R: A visual programming and data analysis framework

17:00 - 18:00 **useR! Focus**

Pedagogy 3 (Room: A, Chair: John Verzani)

Arnau Mir, Margaret Miro-Julia, Monica J. Ruiz-Miro: Using R for Active Learning and Self-assessment in an e-Learning Environment

Fausto Molinari, Martina Salvadori: R-Adamant: Financial technical analysis made easy

Biostatistics workflows (Room: B, Chair: Marc Schwartz)

Yauheniya Cherkas, Javier Cabrera, Birol Emir, Ha Nguyen: PfarMineR: A User-Friendly Expandable Front-End For Biopharmaceutical Applications with R

Sourish Saha, Vladimir Anisimov, Valerii Fedorov, Richard Heiberger: Drug Supply Modeling Software

Jeff Skinner, Vivek Gopalan, Jason Barnett, Yentram Huyen: Automating biostatistics workflows for bench scientists using R-based web-tools

Visualization (Room: D, Chair: Nicholas Lewin-Koh)

Richard M. Heiberger, G. Jay Kerns: A Plot Method for "htest" Objects

Wesley Turner, Jeff Baumes, Phillipe Pebay, Thomas Otahal: Integration of R to VTK, Adding Statistical Computation to a Visualization Toolkit

Marie Vendettuoli, Dianne Cook, Heike Hofmann: Points, Curves and Haystacks: Datavis and Metabolomics

Parallel computing (Room: Green, Chair: David Smith)

Przemyslaw Biecek, Pawel Chudzian, Cezary Dendek, Justin Lindsey: Massively parallel analytics for large datasets in R with nza package

Norman Matloff: Rdsm: Distributed (Quasi-)Threads Programming in R

Junji Nakano, Ei-ji Nakama: Parallel Computing with R using GridRPC

Longitudinal data analysis (Room: PR, Chair: Michael Messner)

M. Helena Goncalves, M. Salome Cabral, Adelchi Azzalini: bild: a package for BInary Longitudinal Data

Pete Philipson, Ruwanthi Kolamunnage-Dona, Ines Sousa: Software for the joint modelling of longitudinal and survival data: the JoineR package

Yue Wang, Narinder Nangia: Bayesian Monitoring of A Longitudinal Clinical Trial Using R2WinBUGS

R social networks (Room: Red, Chair: Mark S. Handcock)

Tal Galili: Blogging about R

Eric Sun: Criss-Crossing the Org Chart: Predicting Colleague Interactions with R

George Zhang: Social network analysis with R sna package

18:00 - 19:30 **useR! Poster Session**

Kuntal Bhattacharyya, Pratim Datta, David Booth: To Do or Not To Do Business with a Country: A Robust Classification Approach

Richard Bilonick: Analysis of Data from Method Comparison Studies Using R, merror, and OpenMx

Max Buot: Estimating a multivariate normal covariance matrix subject to a Loewner ordering

Jeff Cromwell: Model Maker 1: Using Model Based Ontologies for Agent Based Estimation and Learning of R Packages

Nadeem Faiz: A Simple Visualization of S & P 500 Index Performance

Tom Filloon, Dave Dunlop: How to Effectively Visualize and Quantify a 3-D Image?

Panayotis Giannakouros, Lihua Chen: Introducing computational thinking with free software in a math for liberal arts course
Ron Guida: Parallelizing a Computationally Intensive Financial R Application with Zircon Technology
Bryan Hanson: ChemoSpec: An R Package for the Chemometric Analysis of Spectroscopic Data
Ivan Kojadinovic, Jun Yan: Tests in Modeling Continuous Multivariate Distributions Using Copulas
Fayaz Kondagula, Karl Molt: Infrared Spectrometric Purity Control of Chemical Substances using R
Michael Larsen: Teaching Survey Sampling Theory using R
Autumn Laughbaum: Animated Graphics using R
Ana Carolina CN Mafra, Ricardo Cordeiro, Luciana B Nucci, Celso Stephan: Generalized additive models to nomial responses using bivariate Kernel: a solution to spatial analysis
Inga Maslova: R package wfIMA: Wavelet-Functional Indexes of Magnetic Activity
Vincent Negre, Caroline Domerg, Juliette Fabre, Anne Tireau: Using R for data management in ecophysiology Information Systems
Ashoka Polpitiya, Navdeep Jaitly, Konstantinos Petritis: A Tool for Quantitative Analysis of Proteomics Data
Tom Taverner, Ashoka Polpitiya, Gordon Anderson, Richard Smith: RGtk2Extras and DanteR: rapid GUI development for an "omics" R package
Paul Teetor: Analytics for Trading Financial Spreads
Joan Vila, Montse Rue, Nuria Codern, Albert Sorribas: Teaching Statistics: An example of "How to" improve the students' statistical skills using individualized assignments
David Wheeler, Kai Yu, Melissa Friesen: Are there latent decision rules in expert occupational exposure assessments?

Thursday, July 22

09:00 - 09:45 Invited Lecture (Room: Red, Chair: John Lu), **Luke Tierney:** Some possible directions for the R engine

09:45 - 10:30 Invited Lecture (Room: Red, Chair: Hrishikesh Vinod), **Diethelm Würtz:** The Hull, the Feasible Set, and the Risk Surface: A Review of the Portfolio Modeling Infrastructure in R/Rmetrics

10:30 - 11:00 Coffee Break

11:00 - 12:30 **useR! Focus**

Biostatistics 3 (Room: A, Chair: Kevin Wright)

Joseph Kahn, Peter Danenberg, Sourav Das, Derek Ayers: Model simulation and decision analysis with the SimR package in R
Guido Knapp, Bimal Sinha, Dihua Xu: Extracting within-experiment precision of horticultural experiments useful for meta-analysis
Frank Mannino, Richard Heiberger, Valerii Fedorov: Stochastic modeling and simulation in the design of multicenter clinical trials
Yue Shentu: Visualization of titrated dose and recurring events using R/ggplot2

Business intelligence (Room: B, Chair: Michele Chambers)

Ettore Colombo, Gloria Ronzoni, Matteo Fontana: R role in Business Intelligence Software Architecture
Andrew Lampitt: Placing the Power of R into Your Hands
David Reinke, Steve Miller: R and BI – Integrating R with Open Source Business Intelligence Platforms Pentaho and Jaspersoft
Liang Wei, Brendan Kitts: Analyzing Direct Marketing Data with R

Modeling (Room: D, Chair: Heather Turner)

Giles Crane, Cynthia Collins, Karin Mille: Evaluating Grant Applications with Generalized Chain Block Designs in R
Guria Sibnarayan: Diagnostics in Count Data Model
Mark van der Loo: Distribution based outlier detection with the extremevalues package

Alex Zolot: Generalized Linear Mixed Model with Spatial Covariates

Spatio-temporal data analysis (Room: Green, Chair: Virgilio Gomez-Rubio)

Thomas Achia: Generalized linear spatial modeling of HIV in Kenya
Benjamin Mazzotta: Trade Cartograms: a Graphical Method for Dyadic Datasets
Qiushan Tao: ChinaMap: Maps of China for analysing spatial data

Interfaces (Room: PR, Chair: Romain Francois)

Karl-Dieter Crisman: Sage and R: Using R via the Sage notebook
Andrew Redd: NppToR: R Interaction for Notepad++
Andrew Runnalls: CXXR and Add-on Packages
Ansgar Steland: A high-performance compiler for a subset of R

12:30 - 13:30 Lunch Break

13:30 - 15:00 useR! Kaleidoscope I (Room: Red, Chair: Douglas Bates)

Dai Feng, Luke Tierney: mritc - A package for MRI tissue classification
Max Kuhn: The caret Package: A Unified Interface for Predictive Models
Jörg Polzehl, Karsten Tabelow: Statistical Issues in Accessing Brain Functionality and Anatomy
Soeren Sonnenburg, Gunnar Raetsch, Sebastian Henschel, Christian Widmer: SHOGUN - A Large Scale Machine Learning Toolbox
Stefan Theussl, Kurt Hornik, David Meyer: Many Solvers, One Interface - ROI, the R Optimization Infrastructure Package

useR! Kaleidoscope II (Room: Green, Chair: Jan de Leeuw)

Zack Almquist: US Census Spatial and Demographic Data in R: the UScensus2000-suite of packages
Erich Neuwirth: Investigating ODEs with R and spreadsheets
Jeremy Raw: TravelR: Travel Demand Modeling in R
Ganesh Subramaniam, Ravi Varadhan, Simon Urbanek, Sam Epstein: tsX: An R package for the exploratory analysis of a large collection of time-series
Hrishikesh Vinod: Time Series Inference Applications of R in Finance and Econometrics

useR! Kaleidoscope III (Room: PR, Chair: Jim Porzak)

Lou Bajuk-Yorgan, Stephen Kaluzny: Making R accessible to Business Analysts with TIBCO Spotfire
Alex Guazzelli, Konstantinos Stathatos, Michael Zeller: PMML Execution of R Built Predictive Solutions
Brian Hess, Michele Chambers: Analytics at Scale with R
Jim Porzak: Marketing Analytics in R
David Smith: Evolving R for Use in Commercial Environments

15:00 - 15:25 Coffee Break

15:25 - 16:55 useR! Focus

fMRI (Room: Green, Chair: Brandon Whitcher)

Gang Chen, Ziad Saad, Robert Cox: Statistical Analysis Programs in R for FMRI Data
Bjorn Roelstraete, Yves Rosseel: spmR: An R package For fMRI Data Analysis Based On The SPM Algorithms
Daniela Ushizima: Front propagation using fast marching in R

Time series (Room: B, Chair: Diethelm Würtz)

Giuseppe Bruno: Monte Carlo Simulation for Pricing European and American Basket option
Marlene Marchena: The bullwhip effect under a generalized demand process: an R implementation
Irina Roslyakova: Modified segmentation methods of quasi-stationary time series
Robert Samohyl, Elisa Henning: Forecast Monitoring via Multivariate Statistical Process Control with R

RuG panel discussion (Room: Green, Chair: Derek Norton)

Jim Porzak, Drew Conway, Szilard Pafka, John Nash: Panel on Starting & Building a Local R User Group

Data manipulation and classification (Room: A, Chair: Julie Josse)

Christopher Brown: Venn: Powerful and High-Level and Set Manipulating ... a whole new way of working with data

Drew Conway: Real-time network analysis in R using Twitter

Pascal Neveu, Juliette Fabre: Using ontologies for R functions management

Spreadsheets and RExcel (Room: PR, Chair: Erich Neuwirth)

Adrian Dragulescu: Read, write, format Excel 2007 (xlsx) files

Keith Halbert, Richard Heiberger, Erich Neuwirth: Export pivot table to R using RExcel

Christopher Snyder, Keith Halbert: Plotting Advanced Mathematical Functions in Excel Using RExcel

17:00 - 18:00 **useR! Focus**

Social sciences (Room: D, Chair: Olivia Lau)

Patrick Mair, Reinhold Hatzinger: New developments for extended Rasch modeling in R

Yves Rosseel: lavaan: an R package for structural equation modeling and more

Eric Wu, Patrick Mair, Peter Bentler: The REQS package for linking the SEM software EQS to R

Optimization (Room: A, Chair: Ravi Varadhan)

Steven Ellis: An Algorithm for Unconstrained Quadratically Penalized Convex Optimization

Jo Reynaerts, Ravi Varadhan, John C. Nash: The Convergence Properties of the BLP (1995) Contraction Mapping and Alternative Algorithms in R

Ravi Varadhan: SQUAREM: An R package for Accelerating Slowly Convergent Fixed-Point Iterations Including the EM and MM algorithms

Commercial applications 2 (Room: B, Chair: Michael M. Meyer)

Derek Norton: David v. Goliath: How to build an R presence in a corporate SAS environment

Richard Pugh, John James: Navigator: creating and managing complex graphics in a production environment

Doug Schmidt: Adaptive Middleware and High Performance Software For Multi-core Deployments Across Cloud Configurations

Lists and objects (Room: D, Chair: David Gil)

Christopher Brown: Eat your hashes! Hash comes to R

Romain Francois, Dirk Eddelbuettel: RProtoBuf: Protocol Buffers for R

John James: Use of and Using R as on Object Oriented Language

Cloud computing (Room: PR, Chair: Michael O'Connell)

Karim Chine: Elastic-R, a Google docs-like portal for data analysis in the Cloud

Hsin-Ying Hsieh, Kun-Hsien Lin, Sun-Chong Wang: Cloud-R: toward a community-backed R in the cloud

Jeroen Ooms: Web development with R

Real-time computing (Room: Red, Chair: Jeffrey Ryan)

Zubin Dowlaty, Deepak Bysani: Using R in an Event Driven Service Architecture

John Emerson, Michael Kane, Bryan Lewis: Real-time processing and analysis of data streams

Erich Neuwirth, Julia Theresa Csar: Prototyping Preventive Maintenance Tools with R

Friday, July 23

09:00 - 09:45 Invited Lecture (Room: Red, Chair: Daniel Samarov), **Friedrich Leisch:** Reproducible Statistical Research in Practice

09:45 - 10:30 Invited Lecture (Room: Red, Chair: Jonathon Phillips), **Uwe Ligges:** Prospects and Challenges for CRAN - with a glance on 64-bit Windows binaries

10:30 - 11:00 Coffee Break

11:00 - 12:30 **useR! Focus**

Reproducible research and generating reports (Room: A, Chair: Martin Mächler)

Carlin Brickner, Iordan Slavov, Rocco Napoli: Graphics Device Tabular Output

Abhijit Dasgupta: Flexible report generation and literate programming using R and Python's docutils module

Christophe Genolini, Bernard Desgraupes, Lionel Riou Franca: R to LaTeX / HTML

Hector Sanz, Isaac Subirana, Joan Vila: Bivariate Analyses

Finance and resource allocation (Room: B, Chair: Paul Gilbert)

Dirk Eddelbuettel, Khanh Nguyen: RQuantLib: Bridging QuantLib and R

Gloria Ronzoni, Ettore Colombo, Matteo Fontana: R for Labour Market Policies

Jeffrey Ryan: Trading in Real Time with R and IBrokers

Commercial applications 1 (Room: D, Chair: Kerstin Pietzko)

Brian Hess, Michele Chambers: In-database analytics with R

Mieczyslaw Klopotek, Przemyslaw Biecek, Justin Lindsey: Simple Bayesian Networks on Netezza Box

Bill Ladd: Structured Text Access and Analysis

Michael OConnell, Subra Subramanian: The use of R, S+ and Spotfire in the Oracle Life Sciences Data Hub Environment

Data mining, machine learning (Room: Red, Chair: Bryan Hanson)

Collin Bennett, Dave Locke, Robert Grossman, Steve Vejcik: Building Segmented Models Using R and Hadoop

Shengqiao Li, Donald Adjeroh, E. James Harner: Random KNN Classification and Regression

Margaret Mio-Julia, Arnau Mir, Monica J. Ruiz-Miro: R-TREE: Implementation of Decision Trees using R

metRology (Room: PR, Chair: Antonio Possolo)

W. F. Guthrie, H. Liu: An Excel Interface for Functions in the metRology Package

Rudiger Kessel: Automatic R-script generation for Monte Carlo Simulations

Hung-kung Liu, Steve Ellison, William Guthrie, Antonio Possolo: metRology - a new R package for statistical metrology

James Yen, Stephen Ellison: Analysis of interlaboratory studies using R and the metRology package

12:30 - 13:30 Lunch Break

13:30 - 13:45 Closing remarks (Room: Red)

13:45 - 16:30 Invited Lecture (Room: Red, Chair: Katharine Mullen), **Richard Stallman:** Free Software in Ethics and in Practice