- `par()` set 'xaxp' before 'xlog' and 'yaxp' before 'ylog', causing PR#831.
- The logic in `tclRequire()` to check the availability of a Tcl package turned out to be fallible. It now uses a `try()`-and-see mechanism instead.
- Opening a `unz()` connection on a non-existent file left a file handle in use.
- "dist" objects of length 0 failed to print.
- INSTALL and the libR try harder to find a temporary directory (since there might be one left over with the same PID).
- `acf()` could cause a segfault with some datasets. (PR#7771)
- `tan(1+LARGEi)` now gives 0+1i rather than 0+NaNi (PR#7781)
- `summary(data.frame(mat = I(matrix(1:8, 4))))` does not go into infinite recursion anymore.
- `writeBin()` performed byte-swapping incorrectly on complex vectors, also swapping real and imaginary parts. (PR#7778)
- `read.table()` sometimes discarded as blank lines containing only white space, even if `sep=","`.

Changes on CRAN

by Kurt Hornik

New contributed packages

AMORE A MORE flexible neural network package. This package was born to release the TAO robust neural network algorithm to the R users. It has grown and can be of interest for the users wanting to implement their own training algorithms as well as for those others whose needs lie only in the "user space". By Manuel Castejón Limas, Joaquín B. Ordieres Meré, Eliseo P. Vergara González, Francisco Javier Martínez de Pisón Ascacibar, Alpha V. Pernía Espinoza, and Fernando Alba Elías.

BHH2 Functions and data sets reproducing some examples in "Statistics for Experimenters II" by G. E. P. Box, J. S. Hunter, and W. C. Hunter, 2005, John Wiley and Sons. By Ernesto Barrios.

Bolstad Functions and data sets for the book "Introduction to Bayesian Statistics" by W. M. Bolstad, 2004, John Wiley and Sons. By James Curran.

Ecdat Data sets from econometrics textbooks. By Yves Croissant.

GDD Platform and X11 independent device for creating bitmaps (png, gif and jpeg). By Simon Urbanek.

GeneNT The package implements a two-stage algorithm to screen co-expressed gene pairs with controlled FDR and MAS. The packages also constructs relevance networks and clusters co-expressed genes (both similarly co-expressed and transitively co-expressed). By Dongxiao Zhu.

Geneland Detection of spatial structure from genetic data. By Gilles Guillot.

HTMLapplets Functions inserting dynamic scatterplots and grids in documents generated by **R2HTML**. By Gregoire Thomas.

IDPmisc The IDPmisc package contains different high-level graphics functions for displaying large datasets, brewing color ramps, drawing nice arrows, creating figures with differently colored margins and plot regions, and other useful goodies. By Andreas Ruckstuhl, Thomas Unternährer, and Rene Locher.

LDheatmap Produces a graphical display, as a heat map, of measures of pairwise linkage disequilibria between SNPs. Users may optionally include the physical locations or genetic map distances of each SNP on the plot. By Ji-Hyung Shin, Sigal Blay, Jinko Graham, and Brad McNeney.

LogicReg Routines for Logic Regression. By Charles Kooperberg and Ingo Ruczinski.

MEMSS Data sets and sample analyses from "Mixed-effects Models in S and S-PLUS" by J. Pinheiro and D. Bates, 2000, Springer. By Douglas Bates.

MatchIt Select matched samples of the original treated and control groups with similar covariate distributions—can be used to match exactly on covariates, to match on propensity scores, or perform a variety of other matching procedures. By Daniel Ho, Kosuke Imai, Gary King, and Elizabeth Stuart.

Matching Provides functions for multivariate and propensity score matching and for finding optimal balance based on a genetic search algorithm. A variety of univariate and multivariate tests to determine if balance has been obtained are also provided. By Jasjeet Singh Sekhon.

NORMT3 Evaluates the probability density function of the sum of the Gaussian and Student's t density on 3 degrees of freedom. Evaluates the p.d.f. of the sphered Student's t density function. Also evaluates the `erf` and `erfc` functions on complex-valued arguments. By Guy Nason.

PK Estimation of pharmacokinetic parameters. By Martin Wolfsegger.

ProbForecastGOP Probabilistic weather field forecasts using the Geostatistical Output Perturbation method introduced by Gel, Raftery and Gneiting (2004). By Yulia Gel, Adrian E. Raftery, Tilmann Gneiting, and Veronica J. Berrocal.

R.matlab Provides methods to read and write MAT files. It also makes it possible to communicate (evaluate code, send and retrieve objects etc.) with Matlab v6 or higher running locally or on a remote host. The auxiliary Java class provides static methods to read and write Java data types. By Henrik Bengtsson.

R.oo Methods and classes for object-oriented programming in R with or without references. By Henrik Bengtsson.

RGrace Mouse/menu driven interactive plotting application. By M. Kondrin.

RII Estimation of the relative index of inequality for interval-censored data using natural cubic splines. By Jamie Sergeant.

ROCR ROC graphs, sensitivity/specificity curves, lift charts, and precision/recall plots are popular examples of trade-off visualizations for specific pairs of performance measures. ROCR is a flexible tool for creating cutoff-parametrized 2D performance curves by freely combining two from over 25 performance measures (new performance measures can be added using a standard interface). By Tobias Sing, Oliver Sander, Niko Beerenwinkel, and Thomas Lengauer.

ResistorArray Electrical properties of resistor networks. By Robin K. S. Hankin.

Rlab Functions and data sets for the NCSU ST370 class. By Dennis D. Boos, Atina Dunlap Brooks, and Douglas Nychka.

SciViews A bundle of packages to implement a full reusable GUI API for R. Contains **svGUI** with the main GUI features, **svDialogs** for the dialog boxes, **svIO** for data import/export, **svMisc** with miscellaneous supporting functions, and **svViews** providing views and report features (views are HTML presentations of the content of R objects, combining text, tables and graphs in the same document). By Philippe Grosjean & Eric Lecoutre.

SemiPar Functions for semiparametric regression analysis, to complement the book "Semiparametric Regression" by R. Ruppert, M. P. Wand, and R. J. Carroll, 2003, Cambridge University Press. By Matt Wand.

SeqKnn Estimate missing values sequentially from the gene that had least missing rate in microarray data. By Ki-Yeol Kim and Gwan-Su Yi.

UsingR Data sets to accompany the textbook "Using R for Introductory Statistics" by J. Verzani, 2005, Chapman & Hall/CRC. By John Verzani.

Zelig Everyone's statistical software: an easy-to-use program that can estimate, and help interpret the results of, an enormous range of statistical models. By Kosuke Imai, Gary King, and Olivia Lau.

adlift Adaptive Wavelet transforms for signal denoising. By Matt Nunes and Marina Popa.

alr3 Methods and data to accompany the textbook "Applied Linear Regression" by S. Weisberg, 2005, Wiley. By Sanford Weisberg.

arules Provides the basic infrastructure for mining and analyzing association rules and an interface to the C implementations of Apriori and Eclat by Christian Borgelt. By Bettina Gruen, Michael Hahsler and Kurt Hornik.

bayesm Covers many important models used in marketing and micro-econometrics applications. The package includes: Bayes Regression (univariate or multivariate dependent variable), Multinomial Logit (MNL) and Multinomial Probit (MNP), Multivariate Probit, Multivariate Mixtures of Normals, Hierarchical Linear Models with normal prior and covariates, Hierarchical Multinomial Logits with mixture of normals prior and covariates, Bayesian analysis of choice-based conjoint data, Bayesian treatment of linear instrumental variables models, and Analyis of Multivariate Ordinal survey data with scale usage heterogeneity. By Peter Rossi and Rob McCulloch.

bitops Functions for Bitwise operations on integer vectors. S original by Steve Dutky, initial R port

and extensions by Martin Maechler. Revised and modified by Steve Dutky.

boost Contains a collection of boosting methods, these are 'BagBoost', 'LogitBoost', 'AdaBoost' and 'L2Boost', along with feature preselection by the Wilcoxon test statistic. Moreover, methods for the simulation of data according to correlation and mean structures of existing real datasets are included. By Marcel Dettling.

changeLOS Change in length of hospital stay (LOS). By Matthias Wangler and Jan Beyersmann.

clac Clust Along Chromosomes, a method to call gains/losses in CGH array data. By Pei Wang, with contributions from Balasubramanian Narasimhan.

climatol Functions to fill missing data in climatological (monthly) series and to test their homogeneity, plus functions to draw wind-rose and Walter&Lieth diagrams. By José A. Guijarro.

clue CLUster Ensembles. By Kurt Hornik, with contributions from Walter Boehm.

coin Conditional inference procedures for the general independence problem including two-sample, *K*-sample, correlation, censored, ordered and multivariate problems. By Torsten Hothorn and Kurt Hornik, with contributions by Mark van de Wiel and Achim Zeileis.

colorspace Carries out mapping between assorted color spaces. By Ross Ihaka.

concor Concordance, providing "SVD by blocks". By R. Lafosse.

ctv Server-side and client-side tools for task views to CRAN-style repositories. By Achim Zeileis and Kurt Hornik.

cyclones Functions for locating local minima/maxima. By Rasmus E. Benestad.

eco Fits parametric and nonparametric Bayesian models for ecological inference in 2 by 2 tables. The models are fit using the Markov chain Monte Carlo algorithms that are described in Imai and Lu (2004). By Ying Lu and Kosuke Imai.

edci Detection of edgepoints in images based on the difference of two asymmetric M kernel estimators. Linear and circular regression clustering based on redescending M estimators. Detection of linear edges in images. By Tim Garlipp.

elasticnet Elastic net regularization and variable selection. Also implements the sparse PCA algorithm based on the elastic net/lasso. By Hui Zou and Trevor Hastie.

ensembleBMA Uses Bayesian Model Averaging to create probabilistic forecasts of ensembles using a mixture of normal distributions. By Adrian E. Raftery, J. McLean Sloughter, and Michael Polakowski.

epitools Basic tools for applied epidemiology. By Tomas Aragon.

epsi Smoothing methods for images which are based on a redescending M kernel estimator which preserves edges and corners. By Tim Garlipp.

far Modelizations and previsions functions for Functional AutoRegressive processes using nonparametric methods: functional kernel, estimation of the covariance operator in a subspace, ... By Damon Julien and Guillas Serge.

frailtypack Fit a shared gamma frailty model and Cox proportional hazards model using a Penalized Likelihood on the hazard function. Left truncated, censored data and strata (max=2) are allowed. Original Fortran routines by Virginie Rondeau. Modified Fortran routines, R code and packaging by Juan R Gonzalez.

gcmrec Parameters estimation of the general semiparametric model for recurrent event data proposed by Peña and Hollander. By Juan R. Gonzalez, Elizabeth H. Slate, and Edsel A Peña.

genalg R based genetic algorithm for binary and floating point chromosomes. By Egon Willighagen.

gmp Multiple precision Arithmetic (prime numbers, ...), "arithmetic without limitations" using the C library `gmp`. By Antoine Lucas, Immanuel Scholz, Rainer Boehme, and Sylvain Jasson.

gsl An R wrapper for the special functions and quasi random number generators of the Gnu Scientific Library (`http://www.gnu.org/software/gsl/`). By Robin K. S. Hankin; `qrng` functions by Duncan Murdoch.

hmm.discnp Fits hidden Markov models with discrete non-parametric observation distributions to data sets. Simulates data from such models. By Rolf Turner and Limin Liu..

hopach The Hierarchical Ordered Partitioning and Collapsing Hybrid (HOPACH) clustering algorithm. By Katherine S. Pollard, with Mark J. van der Laan.

intcox Implementation of the Iterated Convex Minorant Algorithm for the Cox proportional hazard model for interval censored event data. By Volkmar Henschel, Christiane Heiss, and Ulrich Mansmann.

irr Coefficients of Interrater Reliability and Agreement for quantitative, ordinal and nominal data: ICC, Finn-Coefficient, Robinson's A, Kendall's W, Cohen's Kappa, ... By Matthias Gamer.

kknn Weighted k-Nearest Neighbors Classification and Regression. By Klaus Schliep & Klaus Hechenbichler.

ks Bandwidth matrices for kernel density estimators and kernel discriminant analysis for bivariate data. By Tarn Duong.

labdsv A variety of ordination and vegetation analyses useful in analysis of datasets in community ecology. Includes many of the common ordination methods, with graphical routines to facilitate their interpretation, as well as several novel analyses. By David W. Roberts.

latticeExtra Generic function and standard methods for Trellis-based displays. By Deepayan Sarkar.

ltm Analysis of multivariate Bernoulli data using latent trait models (including the Rasch model) under the Item Response Theory approach. By Dimitris Rizopoulos.

maanova Analysis of *N*-dye Micro Array experiment using mixed model effect. Containing analysis of variance, permutation and bootstrap, cluster and consensus tree. By Hao Wu, with ideas from Gary Churchill, Katie Kerr and Xiangqin Cui.

matlab Emulate MATLAB code using R. By P. Roebuck.

mcmc Functions for Markov chain Monte Carlo (MCMC). By Charles J. Geyer.

meta Fixed and random effects meta-analysis. Functions for tests of bias, forest and funnel plot. By Guido Schwarzer.

micEcon Tools for microeconomic analysis and microeconomic modelling. By Arne Henningsen.

minpack.lm Provides R interface for two functions from MINPACK library, solving nonlinear least squares problem by modification of the Levenberg-Marquardt algorithm. By Timur V. Elzhov.

mlica An R code implementation of the maximum likelihood (fixed point) algorithm of Hyvaerinen, Karhuna and Oja for independent component analysis. By Andrew Teschendorff.

mlmRev Data and examples from a multilevel modelling software review as well as other well-known data sets from the multilevel modelling literature. By Douglas Bates.

mvoutlier Outlier detection using robust estimations of location and covariance structure. By Moritz Gschwandtner and Peter Filzmoser.

nice Get or set UNIX priority (niceness) of running R process. By Charles J. Geyer.

ouch Fit and compare Ornstein-Uhlenbeck models for evolution along a phylogenetic tree. By Aaron A. King.

outliers A collection of some tests commonly used for identifying outliers. By Lukasz Komsta.

perturb Evaluates collinearity by adding random noise to selected variables. By John Hendrickx.

phpSerialize Serializes R objects for import by PHP into an associative array. Can be used to build interactive web pages with R. By Dieter Menne.

pls Multivariate regression by partial least squares regression (PLSR) and principal components regression (PCR). This package supersedes the **pls.pcr** package. By Ron Wehrens and Bjørn-Helge Mevik.

plsgenomics Provides routines for PLS-based genomic analyses. By Anne-Laure Boulesteix and Korbinian Strimmer.

plugdensity Kernel density estimation with global bandwidth selection via "plug-in"". By Eva Herrmann (C original); R interface et cetera by Martin Maechler.

polycor Computes polychoric and polyserial correlations by quick "two-step" methods or ML, optionally with standard errors; tetrachoric and biserial correlations are special cases. By John Fox.

ppc Sample classification of protein mass spectra by peak probability contrasts. By Balasubramanian Narasimhan, R. Tibshirani, and T. Hastie.

proto An object oriented system using prototype or object-based (rather than class-based) object oriented ideas. By Louis Kates and Thomas Petzoldt.

pvclust Assessing the uncertainty in hierarchical cluster analysis. By Ryota Suzuki and Hidetoshi Shimodaira.

qtlDesign Tools for the design of QTL experiments. By Saunak Sen, Jaya Satagopan, and Gary Churchill.

qvalue Q-value estimation for false discovery rate control. By Alan Dabney and John D. Storey, with assistance from Gregory R. Warnes.

relsurv Various functions for regression in relative survival. By Maja Pohar.

resper Two accept-and-reject algorithms to sample from permutations. By Johannes Hüsing.

rstream Unified object oriented interface for multiple independent streams of random numbers from different sources. By Josef Leydold.

rwt Performing digital signal processing. By P. Roebuck, based on MATLAB extension by Rice University's DSP group.

seqinr Exploratory data analysis and data visualization for biological sequence (DNA and protein) data. By Delphine Charif and Jean Lobry.

spectrino Spectra organizer, visualization and data extraction from within R. By Teodor Krastev.

stepwise A stepwise approach to identifying recombination breakpoints in a sequence alignment. By Jinko Graham, Brad McNeney, and Francoise Seillier-Moiseiwitsch, R interface by Sigal Blay.

survBayes Fits a proportional hazards model to time to event data by a Bayesian approach. Right and interval censored data and a log-normal frailty term can be fitted. By Volkmar Henschel, Christiane Heiss, Ulrich Mansmann.

tdist Computes the distribution of a linear combination of independent Student's t-variables (with small degrees of freedom, dff $\leq$ 100) and/or standard Normal Z random variables. By Viktor Witkovsky and Alexander Savin.

tweedie Maximum likelihood computations for Tweedie families. By Peter Dunn.

uroot Unit root tests (KPSS, ADF, CH and HEGY) and graphics for seasonal time series. By Javier López-de-Lacalle & Ignacio Díaz-Emparanza.

vabayelMix Performs inference of a gaussian mixture model within a bayesian framework using an optimal separable approximation to the posterior density. The optimal posterior approximation is obtained using a variational approach. By Andrew Teschendorff.

verification Contains utilities for verification of discrete and probabilistic forecasts. By the NCAR Research Application Program.

zicounts Fits classical and zero-inflated count data regression model as well as censored count data regression. By S M Mwalili.

Other changes

- Packages **CoCoAn**, **gpls**, and **multiv** were moved from the main CRAN section to the Archive.
- Package **Dopt** was moved from the Devel section of CRAN to the Archive.
- Package **multidim** had to be removed from CRAN.

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Events

Chambers Workshop

A workshop entitled "40 Years of Statistical Computing and Beyond" was held at Bell Laboratories, Murray Hill, NJ, U.S.A. on April 29, 2005 to mark the occasion of John Chambers' retirement from the Labs but not from active research. He is continuing his record of innovation by becoming the first Emeritus Member of Technical Staff in the history of Bell Labs.

R is an implementation of the S language and John is the originator and principal designer of S. Without John's work on S there never would have been an R. His patient responding to questions during early development of R was crucial to its success and, since 2000, he has been a member of the R Development Core Team.

The history and development of the S language and of its implementation in R were featured in many of the presentations at the workshop, especially in those by Rick Becker and Allan Wilks. Naturally, the highlight of the day was John's presentation in which he first looked back on his 40 years of involvement in statistical computing and the development of languages for programming with data and then gave some tantalizing glimpses into the future. The agenda for the workshop can be seen at http://stat.bell-labs.com.

DSC 2005

DSC 2005 – Directions in Statistical Computing – will be held from the evening of August 12 through August 15, in Seattle, Washington. This conference follows on from the successful DSC 1999, 2001, and 2003 conferences at the Vienna University of Technology.