Changes on CRAN

2014-07-01 to 2014-12-31

by Kurt Hornik and Achim Zeileis

New packages in CRAN task views

Bayesian **BayesTree**.

Cluster **fclust**, **funFEM**, **funHDDC**, **pgmm**, **tclust**.

Distributions **FatTailsR**, **RTDE**, **STAR**, **predfinitepop**, **statmod**.

Econometrics **LinRegInteractive**, **MSBVAR**, **nonnest2**, **phtt**.

Environmetrics **siplab**.

Finance **GCPM**, **MSBVAR**, **OptionPricing**, **financial**, **fractal**, **riskSimul**.

HighPerformanceComputing **GUIProfiler**, **PGICA**, **aprof**.

MachineLearning **BayesTree**, **LogicForest**, **hdi**, **mlr**, **randomForestSRC**, **stabs**, **vcrpart**.

MetaAnalysis **MAVIS**, **ecoreg**, **ipdmeta**, **metaplus**.

NumericalMathematics **RootsExtremaInflections**, **Rserve**, **SimplicialCubature**, **fastGHQuad**, **optR**.

OfficialStatistics **CoImp**, **RecordLinkage**, **rworldmap**, **tmap**, **vardpoor**.

Optimization **RCEIM**, **blowtorch**, **globalOptTests**, **irace**, **isotone**, **lbfgs**.

Phylogenetics **BAMMtools**, **BoSSA**, **DiscML**, **HyPhy**, **MPSEM**, **OutbreakTools**, **PBD**, **PCPS**, **PHYLOGR**, **RADami**, **RNeXML**, **Reol**, **Rphylip**, **adhoc**, **betapart**, **dendextend**, **expands**, **expoTree**, **jaatha**, **kdetrees**, **mvMORPH**, **outbreaker**, **pastis**, **pegas**, **phyloTop**, **phyloland**, **rdryad**, **rphast**, **strap**, **surface**, **taxize**.

Psychometrics **IRTShiny**, **PP**, **WrightMap**, **mirtCAT**, **pairwise**.

ReproducibleResearch **NMOF**.

Robust **TEEReg**, **WRS2**, **robeth**, **robustDA**, **robustgam**, **robustloggamma**, **robustreg**, **ror**, **rorutadis**.

Spatial **PReMiuM**.

SpatioTemporal **BayesianAnimalTracker**, **TrackReconstruction**, **fishmove**, **mkde**, **wildlifeDI**.

Survival **DStree**, **ICsurv**, **IDPSurvival**, **MIICD**, **MST**, **MicSim**, **PHeval**, **PReMiuM**, **aftgee**, **bshazard**, **bujar**, **coxinterval**, **gamboostMSM**, **imputeYn**, **invGauss**, **lsmeans**, **multipleNCC**, **paf**, **penMSM**, **spBayesSurv**, **survAccuracyMeasures**, **survivalMPL**, **vitality**.

TimeSeries **GMDH**, **gets**, **orderedLasso**, **yuima**.

WebTechnologies **BerlinData**, **EIAdata**, **IBrokers**, **ONETr**, **RCryptsy**, **RDataCanvas**, **RGA**, **RGoogleAnalytics**, **RJSDMX**, **RPublica**, **RPushbullet**, **RSelenium**, **RStars**, **SocialMediaMineR**, **TR8**, **Taxonstand**, **W3CMarkupValidator**, **WikipediR**, **aRxiv**, **boilerpipeR**, **colourlovers**, **curl**, **d3Network**, **dataRetrieval**, **downloader**, **ecoretriever**, **enigma**, **federalregister**, **ggvis**, **gmailr**, **indicoio**, **jSonarR**, **leafletR**, **magrittr**, **mailR**, **marmap**, **meteoForecast**, **paleobioDB**, **polidata**, **pollstR**, **pushoverr**, **pvsR**, **pxweb**, **rClinicalCodes**, **rFDSN**, **rNOMADS**, **rWBclimate**, **rYoutheria**, **rainfreq**, **rbitcoinchartsapi**, **rclinicaltrials**, **recalls**, **redcapAPI**, **reutils**, **rnbn**, **rnrfa**, **ropensecretsapi**, **rsdmx**, **rsunlight**, **shopifyr**, **slackr**, **sorvi**, **translateR**, **tumblR**, **ustyc**, **webutils**, **whisker**, **wikipediatrend**.

New contributed packages

ADDT Analysis of Accelerated Destructive Degradation Test Data. Authors: Yili Hong, Yimeng Xie, and Caleb King.

ARTool Aligned Rank Transform. Authors: Matthew Kay [aut, cre], Jacob O. Wobbrock [aut].

ASMap Linkage map construction using the MSTmap algorithm. Authors: Julian Taylor, David Butler.

ASPBay Bayesian Inference on Causal Genetic Variants using Affected Sib-Pairs Data. Author: Claire Dandine-Roulland.

BANFF Bayesian Network Feature Finder. Authors: Zhou Lan, Yize Zhao, Jian Kang, Tianwei Yu.

BAT Biodiversity Assessment Tools. Authors: Pedro Cardoso, Francois Rigal, Jose Carlos Carvalho.

BBEST Bayesian Estimation of Incoherent Neutron Scattering Backgrounds. Authors: Anton Gagin and Igor Levin with contributions from Charles R. Hogg III.

BEANSP Bayesian Estimate of Age-specific Nest Survival Probabilities. Authors: Chong He, Yiqun Yang, Jing Cao.

BHMSMAfMRI Bayesian hierarchical multi-subject multiscale analysis of functional MRI data. Authors: Nilotpal Sanyal [aut, cre], Marco A.R. Ferreira [aut].

BIOM.utils Utilities for the BIOM (Biological Observation Matrix) Format. Author: Daniel T. Braithwaite [aut, cre].

BNDataGenerator Data Generator based on Bayesian Network Model. Author: Jae-seong Yoo.

BNSP Bayesian Non- and Semi-parametric Model Fitting. Author: Georgios Papageorgiou.

BOIN Bayesian Optimal Interval Design for Phase I Clinical Trials. Authors: Ying Yuan and Suyu Liu.

BSGW Bayesian Survival Model using Generalized Weibull Regression. Authors: Alireza S. Mahani, Mansour T.A. Sharabiani.

BayClone2 Bayesian Feature Allocation Model for Tumor Heterogeneity. Authors: Juhee Lee, Peter Mueller, Subhajit Sengupta, Kamalakar Gulukota, Yuan Ji.

BayesMixSurv Bayesian Mixture Survival Models using Additive Mixture-of-Weibull Hazards, with Lasso Shrinkage and Stratification. Authors: Alireza S. Mahani, Mansour T.A. Sharabiani.

BayesianAnimalTracker Bayesian Melding of GPS and DR Path for Animal Tracking. Authors: Yang (Seagle) Liu [aut, cre], Brian C. Battaile [ctb]. In view: *SpatioTemporal*.

BinNonNor Data Generation with Binary and Continuous Non-normal Components. Authors: Gul Inan, Hakan Demirtas.

BlandAltmanLeh Plots (slightly extended) Bland-Altman plots. Author: Bernhard Lehnert.

CARBayesST Poisson Log-linear Models with Spatio-temporal Random Effects. Authors: Duncan Lee and Alastair Rushworth.

CEC Cross-Entropy Clustering. Authors: Konrad Kamieniecki [aut, cre], Przemyslaw Spurek [ctb].

CINOEDV Co-Information based N-Order Epistasis Detector and Visualizer. Author: Junliang Shang.

CLME Constrained Inference for Linear Mixed Effects Models. Author: Casey M. Jelsema.

CNOGpro Copy Numbers of Genes in prokaryotes. Authors: Ola Brynildsrud, Lars-Gustav Snipen.

COPASutils Tools for processing COPAS large-particle flow cytometer data. Authors: Tyler Shimko, Erik Andersen.

CP Conditional Power Calculations. Author: Andreas Kuehnapfel.

CVTuningCov Regularized Estimators of Covariance Matrices with CV Tuning. Author: Binhuan Wang.

CarletonStats Functions For Statistics Classes At Carleton College. Author: Laura Chihara.

CateSelection Categorical Variable Selection Methods. Authors: Yi Xu and Jixiang Wu.

CerioliOutlierDetection Outlier detection using the iterated RMCD method of Cerioli (2010). Authors: Christopher G. Green [aut, cre], R. Doug Martin [ths].

ClimClass Climate Classification According To Several Indices. Authors: Emanuele Eccel, Emanuele Cordano, Giambattista Toller.

CombinePValue Combine a Vector of Correlated p-values. Author: Hongying Dai.

CompGLM Conway-Maxwell-Poisson GLM and distribution functions. Author: Jeffrey Pollock.

Compind Composite indicators functions. Authors: Francesco Vidoli, Elisa Fusco.

CosmoPhotoz Photometric redshift estimation using Generalized Linear Models. Authors: Rafael S. de Souza, Alberto Krone-Martins, Jonathan Elliott, Joseph Hilbe.

CpGFilter CpG Filtering Method Based on Intra-class Correlation Coefficients. Author: Jun Chen.

Crossover Crossover Designs. Author: Kornelius Rohmeyer.

D2C Predicting Causal Direction from Dependency Features. Authors: Gianluca Bontempi, Catharina Olsen, Maxime Flauder.

DAMOCLES Dynamic Assembly Model Of Colonization, Local Extinction and Speciation. Authors: Rampal S. Etienne and Alex L. Pigot.

DDIwR DDI with R. Author: Adrian Dusa [aut, cre].

DLMtool Data-Limited Methods Toolkit. Author: Tom Carruthers.

DOvalidation Local Linear Hazard Estimation with Do-Validated and Cross-Validated Bandwidths. Authors: M.L. Gamiz, E. Mammen, M.D. Martinez-Miranda and J.P. Nielsen.

DStree Recursive Partitioning for Discrete-Time Survival Trees. Authors: Peter Mayer, Denis Larocque, Matthias Schmid. In view: *Survival*.

DepthProc Authors: Daniel Kosiorowski, Mateusz Bocian, Anna Wegrzynkiewicz and Zygmunt Zawadzki.

Deriv Symbolic Differentiation. Author: Andrew Clausen.

DetMCD DetMCD Algorithm (Robust and Deterministic Estimation of Location and Scatter). Authors: Vakili Kaveh [aut, cre], Mia Hubert [ths].

DynNom A Dynamic Nomogram for Linear and Generalized Linear Models as Shiny Applications. Authors: Amirhossein Jalali, Alberto Alvarez-Iglesias, John Newell.

EBglmnet Empirical Bayesian Lasso and Elastic Net Methods for Generalized Linear Models. Author: Anhui Huang.

EGRET Exploration and Graphics for RivEr Trends. Authors: Robert Hirsch [aut], Laura DeCicco [aut, cre].

EIAdata R Wrapper for the Energy Information Administration (EIA) API. Author: Matthew Brigida. In view: *WebTechnologies*.

EMDomics Earth Mover's Distance for Differential Analysis of Genomics Data. Authors: Daniel Schmolze [aut, cre], Andrew Beck [aut], Sheida Nabavi [aut].

ENMeval Automated runs and evaluations of ecological niche models. Authors: Robert Muscarella, Peter J. Galante, Mariano Soley-Guardia, Robert A. Boria, Jamie M. Kass, Maria Uriarte and Robert P. Anderson.

ENiRG Ecological Niche in R and GRASS. Authors: Fernando Canovas, Chiara Magliozzi, Jose Antonio Palazon-Ferrando, Frederico Mestre, Mercedes Gonzalez-Wanguemert.

EcoVirtual Simulation of Ecological Models. Authors: Alexandre Adalardo de Oliveira and Paulo Inacio Prado.

EffectTreat Prediction of Therapeutic Success. Authors: Wim Van der Elst, Ariel Alonso and Geert Molenberghs.

EnsembleBase Extensible Package for Parallel, Batch Training of Base Learners for Ensemble Modeling. Authors: Alireza S. Mahani, Mansour T.A. Sharabiani.

EnsembleCV Extensible Package for Cross-Validation-Based Integration of Base Learners. Authors: Mansour T.A. Sharabiani, Alireza S. Mahani.

EnsemblePCReg Extensible Package for Principal-Component-Regression-based Integration of Base Learners. Authors: Mansour T.A. Sharabiani, Alireza S. Mahani.

EnsemblePenReg Extensible Classes and Methods for Penalized-Regression-based Integration of Base Learners. Authors: Mansour T.A. Sharabiani, Alireza S. Mahani.

EpiDynamics Dynamic Models in Epidemiology. Authors: Oswaldo Santos Baquero [aut, cre], Fernando Silveira Marques [aut].

Eplot Plotting longitudinal series. Author: Eran Raviv.

FADA Variable selection for supervised classification in high dimension. Authors: Emeline Perthame, Chloe Friguet and David Causeur.

FAMILY A Convex Formulation for Modeling Interactions with Strong Heredity. Author: Asad Haris.

FDGcopulas Multivariate Dependence with FDG Copulas. Authors: Gildas Mazo, Stephane Girard.

FPDclustering PD-Clustering and Factor PD-Clustering. Authors: Cristina Tortora and Paul D. McNicholas.

FRESA.CAD FeatuRE Selection Algorithms for Computer Aided Diagnosis. Author: Jose Gerardo Tamez-Pena.

FatTailsR Power Hyperbolic Functions and Kiener Distributions. Author: Patrice Kiener. In view: *Distributions*.

FeatureHashing Creates a Model Matrix via Feature Hashing With a Formula Interface. Author: Wush Wu [aut, cre].

ForIT Functions from the 2nd Italian Forest Inventory (INFC). Authors: Nicola Puletti, Marco Mura, Cristiano Castaldi, Maurizio Marchi, Ugo Chiavetta, Roberto Scotti.

ForwardSearch Forward Search using asymptotic theory. Author: Bent Nielsen.

Frames2 Estimation in dual frame surveys. Authors: Antonio Arcos, Maria del Mar Rueda, Maria Giovanna Ranalli and David Molina.

FreeSortR Free Sorting data analysis. Author: Philippe Courcoux.

FunctionalNetworks An algorithm for gene and gene set network inference. Author: Alejandro Quiroz-Zarate.

GCAI.bias Guided Correction Approach for Inherited bias (GCAI.bias). Author: Guoshuai Cai.

GCPM Generalized Credit Portfolio Model. Author: Kevin Jakob. In view: *Finance*.

GENLIB Genealogical Data Analysis. Authors: Louis Houde [aut], Jean-Francois Lefebvre [aut], Valery Roy-Lagace [aut], Sebastien Lemieux [aut], Michael J. Fromberger [ctb], Marie-Helene Roy-Gagnon [cre].

GLDreg Fit GLD Regression Model and GLD Quantile Regression Model to Empirical Data. Authors: Steve Su, with contributions from the R Core Team.

GMDH Predicting and Forecasting Time Series via GMDH-Type Neural Network Algorithms. Authors: Osman Dag, Ceylan Yozgatligil. In view: *TimeSeries*.

GPC Generalized Polynomial Chaos. Authors: Miguel Munoz Zuniga and Jordan Ko.

GPareto Gaussian Processes for Pareto Front Estimation and Optimization. Authors: Mickael Binois, Victor Picheny.

GUILDS Implementation of sampling formulas for the unified neutral model of biodiversity and biogeography, with or without guild structure. Author: Thijs Janzen.

GUIProfiler Profiler Graphical User Interface. Authors: Fernando de Villar and Angel Rubio. In view: *HighPerformanceComputing*.

GenWin Spline Based Window Boundaries for Genomic Analyses. Author: Timothy M. Beissinger.

GeneticSubsetter Identify Favorable Subsets of Germplasm Collections. Authors: Ryan C. Graebner and Alfonso Cuesta-Marcos.

GeoDE A geometrical Approach to Differential expression and gene-set enrichment. Authors: Neil R. Clark and Avi Ma'ayan.

GlobalOptions Generate Functions to Get or Set Global Options. Author: Zuguang Gu.

GrammR Graphical Representation and Modeling of Metagenomic Reads. Authors: Deepak N. Ayyala, Shili Lin.

HSSVD Biclustering with Heterogeneous Variance. Authors: Guanhua Chen [aut, cre], Michael Kosorok [aut], Shannon Holloway [ctb].

HWxtest Exact Tests for Hardy-Weinberg Proportions. Author: Bill Engels.

HiDimMaxStable Inference on High Dimensional Max-Stable Distributions. Authors: Alexis Bienvenüe [aut, cre], Christian Robert [aut].

HierO A graphical user interface for calculating power and sample size for hierarchical data. Author: Kari Tokola.

IDPSurvival Imprecise Dirichlet Process for Survival Analysis. Authors: Francesca Mangili, Alessio Benavoli, Cassio P. de Campos, Marco Zaffalon. In view: *Survival*.

IRTShiny Item Response Theory via Shiny. Authors: William Kyle Hamilton, Atsushi Mizumoto. In view: *Psychometrics*.

ISOpureR Deconvolution of Tumour Profiles. Authors: Gerald Quon [aut], Catalina V Anghel [aut, trl], Syed Haider [aut], Francis Nguyen [aut], Amit G Deshwar [aut], Quaid D Morris [aut], Paul C Boutros [aut, cre].

InvariantCausalPrediction Invariant Causal Prediction. Author: Nicolai Meinshausen.

JAGUAR Joint Analysis of Genotype and Group-specific Variability Using a Novel Score Test Approach to Map eQTL. Authors: Chaitanya R. Acharya and Andrew S. Allen.

JMdesign Joint Modeling of Longitudinal and Survival Data – Power Calculation. Authors: Emil A. Cornea, Liddy M. Chen, Bahjat F. Qaqish, Haitao Chu, and Joseph G. Ibrahim.

KODAMA Knowledge discovery by accuracy maximization. Authors: Stefano Cacciatore, Claudio Luchinat, Leonardo Tenori.

LDRTools Tools for Linear Dimension Reduction. Authors: Eero Liski [aut, cre], Klaus Nordhausen [aut], Hannu Oja [aut], Anne Ruiz-Gazen [aut].

LakeMetabolizer Tools for the analysis of ecosystem metabolism. Authors: Luke Winslow, Jake Zwart, Ryan Batt, Jessica Corman, Hilary Dugan, Paul Hanson, Gordon Holtgrieve, Aline Jaimes, Jordan Read, Richard Woolway.

LinCal Static Univariate Frequentist and Bayesian Linear Calibration. Authors: Derick L. Rivers and Edward L. Boone.

LinRegInteractive Interactive Interpretation of Linear Regression Models. Author: Martin Meermeyer. In view: *Econometrics*.

LindenmayeR Functions to Explore L-Systems (Lindenmayer Systems). Author: Bryan Hanson [aut, cre].

MATA Model-Averaged Tail Area Wald (MATA-Wald) Confidence Interval. Author: Daniel Turek [aut, cre].

MAVIS Meta Analysis via Shiny. Authors: William Kyle Hamilton, Atsushi Mizumoto. In view: *MetaAnalysis*.

MCAvariants Multiple Correspondence Analysis Variants. Author: Rosaria Lombardo.

MCS Model Confidence Set Procedure. Authors: Leopoldo Catania and Mauro Bernardi.

MGL Module Graphical Lasso. Author: Safiye Celik.

MGRASTer API Client for the MG-RAST Server of the US DOE KBase. Author: Daniel T. Braithwaite [aut, cre].

MGSDA Multi-Group Sparse Discriminant Analysis. Author: Irina Gaynanova.

MOrder Check Time Homogeneity and Markov Chain Order. Authors: Akshay Chougule, Robert Canales.

MPAgenomics Multi-Patient Analysis of Genomic Markers. Authors: Quentin Grimonprez with contributions from Guillemette Marot and Samuel Blanck. Some functions use code created by Sjoerd Vosse, Mark van de Wiel, Pierre Neuvial, Henrik Bengtsson.

MRH Multi-Resolution Estimation of the Hazard Rate. Authors: Yolanda Hagar, Yuanting Chen, Vanja Dukic.

MRSP Multinomial Response Models with Structured Penalties. Author: Wolfgang Poess-necker.

MSIseq Assess Tumor Microsatellite Instability with a Decision Tree Classifier from Exome Somatic Mutations. Author: Mini Huang.

MST Multivariate Survival Trees. Authors: Xiaogang Su, Peter Calhoun, and Juanjuan Fan. In view: *Survival*.

MVar.pt Analise Multivariada (Brazilian Portuguese). Authors: Paulo Cesar Ossani and Marcelo Angelo Cirillo.

MareyMap Estimation of meiotic recombination rates using marey maps. Authors: Aurelie Siberchicot, Clement Rezvoy, Delphine Charif, Laurent Gueguen and Gabriel Marais.

MatchingFrontier Computation of the Balance Sample Size Frontier in Matching Methods for Causal Inference. Authors: Gary King, Christopher Lucas, and Richard Nielsen.

MenuCollection Collection of Configurable GTK+ Menus. Author: Gianmarco Polotti.

MetFns Analysis of Visual Meteor Data. Author: Kristina Veljkovic.

MetaLandSim Metapopulation and Landscape Simulation. Authors: Frederico Mestre, Fernando Canovas, Ricardo Pita, Antonio Mira, Pedro Beja.

MfUSampler Multivariate-from-Univariate (MfU) MCMC Sampler. Authors: Alireza S. Mahani, Mansour T.A. Sharabiani.

MixGHD Model Based Clustering, Classification and Discriminant Analysis Using the Mixture of Generalized Hyperbolic Distributions. Authors: Cristina Tortora, Ryan P. Browne, Brian C. Franczak and Paul D. McNicholas.

MixedTS Mixed Tempered Stable Distribution. Authors: Lorenzo Mercuri, Edit Rroji.

MultNonParam Multivariate Nonparametric Methods. Authors: John E. Kolassa and Stephane Jankowski.

MultiSV Identification of structural variations in multiple populations based on whole genome resequencing. Author: Khurram Maqbool.

NB Maximum Likelihood method in estimating effective population size from genetic data. Author: Tin-Yu Hui.

NHANES NHANES data. Authors: Randall Pruim, Daniel Kaplan, Nicholas Horton.

NHMM Bayesian NHMM Modeling (Multiple Time Series). Author: Tracy Holsclaw.

NISTunits Fundamental Physical Constants and Unit Conversions from NIST. Author: Jose Gama [aut, cre].

NORTARA Generation of Multivariate Data with Arbitrary Marginals. Author: Po Su [aut, cre].

NPBayesImpute Non-parametric Bayesian Multiple Imputation for Categorical Data. Authors: Quanli Wang, Daniel Manrique-Vallier, Jerome P. Reiter and Jingchen Hu.

NeuralNetTools Visualization and Analysis Tools for Neural Networks. Author: Marcus W. Beck [aut, cre].

ONETr Efficient authenticated interaction with the O*NET API. Author: Eric Knudsen. In view: *WebTechnologies*.

OptionPricing Option Pricing with Efficient Simulation Algorithms. Authors: Kemal Dingec, Wolfgang Hormann. In view: *Finance*.

OutrankingTools Functions for Solving Multiple-criteria Decision-making Problems. Author: Michel Prombo.

P2C2M Posterior Predictive Checks of Coalescent Models. Authors: Michael Gruenstaeudl, Noah Reid.

PANDA Preferential Attachment Based Common Neighbor Distribution Derived Functional Associations. Authors: Hua Li and Pan Tong.

PANICr PANIC Tests of Nonstationarity. Author: Steve Bronder.

PASWR2 Probability and Statistics with R, Second Edition. Author: Alan T. Arnholt.

PGICA Parallel Group ICA Algorithm. Authors: Shaojie Chen, Lei Huang, Huitong Qiu, Ani Eloyan, Brian Caffo and Ciprian Crainiceanu. In view: *HighPerformanceComputing*.

PHENIX Phenotypic Integration Index. Authors: R. Torices, A. J. Muñoz-Pajares.

PLSbiplot1 The Partial Least Squares (PLS) Biplot. Authors: Opeoluwa F. Oyedele [aut, cre], Sugnet Gardner-Lubbe [aut].

PLordprob Multivariate Ordered Probit Model via Pairwise Likelihood. Authors: Euloge Clovis Kenne Pagui [aut, cre], Antonio Canale [aut], Alan Genz [ctb], Adelchi Azzalini [ctb].

PRROC Precision-Recall and ROC Curves for Weighted and Unweighted Data. Authors: Jan Grau and Jens Keilwagen.

ParallelForest Random Forest Classification with Parallel Computing. Author: Bertram Ieong [aut, cre, cph].

PepPrep Insilico peptide mutation, digestion and homologous comparison. Author: Rafael Dellen.

PerFit Person Fit. Author: Jorge N. Tendeiro.

PhyActBedRest Marks periods of sleep in Actigraph accelerometer data. Authors: J. Dustin Tracy, Zhiyi Xu, Leena Choi, Sari Acra, Kong Y. Chen, Maciej S. Buchowski.

PolyPatEx Paternity exclusion in autopolyploid species. Author: Alexander Zwart.

PrevMap Geostatistical Modelling of Spatially Referenced Prevalence Data. Authors: Emanuele Giorgi, Peter J. Diggle.

QoLR Analysis of Health-Related Quality of Life in oncology. Author: Amelie Anota.

QualInt Test for Qualitative Interactions. Authors: Lixi Yu, Eun-Young Suh, Guohua (James) Pan.

Quor Quantile Ordering. Authors: Adriano Polpo, Carlos A. de B. Pereira, Cassio P. de Campos.

R6 Classes with reference semantics. Author: Winston Chang [aut, cre].

RAM R for Amplicon-based Metagenomics. Authors: Wen Chen and Joshua Simpson.

RAMP Regularized Generalized Linear Models with Interaction Effects. Authors: Yang Feng, Ning Hao and Hao Helen Zhang.

RAdwords Loading Google Adwords Data Into R. Authors: Johannes Burkhardt, Matthias Bannert.

RCMIP5 Tools for Manipulating and Summarizing CMIP5 Data. Authors: Ben Bond-Lamberty [aut], Kathe Todd-Brown [aut, cre].

RConics Computations on Conics. Author: Emanuel Huber.

RCryptsy Access to Cryptsy Crypto-Currency Exchange Public Information API via R. Author: William Kyle Hamilton. In view: *WebTechnologies*.

RDML Importing real-time thermo cycler (qPCR) data from RDML format files. Authors: Konstantin A. Blagodatskikh [cre, aut], Stefan Roediger [aut], Michal Burdukiewicz [aut].

RDataCanvas Basic Runtime Support for Datacanvas.io. Author: Xiaolin Zhang [aut, cre]. In view: *WebTechnologies*.

RECA Relevant Component Analysis for Supervised Distance Metric Learning. Author: Nan Xiao.

REDCapR Interaction between R and REDCap. Authors: Will Beasley [aut, cre], David Bard [ctb], Thomas Wilson [ctb], John J Aponte [ctb], Rollie Parrish [ctb], Benjamin Nutter [ctb], Andrew Peters [ctb].

RGA A Google Analytics API client for R. Authors: Artem Klevtsov [aut, cre], Philipp Upravitelev [ctb], Olga Shramko [ctb]. In view: *WebTechnologies*.

RGoogleAnalytics R Wrapper for the Google Analytics API. Authors: Michael Pearmain. Contributions from Nick Mihailowski, Vignesh Prajapati, Kushan Shah and Nicolas Remy. In view: *WebTechnologies*.

RJSDMX R Interface to SDMX Web Services. Authors: Attilio Mattiocco, Diana Nicoletti, Gianpaolo Lopez. In view: *WebTechnologies*.

RMKdiscrete Sundry Discrete Probability Distributions. Author: Robert M. Kirkpatrick.

RMOA Connect R with MOA for Massive Online Analysis. Authors: Jan Wijffels [aut, cre], BNOSAC [cph].

RMOAjars External jars required for package **RMOA**. Author: See file AUTHORS.

RMRAINGEN R Multi-site RAINfall GENeretor: generate daily time series of rainfall from monthly mean values. Author: Emanuele Cordano.

RNeXML Implement semantically rich I/O for the NeXML format. Authors: Carl Boettiger [cre, aut], Scott Chamberlain [aut], Hilmar Lapp [aut], Kseniia Shumelchyk [aut], Rutger Vos [aut]. In view: *Phylogenetics*.

RODBCext Parameterized queries extension for **RODBC**. Authors: Mateusz Zoltak [aut, cre], Brian Ripley [aut], Michael Lapsley [aut].

RPANDA Phylogenetic ANalyses of DiversificAtion. Author: Hélène Morlon [aut, cre, cph].

RRreg Correlation and Regression Analyses for Randomized Response Data. Authors: Daniel W. Heck [aut, cre], Morten Moshagen [aut].

RSQLServer SQL Server R Database Interface (DBI). Authors: Imanuel Costigan [aut, cre], The jTDS Project [aut] (for MSSQL Server driver), Simon Urbanek [ctb], The Legion Of The Bouncy Castle [cph, ctb].

RStars Access to the Digital Universe Data set API. Author: William Kyle Hamilton. In view: *WebTechnologies*.

RSurveillance Design and Analysis of Disease Surveillance Activities. Author: Evan Sergeant.

RTDE Robust Tail Dependence Estimation. Authors: Christophe Dutang [aut, cre], Armelle Guillou [ctb], Yuri Goegebeur [ctb]. In view: *Distributions*.

RTriangle A 2D Quality Mesh Generator and Delaunay Triangulator. Authors: Jonathan Shewchuk, David C. Sterratt.

Ramd Tools For Managing File/function Dependencies In R. Author: Robert Krzyzanowski.

RcmdrMisc R Commander Miscellaneous Functions. Authors: John Fox [aut, cre], Robert Muenchen [ctb], Dan Putler [ctb].

RcmdrPlugin.EcoVirtual Rcmdr EcoVirtual Plugin. Authors: Alexandre Adalardo de Oliveira and Paulo Inacio Prado.

RcmdrPlugin.RMTCJags R MTC Jags **Rcmdr** Plugin. Author: Marcelo Goulart Correia.

RcmdrPlugin.ROC Rcmdr Receiver Operator Characteristic Plug-In package. Authors: Daniel-Corneliu Leucuta [aut, cre], Mihaela Hedesiu [ctb], Andrei Achimas [ctb], Oana Almasan [ctb].

RcppAnnoy Rcpp Bindings for Annoy, a Library for Approximate Nearest Neighbors. Author: Dirk Eddelbuettel.

RcppDL Deep Learning Methods via **Rcpp**. Authors: Qiang Kou, Yusuke Sugomori.

RcppMLPACK Rcpp Integration for MLPACK Library. Authors: Qiang Kou, Ryan Curtin.

RcppParallel Parallel programming tools for **Rcpp**. Authors: JJ Allaire; Romain Francois; Intel, Inc.; Marcus Geelnard.

Rdsdp R Interface to DSDP Semidefinite Programming Library. Authors: Zhisu Zhu, Yinyu Ye (DSDP by Steve Benson, Yinyu Ye and Xiong Zhang).

RealVAMS Multivariate VAM Fitting. Authors: Andrew Karl, Jennifer Broatch, and Jennifer Green.

RegressionFactory Expander Functions for Generating Full Gradient and Hessian from Single- and Multi-Slot Base Distributions. Authors: Alireza S. Mahani, Mansour T.A. Sharabiani.

ReorderCluster Reordering the dendrogram according to the class labels. Authors: Natalia Novoselova, Frank Klawonn, Junxi Wang.

RmixmodCombi Combining Mixture Components for Clustering. Authors: J.-P. Baudry and G. Celeux.

RootsExtremaInflections Finds roots, extrema and inflection points of a curve. Author: Demetris T. Christopoulos. In view: *NumericalMathematics*.

RoughSetKnowledgeReduction Simplification of Decision Tables using Rough Sets. Author: Alber Sanchez.

SBRect Detecting structural breaks using rectangle covering (non-parametric method). Authors: Paul Fischer [aut, cre, cph], Astrid Hilbert [ctb, cph].

SCEPtERbinary Stellar CharactEristics Pisa Estimation gRid for Binary Systems. Authors: Matteo Dell'Omodarme [aut, cre], Giada Valle [aut].

SEAsic Score Equity Assessment summary index computation. Authors: Anne Corinne Huggins-Manley [aut, cre], Douglas Whitaker [aut].

SOD SOD for multidimensional scaling. Author: Martin Jakt.

SOR Estimation using Sequential Offsetted Regression. Authors: Lee S. McDaniel, Jonathan S. Schildcrout.

SPREDA Statistical Package for Reliability Data Analysis. Authors: Yili Hong, Yimeng Xie, and Zhibing Xu.

SQDA Sparse Quadratic Discriminant Analysis. Author: Jiehuan Sun.

SSrat Two-dimensional sociometric status determination with rating scales. Author: Hans Landsheer.

ScoreGGUM Score Persons Using the Generalized Graded Unfolding Model. Authors: David R. King and James S. Roberts.

SelvarMix Regularization for variable selection in model-based clustering and discriminant analysis. Authors: Mohammed Sedki, Gilles Celeux, Cathy Maugis-Rabusseau.

SimplicialCubature Numerical integration of functions over simplices. Authors: John P. Nolan, with parts based on code by Alan Genz. In view: *NumericalMathematics*.

SoundexBR Phonetic-Coding For Portuguese. Author: Daniel Marcelino.

SphericalK Spherical K-function. Authors: Scott Robeson, Ao Li, Chunfeng Huang.

StatMethRank Statistical Methods for Ranking Data. Author: Li Qinglong.

Statomica Statomica utility package. Authors: Zahra Montazeri, Alaa Ali, Kyle Leckett, Marta Padilla and David R. Bickel.

TDA Statistical Tools for Topological Data Analysis. Authors: Brittany T. Fasy, Jisu Kim, Fabrizio Lecci, Clement Maria.

TDboost A Boosted Nonparametric Tweedie Model. Authors: Yi Yang, Wei Qian, Hui Zou.

TEEReg Trimmed Elemental Estimation for Linear Models. Authors: Wei Jiang and Matthew S. Mayo. In view: *Robust*.

TR8 A tool for downloading functional traits data for plant species. Author: Gionata Bocci. In view: *WebTechnologies*.

TRSbook Functions and Datasets to Accompany the Book "The R Software: Fundamentals of Programming and Statistical Analysis". Authors: Pierre Lafaye de Micheaux, Remy Drouilhet, Benoit Liquet.

TableMonster Table Monster. Author: Grant Izmirlian Jr.

UPMASK Unsupervised Photometric Membership Assignment in Stellar Clusters. Authors: Alberto Krone-Martins, Andre Moitinho.

USAboundaries Historical Boundaries of the United States of America, 1629–2000. Authors: Lincoln Mullen [aut, cre], Dr. William M. Scholl Center for American History and Culture, The Newberry Library [cph].

V8 Embedded JavaScript Engine. Author: Jeroen Ooms.

W3CMarkupValidator R Interface to W3C Markup Validation Services. Author: Kurt Hornik [aut, cre]. In view: *WebTechnologies*.

WRS2 Wilcox Robust Estimation and Testing. Authors: Patrick Mair [cre, aut], Felix Schoenbrodt [aut], Rand Wilcox [aut]. In view: *Robust*.

Watersheds Spatial Watershed Aggregation and Spatial Drainage Network Analysis. Author: J.A. Torres.

WaveletComp Computational Wavelet Analysis. Authors: Angi Roesch and Harald Schmidbauer.

WhiteStripe Whitestripe White Matter Normalization for Magnetic Resonance Images. Authors: Taki Shinohara, John Muschelli.

aRxiv Interface to the arXiv API. Authors: Karthik Ram [aut], Karl Broman [aut, cre]. In view: *WebTechnologies*.

acid Analysing Conditional Distributions of Income. Author: Alexander Sohn.

acnr Annotated Copy-Number Regions. Authors: Morgane Pierre-Jean and Pierre Neuvial.

acp Autoregressive Conditional Poisson. Author: Siakoulis Vasileios.

activity Animal Activity Statistics. Author: Marcus Rowcliffe.

adaptDA Adaptive Mixture Discriminant Analysis. Author: Charles Bouveyron.

addreg Additive Regression for Discrete Data. Author: Mark Donoghoe.

adwave Wavelet Analysis of Genomic Data from Admixed Populations. Author: Jean Sanderson.

alleHap Allele simulation and Haplotype reconstruction from pedigree databases. Authors: Nathan Medina-Rodriguez and Angelo Santana.

analogueExtra Additional functions for use with the **analogue** package. Author: Gavin L. Simpson [aut, cre].

anim.plots Simple Animated Plots For R. Author: David Hugh-Jones.

aoos Another Object Orientation System. Author: Sebastian Warnholz.

apc Age-period-cohort analysis. Author: Bent Nielsen.

aplore3 Datasets from Hosmer, Lemeshow and Sturdivant, "Applied Logistic Regression" (3rd ed.). Author: Luca Braglia [aut, cre].

aprean3 Datasets from Draper and Smith "Applied Regression Analysis" (3rd ed., 1998). Author: Luca Braglia [aut, cre].

archdata Example Datasets from Archaeological Research. Author: David L. Carlson.

archiDART Plant Root System Architecture Analysis Using DART Output Files. Authors: Benjamin M Delory, Caroline Baudson, Yves Brostaux, Patrick du Jardin, Loic Pages, Pierre Delaplace.

archivist Tools for Storing, Restoring and Searching for R Objects. Authors: Przemyslaw Biecek [aut, cre], Marcin Kosinski [aut].

astrodatR Astronomical Data. Author: Eric D. Feigelson.

astrolibR Astronomy Users Library. Authors: Arnab Chakraborty and Eric D. Feigelson.

atmcmc Automatically Tuned Markov Chain Monte Carlo. Author: Jinyoung Yang.

attribrisk Population Attributable Risk. Authors: Louis Schenck, Elizabeth Atkinson, Cynthia Crowson, Terry Therneau.

babynames US baby names 1880–2013. Author: Hadley Wickham [aut, cre].

bamboo Protein Secondary Structure Prediction Using the Bamboo Method. Author: David B. Dahl.

bayou Bayesian fitting of Ornstein-Uhlenbeck models to phylogenies. Authors: Josef C. Uyeda, Jon Eastman and Luke Harmon.

bde Bounded Density Estimation. Authors: Guzman Santafe, Borja Calvo, Aritz Perez and Jose A. Lozano.

bdscale Remove Weekends and Holidays From **ggplot2** Axes. Author: Dave Mills.

bglm Bayesian Estimation in Generalized Linear Models. Authors: Nicolas Molano-Gonzalez, Edilberto Cepeda-Cuervo.

binequality Methods for Analyzing Binned Income Data. Authors: Samuel V. Scarpino, Paul von Hippel, and Igor Holas.

binr Cut Numeric Values Into Evenly Distributed Groups. Author: Sergei Izrailev.

bio3d Biological Structure Analysis. Authors: Barry Grant, Xin-Qiu Yao, Lars Skjaerven, Julien Ide.

biogram N-Gram Analysis of Biological Sequences. Authors: Michal Burdukiewicz [cre, aut], Piotr Sobczyk [aut], Chris Lauber [aut].

blocksdesign Nested Block Designs for Unstructured Treatments. Author: R. N. Edmondson.

blsAPI Request Data From The U.S. Bureau of Labor Statistics API. Author: Michael Silva.

bnormnlr Bayesian Estimation for Normal Heteroscedastic Nonlinear Regression Models. Authors: Nicolas Molano-Gonzalez, Marta Corrales Bossio, Maria Fernanda Zarate, Edilberto Cepeda-Cuervo.

bootSVD Fast, Exact Bootstrap Principal Component Analysis for High Dimensional Data. Author: Aaron Fisher.

boral Bayesian Ordination and Regression AnaLysis. Author: Francis K.C. Hui.

breakaway Species richness estimation and modelling. Authors: Amy Willis and John Bunge.

broom Convert Statistical Analysis Objects Into Tidy Data Frames. Authors: David Robinson [aut, cre], Matthieu Gomez [ctb], Boris Demeshev [ctb], Hadley Wickham [ctb].

btf Estimates univariate function via Bayesian trend filtering. Author: Edward A. Roualdes.

bvarsv Bayesian Analysis of a Vector Autoregressive Model with Stochastic Volatility and Time-Varying Parameters. Author: Fabian Krueger.

causaleffect Deriving Expressions of Joint Interventional Distributions in Causal Models. Author: Santtu Tikka.

cdcsis Conditional Distance Correlation and Its Related Feature Screening Method. Authors: Canhong Wen, Wenliang Pan, Mian Huang, and Xueqin Wang.

cents Censored time series. Authors: A.I. McLeod, Nagham M. Mohammad, Justin Veenstra and Abdel El-Shaarawi.

checkpoint Install Packages from Snapshots on the Checkpoint Server for Reproducibility. Author: Revolution Analytics.

childsds Calculation of standard deviation scores adduced from different growth standards. Author: Mandy Vogel [aut, cre].

choiceDes Design Functions for Choice Studies. Author: Jack Horne [aut, cre].

choroplethrAdmin1 Contains an Administrative-Level-1 Map of the World. Author: Ari Lamstein.

choroplethrMaps Contains maps used by the **choroplethr** package. Author: Ari Lamstein.

cjoint AMCE Estimator for Conjoint Experiments. Authors: Anton Strezhnev, Jens Hainmueller, Daniel Hopkins, Teppei Yamamoto.

classyfire Robust multivariate classification using highly optimised SVM ensembles. Authors: Eleni Chatzimichali and Conrad Bessant.

cmprskQR Analysis of Competing Risks Using Quantile Regressions. Authors: Stephan Dlugosz, based on code from Limin Peng and Ruosha Li.

cmvnorm Complex multivariate Gaussian distribution. Author: Robin K. S. Hankin.

coenocliner Coenocline simulation. Authors: Gavin L. Simpson [aut, cre], Francisco Rodriguez-Sanchez [ctb].

commentr Print Nicely Formatted Comments for use in Script Files. Author: Erik Bulow.

compendiumdb Tools for Storage and Retrieval of Gene Expession Data. Authors: Umesh Nandal, Perry D. Moerland.

complmrob Robust Linear Regression with Compositional Data as Covariates. Author: David Kepplinger.

confidence Confidence Estimation of Environmental State Classifications. Authors: Willem M. G. M. van Loon [aut, cph], Dennis J. J. Walvoort [aut, cre].

cooptrees Cooperative aspects of optimal trees in weighted graphs. Author: Manuel Fontenla.

copCAR Fitting the copCAR regression model for discrete areal data. Authors: Emily Goren and John Hughes.

coreTDT TDT for compound heterozygous and recessive models. Authors: Yu Jiang, Andrew S Allen.

cosinor Tools for estimating and predicting the cosinor model. Author: Michael Sachs.

couchDB Connect and work with couchDB databases. Author: Aleksander Dietrichson.

coxinterval Cox-type models for interval-censored data. Authors: Audrey Boruvka and Richard J. Cook. In view: *Survival*.

cqrReg Quantile, Composite Quantile Regression and Regularized Versions. Authors: Jueyu Gao and Linglong Kong.

crayon Colored Terminal Output. Author: Gabor Csardi [aut, cre].

crossReg Confidence intervals for crossover points of two simple regression lines. Author: Sunbok Lee.

curl A Connection Interface to Libcurl. Author: Jeroen Ooms. In view: *WebTechnologies*.

dashboard Interactive Data Visualization with D3.js. Author: Johann Laurent.

dataRetrieval Retrieval Functions for USGS and EPA Hydrologic and Water Quality Data. Authors: Robert Hirsch [aut], Laura DeCicco [aut, cre], David Lorenz [aut]. In view: *WebTechnologies*.

db.r A Database Exploration Tool with Assisted Querying and Schema Exploration. Author: Greg Lamp.

dbarts Discrete Bayesian Additive Regression Trees Sampler. Authors: Hugh Chipman, Robert McCulloch, Vincent Dorie.

dcGOR Analysis of ontologies and protein domain annotations. Authors: Hai Fang and Julian Gough.

dcmr Attribute profile estimation using Diagnostic Classification Models and MCMC. Authors: Diane Losardo and Margi Dubal.

decompr Export Decomposition (Wang-Wei-Zhu and source). Authors: Bastiaan Quast [aut, cre], Fei Wang [aut], Victor Kummritz [aut].

deming Deming, Thiel-Sen and Passing-Bablock Regression. Author: Terry Therneau.

densityClust Clustering by fast search and find of density peaks. Author: Thomas Lin Pedersen.

descomponer Seasonal Adjustment by Frequency Analysis. Author: Francisco Parra.

dfcomb Phase I/II Adaptive Dose-Finding Design for Combination Studies. Authors: Marie-Karelle Riviere and Jacques-Henri Jourdan.

dfmta Phase I/II Adaptive Dose-Finding Design For MTA. Authors: Marie-Karelle Riviere and Jacques-Henri Jourdan.

diffeR Difference Metrics for Comparing Pairs of Maps. Authors: Robert Gilmore Pontius Jr., Alí Santacruz.

digitalPCR Estimate copy number for digital PCR. Author: Xutao Deng.

disposables Create Disposable R Packages for Testing. Author: Gabor Csardi [aut, cre].

documair Automatic Documentation for R packages. Authors: Jean-Baptiste Denis, Regis Pouillot, Kien Kieu.

dotenv Load environment variables from '.env'. Author: Gabor Csardi [aut, cre].

dslice Dynamic slicing. Authors: Chao Ye and Bo Jiang.

dummy Automatic Creation of Dummies with Support for Predictive Modeling. Authors: Michel Ballings and Dirk Van den Poel.

dunn.test Dunn's Test Of Multiple Comparisons Using Rank Sums. Author: Alexis Dinno.

dygraphs Interface to Dygraphs Interactive Time Series Charting Library. Authors: Dan Vanderkam [aut, cph] (dygraphs library), JJ Allaire [aut, cre] (R interface), RStudio [cph].

ecipex Efficient calculation of fine structure isotope patterns via Fourier transforms of simplex-based elemental models. Author: Andreas Ipsen.

ecoretriever R Interface to the EcoData Retriever. Authors: Daniel McGlinn [aut, cre], Ethan White [aut]. In view: *WebTechnologies*.

ecospat Spatial ecology miscellaneous methods. Authors: Olivier Broenniman, Blaise Petitpierre, Christophe Randin, Robin Engler, Frank Breiner, Manuela D'Amen, Loic Pellissier, Julien Pottier, Dorothea Pio, Ruben Garcia Mateo, Valeria Di Cola, Wim Hordijk, Anne Dubuis, Daniel Scherrer, Nicolas Salamin and Antoine Guisan.

ecoval Procedures for Ecological Assessment of Surface Waters. Authors: Nele Schuwirth and Peter Reichert with contributions by Simone Langhans.

edgeRun More Powerful Unconditional Testing of Negative Binomial Means for Digital Gene Expression Data. Author: Emmanuel Dimont.

eegkit Toolkit for Electroencephalography Data. Author: Nathaniel E. Helwig.

eegkitdata Data for package **eegkit**. Author: Nathaniel E. Helwig.

ega Error Grid Analysis. Author: Daniel Schmolze [aut, cre].

embryogrowth Tools to Analyze the Thermal Reaction Norm of Embryo Growth. Author: Marc Girondot.

emil Evaluation of Modeling without Information Leakage. Authors: Christofer Backlin, Mats Gustafsson.

empiricalFDR.DESeq2 Simulation-based False Discovery Rate in RNA-seq. Author: Mikhail V. Matz.

enigma R Client for the Enigma API. Author: Scott Chamberlain [aut, cre]. In view: *WebTechnologies*.

enpls Ensemble Partial Least Squares (EnPLS) Regression. Authors: Nan Xiao, Dong-Sheng Cao, Qing-Song Xu.

ensurer Ensure values at runtime. Author: Stefan Holst Milton Bache.

enviPick Peak picking for high resolution mass spectrometry data. Author: Martin Loos.

epi2loc Epistatic and penetrance models for two-locus genetic interactions. Authors: Raymond Walters, Charles Laurin, Gitta Lubke.

episplineDensity Density Estimation with Soft Information by Exponential Epi-splines. Authors: Sam Buttrey, Johannes Royset, and Roger Wets, based on the Matlab code of Royset and Wets.

exCon Interactive Exploration of Contour Data. Authors: Bryan Hanson [aut, cre], Kristina Mulry [ctb].

extlasso Maximum penalized likelihood estimation with extended lasso penalty. Authors: B N Mandal and Jun Ma.

falsy Define truthy and falsy values. Author: Gabor Csardi [aut, cre].

filenamer Easy Management of File Names. Author: David J. H. Shih.

flam Fits Piecewise Constant Models with Data-Adaptive Knots. Author: Ashley Petersen.

forestplot Advanced Forest Plot Using grid Graphics. Authors: Max Gordon [aut, cre], Thomas Lumley [aut, ctb].

frmhet Regression Analysis of Fractional Responses Under Unobserved Heterogeneity. Author: Joaquim J.S. Ramalho.

fueleconomy EPA fuel economy data. Author: Hadley Wickham [aut, cre].

funFEM Clustering in the Discriminative Functional Subspace. Author: Charles Bouveyron. In view: *Cluster*.

funHDDC Model-based clustering in group-specific functional subspaces. Authors: C. Bouveyron and J. Jacques. In view: *Cluster*.

fuzzyMM Map Matching Using Fuzzy Logic. Author: Nikolai Gorte.

gCat Graph-based two-sample tests for categorical data. Authors: Hao Chen and Nancy R. Zhang.

gapmap Functions for Drawing Gapped Cluster Heatmap with **ggplot2**. Author: Ryo Sakai.

geesmv Modified Variance Estimators for Generalized Estimating Equations. Author: Ming Wang.

gemmR General Monotone Model. Authors: Jeffrey Chrabaszcz [aut, cre], Joe Tidwell [aut], Michael Dougherty [aut].

gender Predict Gender from Names Using Historical Data. Authors: Lincoln Mullen [aut, cre], Cameron Blevins [ctb], Ben Schmidt [ctb].

genpathmox Generalized PATHMOX Algorithm for PLS-PM, LS and LAD Regression. Author: Giuseppe Lamberti [aut, cre].

geoBayes Analysis of geostatistical data using Bayes and empirical Bayes methods. Authors: Evangelos Evangelou, Vivekananda Roy.

geocodeHERE Wrapper for Nokia's HERE Geocoding API. Author: Cory Nissen [aut, cre].

gets General-to-Specific (GETS) Modelling and Indicator Saturation Methods. Authors: Felix Pretis, James Reade, Genaro Sucarrat. In view: *TimeSeries*.

ggRandomForests Visually Exploring Random Forests. Author: John Ehrlinger.

ggswissmaps Offers Various Swiss Maps as **ggplot2** Objects. Author: Sandro Petrillo Burri.

gimme Group Iterative Multiple Model Estimation. Author: Stephanie Lane.

glmvsd Variable Selection Deviation (VSD) Measures and Instability Tests for High-dimensional Generalized Linear Models. Authors: Ying Nan, Yi Yang, Yuhong Yang.

gmailr Access the Gmail RESTful API. Author: Jim Hester. In view: *WebTechnologies*.

gridGraphics Redraw Base Graphics Using grid Graphics. Author: Paul Murrell [cre, aut].

growfunctions Bayesian non-parametric dependent models for time-indexed functional data. Author: Terrance Savitsky.

hcp Change Point Estimation for Regression with Heteroscedastic Data. Authors: Stephen J. Ganocy, Jiayang Sun, and Yulei Wang.

heritability Marker-based Estimation of Heritability Using Individual Plant or Plot Data. Authors: Willem Kruijer, with a contribution from Ian White. Contains data collected by Padraic Flood and Rik Kooke.

hermite Generalized Hermite Distribution. Authors: David Moriña, Manuel Higueras and Pedro Puig.

hglm.data Data for The **hglm** Package. Authors: Xia Shen, Moudud Alam, Lars Ronnegard.

highD2pop Two-Sample Tests for Equality of Means in High Dimension. Author: Karl Gregory.

highTtest Simultaneous Critical Values for *t*-Tests in Very High Dimensions. Authors: Hongyuan Cao [aut], Michael Kosorok [aut], Shannon Holloway [aut, cre].

hillmakeR Perform occupancy analysis. Author: David Gilinson.

historydata Data Sets for Historians. Author: Lincoln Mullen [aut, cre].

hnp Half-Normal Plots with Simulation Envelopes. Authors: Rafael de Andrade Moral [aut, cre], John Hinde [aut], Clarice Garcia Borges Demetrio [aut].

hot.deck Multiple Hot-deck Imputation. Authors: Skyler Cranmer, Jeff Gill, Natalie Jackson, Andreas Murr, Dave Armstrong.

hpcwld High Performance Cluster Models Based on Kiefer-Wolfowitz Recursion. Author: Alexander Rumyantsev [aut, cre].

htmlTable Advanced Tables for Markdown/HTML. Author: Max Gordon.

htmlwidgets HTML Widgets for R. Authors: Ramnath Vaidyanathan, Joe Cheng, JJ Allaire, Yihui Xie, and Kenton Russell.

hydrostats Hydrologic indices for daily time series data. Author: Nick Bond.

iBATCGH Integrative Bayesian Analysis of Transcriptomic and CGH data. Author: Alberto Cassese.

iFes Incremental Feature Selection Algorithm accelerated by GPU. Authors: Qinghan Meng, Fengfeng Zhou.

ibeemd Irregular-lattice based ensemble empirical mode decomposition. Author: Maogui Hu.

ibelief Implementing Belief Functions. Author: Kuang Zhou; Arnaud Martin.

ibmdbR IBM In-Database Analytics for R. Author: IBM Corporation.

ica Independent Component Analysis. Author: Nathaniel E. Helwig.

icamix Estimation of ICA Mixture Models. Authors: Xiaotian Zhu, David R. Hunter.

iccbeta Multilevel model intraclass correlation for slope heterogeneity. Authors: Steven Andrew Culpepper [aut, cph, cre], Herman Aguinis [aut, cph].

iki.dataclim Consistency, Homogeneity and Summary Statistics of Climatological Data. Author: Boris Orlowsky.

ilc Lee-Carter Mortality Models using Iterative Fitting Algorithms. Authors: Zoltan Butt, Steven Haberman and Han Lin Shang.

imputeLCMD A collection of methods for left-censored missing data imputation. Author: Cosmin Lazar.

inTrees Interpret Tree Ensembles. Author: Houtao Deng.

indicoio A simple R Wrapper for the indico set of APIs. Author: Alexander Gedranovich. In view: *WebTechnologies*.

insuranceData A Collection of Insurance Datasets Useful in Risk Classification in Non-life Insurance. Authors: Alicja Wolny–Dominiak and Michal Trzesiok.

interAdapt A shiny application for designing adaptive clinical trials Authors: Aaron Fisher, Michael Rosenblum, Harris Jaffee.

interpretR Binary Classifier Interpretation Functions. Authors: Michel Ballings and Dirk Van den Poel.

ionflows Calculate the Number of Required Flows for Semiconductor Sequencing. Authors: Michael Bockmayr and Jan Budczies.

iosmooth Functions for smoothing with infinite order flat-top kernels. Authors: Timothy L. McMurry, Dimitris N. Politis.

ips Interfaces to Phylogenetic Software in R. Author: Christoph Heibl.

itertools2 Functions creating iterators for efficient looping. Authors: John A. Ramey, Kayla Schaefer.

ivprobit Instrumental variables probit model. Author: Zaghdoudi Taha.

jSonarR jSonar Analytics Platform API for R. Author: jSonar Inc. In view: *WebTechnologies*.

jiebaR Chinese Text Segmentation. Authors: Qin Wenfeng, and the authors of CppJieba for the included version of CppJieba.

jomo Multilevel Joint Modelling Multiple Imputation. Authors: Matteo Quartagno, James Carpenter.

knockoff Knockoff Filter. Authors: Rina Foygel Barber, Emmanuel Candes, Evan Patterson.

kofnGA A genetic algorithm for fixed-size subset selection. Author: Mark A. Wolters.

kpodclustr Method for Clustering Partially Observed Data. Authors: Jocelyn T. Chi [aut, cre], Eric C. Chi [ctb].

kselection Selection of *k* in *k*-means clustering. Author: Daniel Rodriguez Perez.

lakemorpho Lake morphometry in R. Author: Jeffrey W. Hollister [aut, cre].

landpred Landmark Prediction of a Survival Outcome. Author: Layla Parast.

lazyeval Lazy (Non-Standard) Evaluation. Authors: Hadley Wickham [aut, cre], RStudio [cph].

lbfgs Limited-memory BFGS Optimization. Authors: Antonio Coppola [aut, cre, cph], Brandon Stewart [aut, cph], Naoaki Okazaki [aut, cph], David Ardia [ctb, cph], Dirk Eddelbuettel [ctb, cph], Katharine Mullen [ctb, cph], Jorge Nocedal [ctb, cph]. In view: *Optimization*.

leaderCluster Leader Clustering Algorithm. Author: Taylor B. Arnold.

lefse Phylogenetic and Functional Analyses for Ecology. Author: Nathan G. Swenson.

lintr Static R Code Analysis. Author: Jim Hester [aut, cre].

lm.beta Add Standardized Regression Coefficients to lm-Objects. Author: Stefan Behrendt [aut, cre].

lmeVarComp Testing for a subset of variance components in linear mixed models. Author: Yichi Zhang.

lmenssp Linear Mixed Effects Models with Non-stationary Stochastic Processes. Authors: Ozgur Asar, Peter J. Diggle.

lmmot Multiple Ordinal Tobit (MOT) model. Author: Marvin N. Wright.

logbin Relative Risk Regression Using the Log Binomial Model. Author: Mark Donoghoe.

logconPH CoxPH Model with Log Concave Baseline Distribution. Author: Clifford Anderson-Bergman.

logitchoice Fitting L_2-regularized logit choice models via generalized gradient descent. Author: Michael Lim.

lpme Local Polynomial Estimator in Measurement Error Models. Authors: Haiming Zhou and Xianzheng Huang.

lucid Lucid Printing of Floating Point Numbers. Author: Kevin Wright.

lunar Lunar Phase & Distance, Seasons and Other Environmental Factors. Author: Emmanuel Lazaridis [aut, cre].

lvm4net Latent Variable Models for Networks. Author: Isabella Gollini.

m4fe Models for Financial Economics. Author: Nathan Esau.

maboost Binary and Multiclass Boosting Algorithms. Author: Tofigh Naghibi.

mads Multi-Analysis Distance Sampling. Author: Laura Marshall.

managelocalrepo Manage a CRAN-style Local Repository. Author: Imanuel Costigan.

manipulate Interactive Plots for RStudio. Authors: JJ Allaire [aut, cre] (R interface), RStudio [cph].

matR Metagenomics Analysis Tools for R. Authors: Daniel Braithwaite [aut, cre], Kevin Keegan [aut], University of Chicago [cph].

matchingMarkets Analysis of stable matchings. Author: Thilo Klein.

matpow matrix powers. Authors: Norm Matloff, Jack Norman.

mcc Moment Corrected Correlation. Author: Yi-Hui Zhou.

mdscore Improved Score Tests for Generalized Linear Models. Authors: Antonio Hermes M. da Silva-Junior [aut, cre], Damiao N. da Silva [aut], Silvia L. P. Ferrari [ctb].

mdsdt Functions for Analysis of Data with General Recognition Theory. Authors: Robert X.D. Hawkins, Joe Houpt, Noah Silbert, Leslie Blaha, Thomas D. Wickens.

measuRing Detection and Control of Tree-Ring Widths on Scanned Image Sections of Dendrochronological Samples. Authors: Wilson Lara, Carlos Sierra.

medflex Flexible Mediation Analysis using Natural Effect Models. Authors: Johan Steen [aut, cre], Tom Loeys [aut], Beatrijs Moerkerke [aut], Stijn Vansteelandt [aut], Joris Meys [ctb] (technical support), Theis Lange [ctb] (valuable suggestions).

megaptera MEGAPhylogeny Techniques in R. Author: Christoph Heibl.

metaMix Bayesian Mixture Analysis for Metagenomic Community Profiling. Author: Sofia Morfopoulou.

metafolio Metapopulation simulations for conserving salmon through portfolio optimization. Authors: Sean C. Anderson [aut, cre], Jonathan W. Moore [ctb], Michelle M. McClure [ctb], Nicholas K. Dulvy [ctb], Andrew B. Cooper [ctb].

metaplus Robust meta-analysis and meta-regression. Author: Ken Beath. In view: *Meta-Analysis*.

meteoForecast Numerical Weather Predictions. Authors: Oscar Perpinan Lamigueiro [cre, aut], Marcelo Pinho Almeida [ctb]. In view: *WebTechnologies*.

mfblock Fitting and Simulation of a block multifactor model. Author: Marc Fortier.

micropan Microbial Pan-genome Analysis. Authors: Lars Snipen and Kristian Hovde Liland.

miniCRAN Tools to create an internally consistent, mini version of CRAN with selected packages only. Authors: Revolution Analytics [aut], Andrie de Vries [aut, cre].

mipfp Multidimensional Iterative Proportional Fitting. Authors: Johan Barthelemy [aut, cre], Thomas Suesse [aut], Mohammad Namazi-Rad [ctb].

mirtCAT Computerized Adaptive Testing with Multidimensional Item Response Theory. Author: Phil Chalmers [aut, cre, cph]. In view: *Psychometrics*.

mkde 2D and 3D movement-based kernel density estimates (MKDEs). Authors: Jeff A. Tracey, James Sheppard, Jun Zhu, Robert Sinkovts, Amit Chourasia, Glenn Lockwood, and Robert N. Fisher. In view: *SpatioTemporal*.

mnormpow Multivariate Normal Distributions with Power Integrand. Authors: Alan Genz [ctb], Adelchi Azzalini [ctb], Alexis Bienvenüe [aut, cre], Christian Robert [aut].

moonBook Functions and Datasets for the Book by Keon-Woong Moon. Author: Keon-Woong Moon [aut, cre].

mosaicData Project MOSAIC (mosaic-web.org) data sets. Authors: Randall Pruim, Daniel Kaplan, Nicholas Horton.

mp Multidimensional Projection Techniques. Authors: Francisco M. Fatore, Samuel G. Fadel.

mpath Regularized Linear Models. Authors: Zhu Wang, with contributions from Achim Zeileis, Simon Jackman, Brian Ripley, Trevor Hastie, Rob Tibshirani, Balasubramanian Narasimhan, Gil Chu and Patrick Breheny.

mpcv Multivariate Process Capability Vector. Author: Krzysztof Ciupke.

mppa Statistics for analysing multiple simultaneous point processes on the real line. Authors: Patrick Rubin-Delanchy and Nicholas A Heard.

msBP Multiscale Bernstein Polynomials for Densities. Author: Antonio Canale.

msda Multi-class Sparse Discriminant Analysis. Authors: Qing Mai, Yi Yang, Hui Zou.

mtk Mexico ToolKit library (MTK). Authors: Juhui Wang [aut, cre] (software and engineering), Hervé Monod [aut] (applications and statistical methods), Robert Faivre [ctb] (applications and statistical methods), Hervé Richard [ctb] (software and engineering).

multiband Period Estimation for Multiple Bands. Authors: Eric C. Chi, James P. Long.

multibiplotGUI Multibiplot Analysis in R. Authors: Ana Belen Nieto Librero, Nora Baccala, Purificacion Vicente Galindo, Purificacion Galindo Villardon.

multipleNCC Weighted Cox-regression for nested case-control data. Authors: Nathalie C. Stoer, Sven Ove Samuelsen. In view: *Survival*.

multispatialCCM Multispatial Convergent Cross Mapping. Author: Adam Clark.

multiwayvcov Multi-way Standard Error Clustering. Authors: Nathaniel Graham and Mahmood Arai and Björn Hagströmer.

musicNMR Conversion of Nuclear Magnetic Resonance spectrum in audio file. Authors: Stefano Cacciatore, Edoardo Saccenti, Mario Piccioli.

mvglmmRank Multivariate Generalized Linear Mixed Models for Ranking Sports Teams. Authors: Andrew T. Karl, Jennifer Broatch.

mvprpb Orthant Probability of the Multivariate Normal Distribution. Author: Noboru Nomura.

mvrtn Mean and Variance of Truncated Normal Distribution. Author: Matthew McLeod.

mwaved Multichannel wavelet deconvolution with additive long memory noise. Author: Justin Rory Wishart.

myTAI A Framework to Perform Phylotranscriptomics Analyses for Evolutionary Developmental Biology Research. Author: Hajk-Georg Drost.

mycor Automatic Correlation and Regression Test in a Data Frame. Author: Keon-Woong Moon [aut, cre].

nabor Wraps libnabo, a fast *K* Nearest Neighbour library for low dimensions. Authors: Stephane Mangenat (for libnabo), Gregory Jefferis.

nasaweather Collection of datasets from the ASA 2006 data expo. Author: Hadley Wickham [aut, cre].

nat.nblast NeuroAnatomy Toolbox (**nat**) Extension for Assessing Neuron Similarity and Clustering. Authors: Greg Jefferis and James Manton.

nat.templatebrains NeuroAnatomy Toolbox (**nat**) Extension for Handling Template Brains. Authors: James Manton and Greg Jefferis.

netgsa Network-based Gene Set Analysis. Authors: Ali Shojaie and Jing Ma.

nettools A Network Comparison Framework. Authors: Michele Filosi [aut, cre], Roberto Visintainer [aut], Samantha Riccadonna [aut], Giuseppe Jurman [ctb], Cesare Furlanello [ctb].

networkD3 Tools for Creating D3 JavaScript Network Graphs from R. Authors: Christopher Gandrud, J.J. Allaire, and B.W. Lewis.

nicheROVER (Niche) (R)egion and Niche (Over)lap Metrics for Multidimensional Ecological Niches. Authors: Martin Lysy [aut, cre], Ashley D. Stasko [aut, ctb], Heidi K. Swanson [aut, ctb].

nlWaldTest Wald Test of nonlinear restrictions for regression parameters. Author: Oleh Komashko.

nlsem Fitting Structural Equation Mixture Models. Authors: Nora Umbach [aut, cre], Katharina Naumann [aut], David Hoppe [aut], Holger Brandt [aut], Augustin Kelava [ctb], Bernhard Schmitz [ctb].

nodiv Compares the Distribution of Sister Clades Through a Phylogeny. Author: Michael Krabbe Borregaard.

nonnest2 Tests of Non-nested Models. Authors: Edgar C. Merkle and Dongjun You. In view: *Econometrics*.

nontargetData Quantized simulation data of isotope pattern centroids. Authors: Martin Loos, Francesco Corona.

npsm Nonparametric Statistical Methods using R. Authors: John Kloke, Joseph McKean.

nscancor Non-Negative and Sparse CCA. Authors: Christian Sigg [aut, cre], R Core team [aut].

nsgp Non-Stationary Gaussian Process Regression. Author: Markus Heinonen.

nycflights13 Data about flights departing NYC in 2013. Author: Hadley Wickham [aut, cre].

oaxaca Blinder-Oaxaca decomposition. Author: Marek Hlavac.

occ Estimates PET neuroreceptor occupancies. Author: Joaquim Radua. In view: *Medical-Imaging*.

onlinePCA Online Principal Component Analysis. Author: David Degras.

openssl Bindings to OpenSSL. Author: Jeroen Ooms.

opentraj Tools for Creating and Analysing Air Trajectory Data. Author: Thalles Santos Silva.

optiscale Optimal scaling. Author: William G. Jacoby.

optrees Optimal Trees in Weighted Graphs. Author: Manuel Fontenla [aut, cre].

orderedLasso Ordered Lasso and Time-lag Sparse Regression. Authors: Jerome Friedman, Xiaotong Suo and Robert Tibshirani. In view: *TimeSeries*.

ordinalgmifs Ordinal Regression for High-dimensional Data. Authors: Kellie J. Archer, Jiayi Hou, Qing Zhou, Kyle Ferber, John G. Layne, Amanda Gentry.

ore An R Interface to the Oniguruma Regular Expression Library. Authors: Jon Clayden, based on Onigmo by K. Kosako and K. Takata.

orgR Analyse Text Files Created by Emacs' Org mode. Author: Yi Tang.

pBrackets Plot Brackets. Author: Andreas Schulz.

pRSR Test of periodicity using response surface regression. Author: M. S. Islam.

packrat A Dependency Management System for Projects and their R Package Dependencies. Authors: Kevin Ushey, Jonathan McPherson, Joe Cheng, JJ Allaire.

panelaggregation Aggregate Longitudinal Survey Data. Authors: Matthias Bannert [aut, cre], Gabriel Bucur [aut].

parsedate Recognize and Parse Dates in Various Formats, Including All ISO 8601 Formats. Authors: Gabor Csardi, Linus Torvalds.

pauwels2014 Bayesian Experimental Design for Systems Biology. Author: Edouard Pauwels.

pdR threshold regression and unit root test in panel data. Author: Ho Tsung-wu.

pedometrics Pedometric Tools and Techniques. Authors: Alessandro Samuel-Rosa [aut, cre], Lucia Helena Cunha dos Anjos [ths], Gustavo de Mattos Vasques [ths], Gerard B. M. Heuvelink [ths], Tony Olsen [ctb], Tom Kincaid [ctb], Juan Carlos Ruiz Cuetos [ctb], Maria Eugenia Polo Garcia [ctb], Pablo Garcia Rodriguez [ctb], Edzer Pebesma [ctb], Jon Skoien [ctb], Joshua French [ctb].

penMSM Estimating regularized multistate models using L_1 penalties. Author: Holger Reulen. In view: *Survival*.

pez Phylogenetics for the Environmental Sciences. Authors: William D. Pearse, Marc W. Cadotte, Jeannine Cavender-Bares, Caroline Tucker, Steve C. Walker, Matthew R. Helmus.

phylin Spatial interpolation of genetic data. Authors: Pedro Tarroso, Guillermo Velo-Anton, Silvia Carvalho.

picasso Pathwise Calibrated Sparse Shooting Algorithm. Authors: Xingguo Li, Tuo Zhao and Han Liu.

pingr Check If a Remote Computer is Up. Author: Gabor Csardi [aut, cre].

plotROC Generate Useful ROC Curve Charts for Print and Interactive Use. Author: Michael C Sachs.

pointdensityP Point density for geospatial data. Authors: Paul Evangelista and Dave Beskow.

polidata Political Data Interface in R. Authors: Eunjeong Park [aut, cre], Jong Hee Park [aut]. In view: *WebTechnologies*.

popKorn For interval estimation of mean of selected populations. Authors: Vik Gopal, Claudio Fuentes.

poplite Tools for simplifying the population and querying of SQLite databases. Author: Daniel Bottomly.

powerr Analysis of Power System. Author: Jingfan Sun [aut, cre].

prc Paired Response Curve. Author: Youyi Fong.

predictmeans Calculate Predicted Means for Linear Models. Authors: Dongwen Luo, Siva Ganesh and John Koolaard.

preseqR Predicting Species Accumulation. Authors: Chao Deng, Timothy Daley and Andrew D. Smith.

prettyunits Pretty, Human Readable Formatting of Quantities. Author: Gabor Csardi [aut, cre].

propOverlap Feature (gene) selection based on the Proportional Overlapping Scores. Authors: Osama Mahmoud, Andrew Harrison, Aris Perperoglou, Asma Gul, Zardad Khan, Berthold Lausen.

proteomics Statistical Analysis of High Throughput Proteomics Data. Author: Thomas W. D. Möbius.

pryr Tools for computing on the language. Authors: Hadley Wickham [aut, cre], R Core Team [ctb].

pxweb R interface to the PX-Web/PC-Axis API. Authors: Mans Magnusson, Leo Lahti, Love Hansson. In view: *WebTechnologies*.

qdapRegex Regular Expression Removal, Extraction, and Replacement Tools. Authors: Jason Gray [ctb], Tyler Rinker [aut, cre].

qdm Fitting a Quadrilateral Dissimilarity Model to Same-Different Judgments. Authors: Nora Umbach [aut, cre], Florian Wickelmaier [aut].

qgtools Tools for Quantitative Genetics Data Analyses. Authors: Jixiang Wu, Johnie N. Jenkins and Jack C. McCarty.

qicharts Quality Improvement Charts. Authors: Jacob Anhoej [aut, cre], Timo Roeder [ctb].

qqtest Quantile Quantile Plots Self Calibrating For Visual Testing. Author: Wayne Oldford [aut, cre].

quad Exact permutation moments of quadratic form statistics. Author: Yi-Hui Zhou.

qualCI Causal Inference with Qualitative and Ordinal Information on Outcomes. Authors: Konstantin Kashin, Adam Glynn, Nahomi Ichino.

rARPACK R wrapper of ARPACK for large scale eigenvalue/vector problems, on both dense and sparse matrices. Authors: Yixuan Qiu, Jiali Mei and authors of the ARPACK library. In view: *NumericalMathematics*.

rDEA Robust Data Envelopment Analysis (DEA) for R. Authors: Jaak Simm [aut, cre], Galina Besstremyannaya [aut].

rFDSN Get Seismic Data from the International Federation of Digital Seismograph Networks. Author: Daniel C. Bowman [aut, cre]. In view: *WebTechnologies*.

rJPSGCS R-interface to Gene Drop Simulation from JPSGCS. Authors: Sigal Blay [aut], Jinko Graham [aut], Brad McNeney [aut, cre], Annick Nembot-Simo [aut], Alun Thomas [ctb], Hin-Tak Leung [ctb].

rPref Routines to select and visualize the maxima for a given strict partial order. Author: Patrick Roocks.

rSPACE Spatially-Explicit Power Analysis for Conservation and Ecology. Authors: Martha Ellis, Jake Ivan, Jody Tucker, Mike Schwartz.

rYoutheria Access to the YouTheria mammal trait database. Author: Tom August. In view: *WebTechnologies*.

radar Fundamental Formulas for Radar. Authors: Jose' Gama [aut, cre], Nick Guy [aut].

rappdirs Application directories: determine where to save data, caches and logs. Authors: Hadley Wickham [trl, cre, cph], RStudio [cph], Sridhar Ratnakumar [aut], Trent Mick [aut], ActiveState [cph], Eddy Petrisor [ctb], Trevor Davis [trl, aut], Gabor Csardi [ctb], Gregory Jefferis [ctb].

rareGE Testing Gene-Environment Interaction for Rare Genetic Variants. Author: Han Chen.

rcbalance Large, Sparse Optimal Matching with Refined Covariate Balance. Author: Samuel D. Pimentel.

rcicr Reverse correlation image classification toolbox. Author: Ron Dotsch.

rclinicaltrials Download Aggregate Trial Information and Results from ClinicalTrials.gov. Author: Michael C Sachs. In view: *WebTechnologies*.

rcrossref R Client for Various CrossRef APIs. Authors: Carl Boettiger [aut], Ted Hart [aut], Scott Chamberlain [aut, cre], Karthik Ram [aut].

reconstructr Session Reconstruction and Analysis. Author: Oliver Keyes.

recosystem Recommender System using Matrix Factorization. Authors: Yixuan Qiu, Chih-Jen Lin, Yu-Chin Juan, Yong Zhuang, Wei-Sheng Chin and other contributors.

redcapAPI R interface to REDCap. Authors: Benjamin Nutter. Initiated by Jeffrey Horner and Will Gray with contributions from Jeremy Stephens, and Will Beasley. In view: *WebTechnologies*.

refset Subsets with Reference Semantics. Author: David Hugh-Jones.

refund.wave Wavelet-Domain Regression with Functional Data. Authors: Lan Huo, Philip Reiss and Yihong Zhao.

regexr Readable Regular Expressions. Author: Tyler Rinker [aut, cre].

remote Empirical Orthogonal Teleconnections in R. Authors: Tim Appelhans, Florian Detsch, Thomas Nauss.

replicationInterval Replication Interval Functions. Author: David Stanley.

repra Renewable Energy Probability Resource Assessment Tool (REPRA). Authors: Eduardo Ibanez [aut, cre], National Renewable Energy Laboratory [cph].

retistruct Retinal Reconstruction Program. Authors: David C. Sterratt [aut, cre, cph], Daniel Lyngholm [aut, cph].

rex Friendly Regular Expressions. Authors: Kevin Ushey [aut], Jim Hester [cre, aut].

rfUtilities Random Forests model selection and performance evaluation. Authors: Jeffrey S. Evans [aut, cre], Melanie A. Murphy [aut].

rfoaas R Interface to FOAAS. Author: Dirk Eddelbuettel.

rfordummies Code examples to accompany the book "R for Dummies". Authors: Andrie de Vries [aut, cre], Joris Meys [aut].

riskSimul Risk Quantification for Stock Portfolios under the t-Copula Model. Authors: Wolfgang Hormann, Ismail Basoglu. In view: *Finance*.

rivernet Read, Analyze and Plot River Networks. Author: Peter Reichert.

rjstat Read and write JSON-stat data sets. Authors: Aaron Schumacher, Håkon Malmedal.

rkvo Read Key/Value Pair Observations. Author: Vehbi Sinan Tunalioglu [aut, cre].

rmarkdown Dynamic Documents for R. Authors: JJ Allaire, Jonathan McPherson, Yihui Xie, Hadley Wickham, Joe Cheng, Jeff Allen.

rnaseqWrapper Wrapper for several R packages and scripts to automate RNA-seq analysis. Author: Mark Peterson.

rnbn Access NBN Data. Authors: Stuart Ball and Tom August. In view: *WebTechnologies*.

rncl An interface to the Nexus Class Library. Authors: Francois Michonneau [aut, cre], Ben Bolker [aut], Mark Holder [aut, cre], Paul Lewis [aut, cre], Brian O'Meara [aut, cre].

rnrfa UK National River Flow Archive data from R. Authors: Claudia Vitolo, Matthew Fry. In view: *WebTechnologies*.

robustDA Robust Mixture Discriminant Analysis. Authors: Charles Bouveyron and Stephane Girard. In view: *Robust*.

robustvarComp Robust Estimation of Variance Component Models. Authors: Claudio Agostinelli and Victor J. Yohai.

rodd Optimal Discriminating Designs. Author: Roman Guchenko [aut, cre].

ropensecretsapi Interface for the OpenSecrets.org API. Author: Thomas P. Fuller. In view: *WebTechnologies*.

rowr Row-based functions for R objects. Author: Craig Varrichio.

rpg Easy interface to advanced PostgreSQL features. Author: Timothy H. Keitt.

rplexos Read and Analyze PLEXOS Solutions from R. Authors: Eduardo Ibanez [aut, cre], National Renewable Energy Laboratory [cph].

rqPen Penalized Quantile Regression. Author: Ben Sherwood.

rsdmx Tools for Reading SDMX Data and Metadata. Authors: Emmanuel Blondel [aut, cre], Matthieu Stigler [ctb]. In view: *WebTechnologies*.

rsml Plant Root System Markup Language (RSML) File Processing. Author: Guillaume Lobet.

rstackdeque Persistent Fast Amortized Stack and Queue Data Structures. Author: Shawn T. O'Neil.

rsubgroup Subgroup Discovery and Analytics. Author: Martin Atzmueller.

rsunlight Interface to Sunlight Foundation APIs. Authors: Scott Chamberlain [aut, cre], Thomas J. Leeper [ctb]. In view: *WebTechnologies*.

rtdists Response time distributions. Authors: Scott Brown [aut], Matthew Gretton [aut], Andrew Heathcote [aut], Andreas Voss [ctb], Jochen Voss [ctb], Andrew Terry [ctb], Henrik Singmann [aut, cre].

rtkpp STK++ Integration To R Using **Rcpp**. Authors: Serge Iovleff [aut, cre], Vincent Kubicki [ctb], Quentin Grimonprez [ctb], Parmeet Bhatia [ctb].

rtype A strong type system for R. Author: Kun Ren.

rucm Implementation of Unobserved Components Model (UCM) in R. Author: Kaushik Roy Chowdhury.

ruv Detect and Remove Unwanted Variation using Negative Controls. Author: Johann Gagnon-Bartsch.

rvalues Computation of r-values for ranking in high-dimensional settings. Authors: Nicholas Henderson and Michael Newton.

rvest Easily Harvest (Scrape) Web Pages. Authors: Hadley Wickham [aut, cre], RStudio [cph].

saccades Detection of Fixations in Eye-Tracking Data. Author: Titus von der Malsburg [aut, cph, cre].

sads Maximum Likelihood Models for Species Abundance Distributions. Authors: Paulo I. Prado and Murilo Dantas Miranda.

saeSim Simulation Tools for Small Area Estimation. Author: Sebastian Warnholz.

saery Small Area Estimation for Rao and Yu Model. Authors: Maria Dolores Esteban Lefler, Domingo Morales Gonzalez, Agustin Perez Martin.

safi Sensitivity Analysis for Functional Input. Authors: Jana Fruth, Malte Jastrow.

sanitizers C/C++ source code to trigger Address and Undefined Behaviour Sanitizers. Author: Dirk Eddelbuettel.

saps Significance Analysis of Prognostic Signatures. Authors: Daniel Schmolze [aut, cre], Andrew Beck [aut], Benjamin Haibe-Kains [aut].

scrm Simulating the Evolution of Biological Sequences. Authors: Paul Staab [aut, cre, cph], Zhu Sha [aut, cph], Dirk Metzler [aut, cph, ths], Gerton Lunter [aut, cph, ths].

sdcTarget Statistical Disclosure Control Substitution Matrix Calculator. Author: Emmanuel Lazaridis [aut, cre].

secrlinear Spatially Explicit Capture-Recapture for Linear Habitats. Author: Murray Efford.

seedy Simulation of Evolutionary and Epidemiological Dynamics. Author: Colin Worby.

segmag Determine Event Boundaries in Event Segmentation Experiments. Authors: Frank Papenmeier [aut, cre], Konstantin Sering [ctb].

selectspm Select point patterns models based on minimum contrast and AIC. Author: Marcelino de la Cruz.

selfingTree Genotype Probabilities in Intermediate Generations of Inbreeding Through Selfing. Authors: Frank Technow [aut, cre].

sensory Simultaneous Model-Based Clustering and Imputation via a Progressive Expectation-Maximization (PEM) algorithm. Authors: Brian C. Franczak, Ryan P. Browne and Paul D. McNicholas.

settings Software Option Settings Manager for R. Author: Mark van der Loo.

shopifyr An R Interface to the Shopify API. Author: Charlie Friedemann. In view: *WebTechnologies*.

sievetest Sieve test reporting functions. Author: Petr Matousu.

sigloc Signal Location Estimation. Author: Sergey S. Berg.

signal.hsmm Predict Presence of Signal Peptides. Authors: Michal Burdukiewicz [cre, aut], Piotr Sobczyk [aut].

simPop Simulation of Synthetic Populations for Survey Data Considering Auxiliary Information. Authors: Bernhard Meindl, Matthias Templ, Andreas Alfons, Alexander Kowarik, with contributions from Mathieu Ribatet.

simTool Conduct Simulation Studies with a Minimal Amount of Source Code. Author: Marsel Scheer.

simrel Linear Model Data Simulation and Design of Computer Experiments. Author: Solve Sæbø.

sisVIVE Some Invalid Some Valid Instrumental Variables Estimator. Author: Hyunseung Kang.

sla Two-Group Straight Line ANCOVA. Authors: W. Gregory Alvord [aut, cre], Nick Carchedi [aut].

slackr Send messages, images, R objects and files to Slack.com channels/users. Authors: Bob Rudis and Jay Jacobs. In view: *WebTechnologies*.

sld Estimation and Use of the Quantile-Based Skew Logistic Distribution. Authors: Robert King, Paul van Staden.

slp Discrete Prolate Spheroidal (Slepian) Sequence Regression Smoothers. Authors: Wesley Burr, with contributions from Karim Rahim.

smac Sparse Multi-category Angle-Based Large-Margin Classifiers. Authors: Chong Zhang, Guo Xian Yau, Yufeng Liu.

smacpod Statistical Methods for the Analysis of Case-Control Point Data. Author: Joshua French.

smnet Smoothing For Stream Network Data. Author: Alastair Rushworth.

smoother Gaussian window smoothing. Author: Nicholas Hamilton.

snht Standard Normal Homogeneity Test. Author: Josh Browning.

snipEM Snipping methods for robust estimation and clustering. Authors: Alessio Farcomeni, Andy Leung.

snpRF Random Forest for SNPs to Prevent X-chromosome SNP Importance Bias. Authors: Fortran original by Leo Breiman and Adele Cutler, R port by Andy Liaw and Matthew Wiener. Modifications of randomForest v 4.6-7 for SNPs by Greg Jenkins based on a method developed by Stacey Winham, Greg Jenkins and Joanna Biernacka.

snpar Supplementary Non-parametric Statistics Methods. Author: Debin Qiu.

sns Stochastic Newton Sampler. Authors: Alireza S. Mahani, Asad Hasan, Marshall Jiang, Mansour T.A. Sharabiani.

sonicLength Estimating Abundance of Clones from DNA fragmentation data. Author: Charles Berry.

spThin Functions for Spatial Thinning of Species Occurrence Records for Use in Ecological Models. Authors: Matthew E. Aiello-Lammens, Robert A. Boria, Aleksandar Radosavljevic, Bruno Vilela, and Robert P. Anderson.

spanr Search Partition Analysis. Author: Roger Marshall.

spareserver Client side load balancing. Author: Gabor Csardi [aut, cre].

spark Sparklines in the R Terminal. Author: Gabor Csardi [aut, cre].

sparseSEM Sparse-aware Maximum Likelihood for Structural Equation Models. Author: Anhui Huang.

spatialnbda Performs spatial NBDA in a Bayesian context. Author: Glenna Nightingale.

spca Sparse Principal Component Analysis. Author: Giovanni Maria Merola.

spdynmod Spatio-dynamic wetland plant communities model. Authors: Javier Martinez-Lopez, Babak Naimi, Julia Martinez-Fernandez.

spiders Fits predator preferences model. Authors: Edward A. Roualdes and Simon Bonner.

spnet Plotting (social) networks on maps. Authors: Emmanuel Rousseaux, Marion Deville.

sprinter Framework for Screening Prognostic Interactions. Author: Isabell Hoffmann.

sprm Sparse and Non-Sparse Partial Robust M Regression. Authors: Sven Serneels, BASF Corp and Irene Hoffmann.

sptm SemiParametric Transformation Model Methods. Authors: Youyi Fong, Krisztian Sebestyen.

srd Draws Scaled Rectangle Diagrams. Author: Roger Marshall.

ssd Sample Size Determination (SSD) for Unordered Categorical Data. Authors: Junheng Ma and Jiayang Sun.

ssh.utils Local and remote system commands with output and error capture. Author: Sergei Izrailev.

stabs Stability Selection with Error Control. Authors: Benjamin Hofner [aut, cre], Torsten Hothorn [aut]. In view: *MachineLearning*.

statar Tools Inspired by Stata to Clean, Explore and Join Datasets. Author: Matthieu Gomez [aut, cre].

statcheck Extract statistics from articles and recompute p-values. Authors: Sacha Epskamp and Michele B. Nuijten.

statebins An alternative to choropleth maps for USA States. Author: Bob Rudis.

strataG Summaries and Population Structure Analyses of Haplotypic and Genotypic Data. Author: Eric Archer.

subgroup Methods for exploring treatment effect heterogeneity in subgroup analysis of clinical trials. Author: I. Manjula Schou.

subrank Computes copula using ranks and subsampling. Author: Jerome Collet.

sudokuAlt Tools for Making, Displaying and Spoiling Sudoku Games. Author: Bill Venables.

summarytools Dataframe Summaries, Frequency Tables and Numerical Summaries with Customizable Output. Author: Dominic Comtois.

survAccuracyMeasures Estimate accuracy measures for risk prediction markers from survival data. Authors: Yingye Zheng, Tianxi Cai, and Marshall Brown. In view: *Survival*.

svgViewR 3D Animated Interactive Visualizations using SVG. Author: Aaron Olsen.

sweidnumbr Handling of Swedish Identity Numbers. Author: Mans Magnusson.

swfscMisc Miscellaneous Functions for Southwest Fisheries Science Center. Author: Eric Archer.

synthpop Generating synthetic versions of sensitive microdata for statistical disclosure control. Authors: Beata Nowok, Gillian M Raab and Chris Dibben.

tcR Data Analysis of T-cell Receptor Repertoires. Authors: Vadim Nazarov, Mikhail Pogorelyy.

testthatsomemore A mocking, stubbing, and file testing framework extending **testthat**. Author: Robert Krzyzanowski [aut, cre].

textreg n-gram Text Regression, aka Concise Comparative Summarization. Author: Luke Miratrix.

thermocouple Temperature Measurement with Thermocouples, RTD and IC Sensors. Author: Jose Gama [aut, cre].

tidyr Easily Tidy Data with spread() and gather() Functions. Authors: Hadley Wickham [aut, cre], RStudio [cph].

timeseriesdb Store and Organize Time Series in a Database. Author: Matthias Bannert [aut, cre].

timma Target Inhibition Interaction using Maximization and Minimization Averaging. Author: Liye.

tlm Effects under Linear, Logistic and Poisson Regression Models with Transformed Variables. Authors: Jose Barrera-Gomez and Xavier Basagana.

tmap Thematic Maps. Author: Martijn Tennekes. In view: *OfficialStatistics*.

toxtestD Experimental design for binary toxicity tests. Authors: Nadia Keddig and Werner Wosniok.

traj Trajectory Analysis. Authors: Marie-Pierre Sylvestre, Dan Vatnik.

trajectories Classes and methods for trajectory data. Authors: Edzer Pebesma [cre, aut], Benedikt Klus [aut].

translateR Bindings for the Google and Microsoft Translation APIs. Authors: Christopher Lucas and Dustin Tingley. In view: *WebTechnologies*.

treatSens Sensitivity analysis for causal inference. Authors: Nicole Bohme Carnegie, Masataka Harada, Jennifer Hill.

treeclim Numerical calibration of proxy-climate relationships. Authors: Christian Zang [aut, cre, cph, trl], Franco Biondi [ctb, cph].

trimTrees Trimmed opinion pools of trees in a random forest. Authors: Yael Grushka-Cockayne, Victor Richmond R. Jose, Kenneth C. Lichtendahl Jr. and Huanghui Zeng, based on the source code from the **randomForest** package by Andy Liaw and Matthew Wiener and on the original Fortran code by Leo Breiman and Adele Cutler.

trotter Pseudo-Vectors Containing All Permutations, Combinations and Subsets of Objects Taken from a Vector. Author: Richard Ambler.

tsc Likelihood-ratio Tests for Two-Sample Comparisons. Authors: Yang Zhao, Albert Vexler, Alan Hutson.

tufterhandout Tufte-style HTML document format for rmarkdown. Author: Michael Sachs.

tumblR Tumblr API. Author: Andrea Capozio. In view: *WebTechnologies*.

tuple Find every match, or orphan, duplicate, triplicate, or other replicated values. Author: Emmanuel Lazaridis [aut, cre].

tvd Total Variation Denoising. Author: Mark Pinese [aut, cre, cph].

uniftest Tests for Uniformity. Authors: Maxim Melnik, Ruslan Pusev.

unittest TAP-compliant unit testing. Authors: Jamie Lentin [aut, cre], Anthony Hennessey [aut].

urltools Vectorised Tools for URL Handling and Parsing. Author: Oliver Keyes.

uskewFactors Model-based clustering via mixtures of unrestricted skew-*t* factor analyzer models. Authors: Paula M. Murray, Ryan P. Browne, and Paul D. McNicholas.

vartors Transform Definition of Variables to R Scripts. Authors: Joris Muller [aut, cre], Erik-André Sauleau [ctb].

vcrpart Tree-Based Varying Coefficient Regression for Generalized Linear and Ordinal Mixed Models. Authors: Reto Buergin [aut, cre, cph], Gilbert Ritschard [ctb, ths]. In view: *MachineLearning*.

vdmR Visual Data Mining Tools for R. Author: Tomokazu Fujino.

vegan3d Static and dynamic 3D plots for **vegan** package. Authors: Jari Oksanen [aut, cre], Roeland Kindt [aut], Gavin L. Simpson [aut].

vetools Tools for Venezuelan Environmental Data. Authors: Andrew Sajo-Castelli [aut, cre], Desiree Villalta [ctb], Lelys Bravo [ctb].

virtualspecies Generation of Virtual Species Distributions. Authors: Boris Leroy with help from C. N. Meynard, C. Bellard and F. Courchamp.

visova Visualization of Analysis of Variance. Author: Ali Vala Barbaros.

vudc Visualization of Univariate Data for Comparison. Author: Csaba Farago.

webutils Utility Functions for Web Applications. Author: Jeroen Ooms. In view: *WebTechnologies*.

wikipediatrend Public Subject Attention via Wikipedia Page Access Statistics. Authors: Peter Meissner [aut, cre], R Core team [ctb]. In view: *WebTechnologies*.

wildlifeDI Calculate Indices of Dynamic Interaction for Wildlife Telemetry Data. Author: Jed Long. In view: *SpatioTemporal*.

windex Analysing convergent evolution using the Wheatsheaf index. Authors: Kevin Arbuckle and Amanda Minter.

wrassp Interface to the ASSP Library. Authors: Raphael Winkelmann [aut, cre], Lasse Bombien [aut], Michel Scheffers [aut].

wux Wegener Center Climate Uncertainty Explorer. Authors: Thomas Mendlik, Georg Heinrich, Andreas Gobiet and Armin Leuprecht.

x.ent eXtraction of ENTity. Authors: Nicolas Turenne, Tien T. Phan.

xgboost eXtreme Gradient Boosting. Authors: Tianqi Chen, Tong He.

xtal Crystallization Toolset. Authors: Qingan Sun, Xiaojun Li.

ztable Zebra-Striped Tables in LATEX and HTML Formats. Author: Keon-Woong Moon [aut, cre].

Other changes

The following packages were moved to the Archive: **ARAMIS, ARTIVA, AWS.tools, Ace, AncestryMapper, Animal, BLCOP, BMAmevt, BOG, BaSAR, Barnard, BayesPen, BayesQTLBIC, BiomarkeR, CCMnet, CFL, CONOR, CONORData, CVD, DRI, DWD, Defaults, Devore6, DierckxSpline, ENA, ESPRESSO, EVER, FPDC, FRBData, FusedLasso, GOsummaries, HIBAG, HPO.db, HPOSim, JJcorr, KsPlot, LargeRegression, MASSI, MCMChybridGP, MFSAS, MIfuns, MLEP, MLPAstats, MMST, MVPARTwrap, MVpower, Mangrove, MiClip, MiscPsycho, MortalitySmooth, NHMMfdr, NMRS, Nemenyi, NetPreProc, OneHandClapping, PIN, PKmodelFinder, PKtools, POET, PSMix, PamGeneMixed, RAHRS, RBerkeley, RC, RDS, RECSO, REGENT, RHmm, RJSONLD, RMendeley, RMessenger, RNCBI, RNCBIAxis2Libs, RPPanalyzer, RSQLite.extfuns, RSocrata, RSpincalc, RcmdrPlugin.doBy, Rearrangement, RelativeRisk, Reot, Rgbp, Rgnuplot, Rjms, Rjmsjars, Rknots, SCEPtERextras, SDBP, SDDA, SRPM, STARSEQ, SesIndexCreatoR, SigTree, SimHap, StVAR, StateTrace, StreamingLm, TFDEA, TRIANG, TRIANGG, TSAgg, UBCRM, VisuClust, WebDevelopR, aCGH.Spline, acer,**

anaglyph, **anoint**, **ant**, **attfad**, **avgrankoverlap**, **biOps**, **biOpsGUI**, **bigRR**, **bigml**, **bilan**, **blockTools**, **bootfs**, **cacheSweave**, **cacher**, **capme**, **cgwtools**, **changeLOS**, **colbycol**, **comorbidities**, **complex.surv.dat.sim**, **confReg**, **conicfit**, **csound**, **cusp**, **dataone**, **dataonelibs**, **ddepn**, **dse1**, **dse2**, **easi**, **edmr**, **em2**, **emg**, **emplik2**, **factas**, **faisalconjoint**, **fork**, **fracprolif**, **gWidgetsWWW**, **gammSlice**, **gcExplorer**, **genomicper**, **glmperm**, **googlePublicData**, **gsmaRt**, **highriskzone**, **iScreen**, **icomp**, **ipw**, **iwtp**, **jmec**, **lancet.iraqmortality**, **latticist**, **ldDesign**, **lmPerm**, **lmbc**, **logistiX**, **logregperm**, **longclust**, **malaria.em**, **margie**, **marginalmodelplots**, **maticce**, **metrumrg**, **mixedQF**, **mixstock**, **modelcf**, **mrdrc**, **mseq**, **muRL**, **multicore**, **munsellinterpol**, **mvpart**, **mvtBinaryEP**, **nacopula**, **neuRosim**, **noia**, **nordklimdata1**, **nricens**, **oposSOM**, **optmatch**, **orthogonalsplinebasis**, **pacose**, **parspatstat**, **pcaPA**, **pcenum**, **pfa**, **pgnorm**, **phyext**, **playitbyr**, **plink**, **postCP**, **ppmlasso**, **ppstat**, **processdata**, **qfa**, **randomSurvivalForest**, **rcqp**, **rdyncall**, **review**, **rgexf**, **risaac**, **rknn**, **rmmseg4j**, **rocplus**, **roxygen**, **rrdf**, **rrdflibs**, **rwm**, **samplesize**, **scaleboot**, **seqminer**, **signalextraction**, **sigora**, **sltl**, **speedRlibTF**, **speedRlibs**, **sra**, **ssize.fdr**, **standGL**, **sugaR**, **survBayes**, **survJamda**, **survJamda.data**, **sweSCB**, **tilting**, **transmission**, **transnet**, **treelet**, **varcompci**, **vcf2geno**, **vimcom**, **visualizationTools**, **waldwolf**, **wccsom**, **weathermetrics**, **wild1**, **xgrid**

The following packages were resurrected from the Archive: BTSPAS, BayesTree, BcDiag, CGP, EstSimPDMP, HDPenReg, HiDimDA, LogicForest, MAVTgsa, OrdLogReg, PHYLOGR, RcmdrPlugin.FactoMineR, RcmdrPlugin.steepness, RecordLinkage, SparseTSCGM, SpatialPack, XLConnectJars, agsemisc, convevol, ecp, evtree, pgmm, rngSetSeed, sensitivityPStrat, sprint, tagcloud, tclust

The following packages had to be removed: **GWAtoolbox**, **Gmisc**, **LDExplorer**, **Rdrools**, **Rdroolsjars**, **WhopGenome**, **bstats**

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