R Optimization Task View Packages

Classification According to Subject

Source: http://cran.r-project.org/web/views/Optimization.html

What follows is an attempt to provide a by-subject overview of packages. The full name of the subject as well as the corresponding MSC 2010 code (if available) are given in brackets.

- **LP (Linear programming, 90C05):boot,clpAPI,cplexAPI,glpkAPI,limSolve,linprog,lpSolve,lpSolveAPI,quantreg,rcdd,Rcplex,Rglpk,Rmosek,Rsymphony**
- GO (Global Optimization):nloptr
- **SPLP (Special problems of linear programming like transportation, multi-index, etc., 90C08):clue,lpSolve,lpSolveAPI,optmatch,quantreg,TSP**
- BP (Boolean programming, 90C09):cplexAPI,glpkAPI,lpSolve,lpSolveAPI,Rcplex,Rglpk
- IP (Integer programming, 90C10):cplexAPI,glpkAPIlpSolve,lpSolveAPI,Rcplex,Rglpk,Rmosek,Rsymphony
- MIP (Mixed integer programming and its variants MILP for LP and MIQP for QP, 90C11):cplexAPI,glpkAPI,lpSolve,lpSolveAPI,Rcplex,Rglpk,Rmosek,Rsymphony
- QP (Quadratic programming, 90C20):cplexAPI,kernlab,limSolve,LowRankQP,quadprog,Rcplex,Rmosek
- SDP (Semidefinite programming, 90C22):Rcsdp
- **MOP (Multi-objective and goal programming, 90C29):goalprog,mco**
- NLP (Nonlinear programming, 90C30): Rdonlp2,Rsolnp
- **GRAPH (Programming involving graphs or networks, 90C35):igraph,sna**
- **IPM (Interior-point methods, 90C51):cplexAPI,kernlab,glpkAPI,LowRankQP,quantreg,Rcplex**
- RGA (Methods of reduced gradient type, 90C52): stats (`optim()`),gsl
- QN (Methods of quasi-Newton type, 90C53): stats (`optim()`),gsl,nloptr,ucminf
- DF (Derivative-free methods, 90C56):dfoptim,minqa,nloptr

Additionally:

- **LP Graphical Method and Interior-point method: intpoint**
- **Metaheuristics:**
  - **Genetic and Evolutionary Algorithms: GA, genalg, galgo, emoa (Evolutionary Multiobjective Optimization Algorithms)**
  - **Particle Swarm Optimization: PSO**
- **PERT (Program Evaluation and Review Technique): prevalence (function: betapert), mc2d (function: pert)**