

Numerical Solution of Initial and Boundary Value Problems in the open source software R.

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We present the R packages **deTestSet** and **bvpSolve** for the numerical solution of initial and boundary value problems. We give a brief introduction on the use of R in simulate fish population dynamics. The R package **deTestSet** is derived from the Test Set for Initial Value Problem Solvers available at <http://www.dm.uniba.it/~testset> which includes documentation of the test problems, experimental results from a number of proven solvers, and Fortran subroutines providing a common interface to the defining problem functions. Many of these facilities are now available in the R package **deTestSet**, which comprises an R interface to the test problems and to most of the Fortran solvers [1, 5, 4]. The R package **bvpSolve** includes an R interface to well known Fortran solvers and a set of challenges test problems [1, 2, 3]. The packages **deTestSet** and **bvpSolve** are free software distributed under the GNU General Public License, as part of the R open source software project [6].

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References

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