

Billups, Stephen C.; Dirkse, Steven P.; Ferris, Michael C.

A comparison of large scale mixed complementarity problem solvers. (English)

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Summary: This paper provides a means for comparing various computer codes for solving large scale mixed complementarity problems. We discuss inadequacies in how solvers are currently compared, and present a testing environment that addresses these inadequacies. This testing environment consists of a library of test problems, along with GAMS and MATLAB interfaces that allow these problems to be easily accessed. The environment is intended for use as a tool by other researchers to better understand both their algorithms and their implementations, and to direct research toward problem classes that are currently the most challenging. As an initial benchmark, eight different algorithm implementations for large scale mixed complementarity problems are briefly described and tested with default parameter settings using the new testing environment.

MSC:

90C33 Complementarity and equilibrium problems and variational inequalities (finite dimensions) (aspects of mathematical programming)

90C06 Large-scale problems in mathematical programming

49J40 Variational inequalities

Cited in **34** Documents

Keywords:

variational inequalities; large scale mixed complementarity

Software:

GAMS; QPCOMP; Matlab

Full Text: [DOI](#)