数学与系统科学研究院

计算数学所学术报告

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报告题目：

Experiments with linear and nonlinear optimization using Quad precision

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报告时间：2014 年 12 月 15 日（周一）

下午 14:00-15:00

报告地点：　数学院南楼七层 **702** 会议室

Abstract:

Systems biologists are developing increasingly large models of metabolism and integrated models of metabolism and macromolecular expression. Standard LP solvers do not give sufficiently accurate solutions, and exact simplex solvers are extremely slow. On a range of multiscale examples we find that 34-digit Quad floating-point achieves exceptionally small primal and dual infeasibilities (of order 10^{−30}) when no more than 10^{−15} is requested. We confirm this effect on 62 problems from the LPnetlib collection.

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