数学与系统科学研究院

计算数学所网络学术报告

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报告题目：

PDFO: Powell's derivative-free optimization solvers with MATLAB/Python interfaces

邀请人： 刘歆 研究员

报告时间：2020 年 5 月 13 日（周三）

上午 **10:00-11:00**

报告工具：腾讯会议

会议 ID： **713 245 722**

Abstract：

Besides other treasures, late Professor M. J. D. Powell left us five derivative-free optimization solvers that he coded in Fortran, namely COBYLA (1992), UOBYQA (2000), NEWUOA (2004), BOBYQA (2009), and LINCOA (2013). Professor Powell devised these solvers to tackle general nonlinear optimization problems of continuous variables with or without constraints using only function values but not derivatives of the objective function or nonlinear constraint functions. In practice, such functions are often black boxes defined by simulations, and the corresponding optimization problems are often categorized as black-box optimization or simulation-based optimization. Problems of this kind occur frequently in industrial and engineering applications, including circuit design, aircraft design, and machine learning. We will introduce the basic ideas of Powell's solvers, and present the PDFO package, which provides interfaces for calling these solvers from MATLAB and Python.

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欢迎大家参加！