

# 数学与系统科学研究院

## 计算数学所博士后定期学术报告

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报告题目:

**Exact penalty functions for  
zero-norm optimization problems**

报告时间: **2014 年 12 月 10 日 (周三)**

**下午 16: 00~17: 00**

报告地点: **数学院南楼七层**

**702 会议室**

## **Abstract:**

**This talk concerns with three classes of common zero-norm optimization problems which are the zero-norm minimization with quadratic constraint problem, the zero-norm regularized minimization problem, and the zero-norm constrained minimization problem. For each class of these problems, we establish a unified framework for constructing its exact penalty functions based on the problem itself, its augmented form, and its MPEC reformulation, respectively. These frameworks involve the differentiable quadratic penalty function. We also illustrate the potential applications of these exact penalty functions in the design of algorithms by proposing an algorithm with finite termination for the zero-norm minimization with quadratic constraint problem. Finally, preliminary computational results are reported.**

**欢迎大家参加！**