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：

Solving PDEs by deep neural networks: Two case studies

邀请人：于海军 研究员

报告时间：**2021** 年 **7** 月 **13** 日（周二）

上午 **10:00-11:00**

报告地点：科技综合楼

311 教室

Abstract:

Solving partial differential equations (PDEs) by deep neural networks has attracted significant attentions in recent years. In this presentation, I will discuss two case studies related to this topic: (1) How to understand loss landscapes of neural network models in solving PDEs; (2) How to find the optimal solution to machine-learning tasks with nondifferentiable activation functions.

For (1), we introduce a roughness index which is able to make a connection between the index value and the approximation accuracy. For (2), we design a derivative-free optimization method which is able to find the global minimizer of high-dimensional functions and is able to deal with non-differentiable objective functions.

欢迎大家参加！