



复旦大学数学科学学院 数学综合报告会

报告题目：**Kernel-based Approximation Methods for Partial Differential Equations: Deterministic or Stochastic Problems**

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报告时间：2017-01-17 星期二 10:00-11:00

报告地点：光华东主楼 1801

摘要：In this talk, we present the kernel-based approximation methods to solve the partial differential equations by the Gaussian process regressions defined on the kernel-based probability spaces induced from the positive definite kernels. We focus on the kernel-based regression solutions of the multiple Poisson equations. Using the kernel-based probability measures, we show many properties of the kernel-based regression solutions including approximate formulas, convergence, acceptable errors, and optimal initialization. Generally, we combine the knowledge and techniques of numerical analysis, regression analysis, and stochastic analysis to renew the theory of kernel-based approximation methods.

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