



复旦大学数学科学学院 数学综合报告会

报告题目: **Approximation properties, frames and embeddings for Banach and operator spaces**

报告人: 刘锐博士

(南开大学数学科学学院)

报告时间: 2017-11-02 星期四 16:00—17:00

报告地点: 光华楼东主楼 1403

摘要: We introduce the concept of (completely bounded) frames for Banach and operator spaces, show the connection with the (completely) bounded approximation property and complemented embedding, and give the duality theorems for frames and associated basis in Banach spaces. We also prove that a separable operator space has the completely bounded approximation property if and only if it has a completely bounded frame if and only if it is completely isomorphic to a completely complemented subspace of an operator space with a completely bounded basis. We give a concrete cb-frame for the reduced free group C^* -algebra $C^*_r(F_2)$ which is derived from the infinite convex decomposition of the canonical biorthogonal system. Finally, we show that, in contrast to Banach space case, the Oikhberg-Ricard Hilbertian operator space can not be completely isomorphic to a subspace of an operator space with a cb-basis. Also, we will mention some recent progress (joint with Zhong-Jin Ruan).

非线性数学模型与方法教育部重点实验室
中法应用数学国际联合实验室
上海市现代应用数学重点实验室
复旦大学数学研究所