复旦大学数学科学学院
数 学 综 合 报 告 会

报告题目：On a problem of Fritz, Netzer, and Thom

报告人：Isaac Goldbring (加州大学尔湾分校)

时间：2026-03-30 星期一 16:00 - 17:30

地点：光华楼西主楼2401

报告摘要：

After being open for 50 years, the Connes Embedding Problem (CEP) in operator algebras was settled several years ago as a consequence of the quantum complexity result MIP*=RE. One equivalent formulation of the CEP is that the group F2×F2 is residually finite-dimensional (RFD), where F2 is the free group on 2 generators. In their 2012 paper, Fritz, Netzer, and Thom proved that any RFD group G is such that the standard presentation of the universal group C*-algebra C   (G) is computable and thus raised the question as to whether or not the standard presentation of the universal group C*-algebra C   (F2×F2) is computable, for a negative answer to this question would refute the CEP. While MIP*=RE settled the CEP, it failed to resolve the question of Fritz, Netzer, and Thom. In this talk, I will show that the standard presentation of the universal group C*-algebra C   (F2×F2) is not computable, using an even more recent quantum complexity result known as MIPco=coRE. Time permitting, I will discuss related results. The work presented in this talk is joint with Thomas Sinclair. No prior knowledge of operator algebras or quantum complexity will be assumed.

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