报告题目：Exhaustive Families of Representations of $C^*$-algebras and Fredholm Groupoids (II)

报告人：乔雨（陕西师范大学）

时间：2020-08-20 星期四 14:00-15:00

地点：腾讯会议 ID: 743 166 781

报告摘要：A classical theorem states that if $M$ is a closed manifold and $P : H^s(M) \to H^{s-m}(M)$ is (considered as) a (bounded) pseudodifferential operator, then $P$ is Fredholm if and only if $P$ is elliptic. This theorem is no longer true for singular or noncompact manifolds. In the second talk, we would like to extend this theorem to singular setting via Lie groupoid techniques. We first recall the notion of manifolds with corners (following the work of Melrose). Next we present the concept of Fredholm Lie groupoids, which is a class of Lie groupoids for which certain characterization of Fredholm operators is valid, then give a characterization of Fredholm groupoids through exhaustive families, and finally adopt b-calculus, scattering calculus, and edge calculus in the framework of Fredholm Lie groupoids. This is joint work with Catarina Carvalho and Victor Nistor.