GRADUATE SEMINAR

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Completely Bounded Maps, Stinespring Representation, and Uniqueness

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Abstract:

In operator theory, an object of great relevance is the completely positive map. Much has already been explored on the topic, though the conditions on these mappings is rather restrictive. We ask, then, if there is a more general notion. To this end, we introduce completely bounded maps. From here, we will look at which properties translate nicely to this more general context, and which ones are problematic. Specifically, we will focus on the Stinespring representation for completely bounded maps, and ask under what conditions is this representation unique.



