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**Corey M Jones\*** ([corey.m.jones@vanderbilt.edu](mailto:corey.m.jones@vanderbilt.edu)). *Analytical Properties for Tensor Categories.*

Popa introduced analytical properties including amenability, the Haagerup property, and property (T) for finite index inclusions of  $II_1$  factors  $N \subseteq M$ , generalizing the notions familiar from the theory of discrete groups. Recently, Popa and Vaes provided a characterization of these definitions in the more algebraic setting of rigid  $C^*$ -tensor categories. Soon after their work, several different points of view on this topic have emerged. In this talk we discuss how these properties have natural interpretations from the point of view of the annular representation theory introduced by Jones, and we discuss applications of this viewpoint, namely that quantum  $G_2$  categories have property (T). (Received August 18, 2015)