

GRADUATE SEMINAR

Avner Sadikov

Establishing Stinespring's Dilation Theorem Upon K.R.Parthasarathy's Setting

MSc student supervised by Dr. Remus Floricel

Nov. 21st, 2022

3:30 pm

University of Regina

Location: CL 305 &

<https://uregina-ca.zoom.us/j/94125367372>

Meeting ID: 941 2536 7372

Abstract:

Within the world of quantum information and operator algebras, completely positive maps are convenient and effective tools for translation between various C^* -algebras. These mappings will be explored from finite to infinite dimensional spaces and useful consequences will be stated. To support this, important concepts such as Stinespring's dilation theorem and Arveson's extension theorem will be defined and briefly proved. Furthermore, the minimality and uniqueness properties of Stinespring's theorem will also be explored. After the base of information has been established, a theorem by K.R.Parthasarathy will be stated to discuss the current research direction for Stinespring's theorem in specified settings.