

# Probabilistic Operator Algebra Seminar

Organizer: Dan-Virgil Voiculescu

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Title: *On relations between additive and max-convolutions in classical, free and Boolean probability theory*

In 2010 Tucci gave the limit laws of multiplication of large numbers of freely independent bounded positive random variables. After that, Haagerup and Moeller extended Tucci's limit theorem to unbounded positive random variables. In this talk, we will firstly introduce the free max-convolution and Boolean max-convolution which are distributions of the maximum (in terms of Ando's order) of freely and Boolean independent random variables. The free max-convolution was defined by Ben Arous and Voiculescu in 2006. After that, the Boolean max-convolution was defined by Vargas and Voiculescu. Finally, we give relations between classical/free/Boolean additive convolutions and classical/free/Boolean max-convolutions, respectively via the Tucci-Haagerup-Moeller's limit theorem. This talk is based on a submitted paper (arXiv:2003.05382).