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## Selfdecomposable distributions in free probability

The class of selfdecomposable distributions constitutes an important and well-studied subclass of the infinitely divisible probability distributions in classical probability. It contains many prominent examples of classical probability laws; e.g. the stable distributions and the Gamma distributions. Around 2001 Barndorff-Nielsen and the speaker introduced the natural counterpart in free probability theory, *the freely selfdecomposable distributions*, which have since attracted considerable attention. In the first part of this talk I shall summarize some of the key features and examples of the freely selfdecomposable distributions. In 2011 Belinschi et al. established the rather surprising fact that the classical Gaussian distributions are freely infinitely divisible. In the last part of the talk I will present some very recent joint work with T. Hasebe and N. Sakuma, which we expect will lead to the conclusion that the classical Gaussians are in fact freely selfdecomposable.