1163-90-1143 **Ludovic Tangpi***, ludovic.tangpi@princeton.edu, and **Daniel Bartl**, daniel.bartl@univie.ac.at.

Non-Asymptotic rates for the estimation of risk measures.

Consider the problem of computing the riskiness of a financial position F written on the underlying S with respect to a general law invariant risk measure (for instance the average value at risk). In practice the true distribution of S is unknown and one needs to resort to historical data for the computation. In this talk we present rates of convergence results to the riskiness of F(S) when the distribution of S is estimated by its empirical measure given N observations. We will present (sharp) non-asymptotic rates for both the deviation probability and the expectation of the estimation error. This talk is based on a join work with Daniel Bartl. (Received September 14, 2020)