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## **“Statistical analysis and nuclear density functional theory: calibration and correlations”**

This talk comes from a nuclear physics perspective demonstrating how statistical analysis is used as powerful tool to explore the capabilities of a model and to deal properly with its uncertainties. At the side of the physics models, the talk will concentrate on one class of models, namely nuclear density functional theories. With that, it will go through applications with increasing complexity. It starts with calibration of the model parameters, then proceeds to a statistical analysis of extrapolation errors, model sensitivity and correlations. As most elaborate application, Bayesian statistics is used for an improved uncertainty analysis and model mixing.