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Ab initio in nuclear theory: what, why, and how

The ab initio method in nuclear theory can be interpreted as a systematically improvable approach for quantitatively describing nuclei using the finest resolution scale possible while maximizing its predictive capabilities. In this talk, I will highlight some recent developments in ab initio nuclear structure calculations, focusing on the use of Bayesian methods for uncertainty quantification. I will also discuss some of the challenges that we are facing.

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