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### **Computational perspectives in nuclear reactions**

FILOMENA NUNES, Michigan State University

Nuclear reactions are crucial to probe the structure of nuclei, in particular for unstable systems. They can also provide important astrophysical information. However, it is only in the last decade, as a wider variety of mechanisms are consistently included in the reaction model and more structure information is taken into account, that modelling nuclear reactions has become computationally intensive. In this talk I will give a snapshot of the state of the art calculations including some results on breakup and transfer reactions with light exotic nuclei. I will show some results on performance and will discuss the degree of parallelism in the codes as well as the bottlenecks we need to resolve when scaling up to Petaflops machines. Finally, I will conclude with a vision of where we would like to be in a decade.