

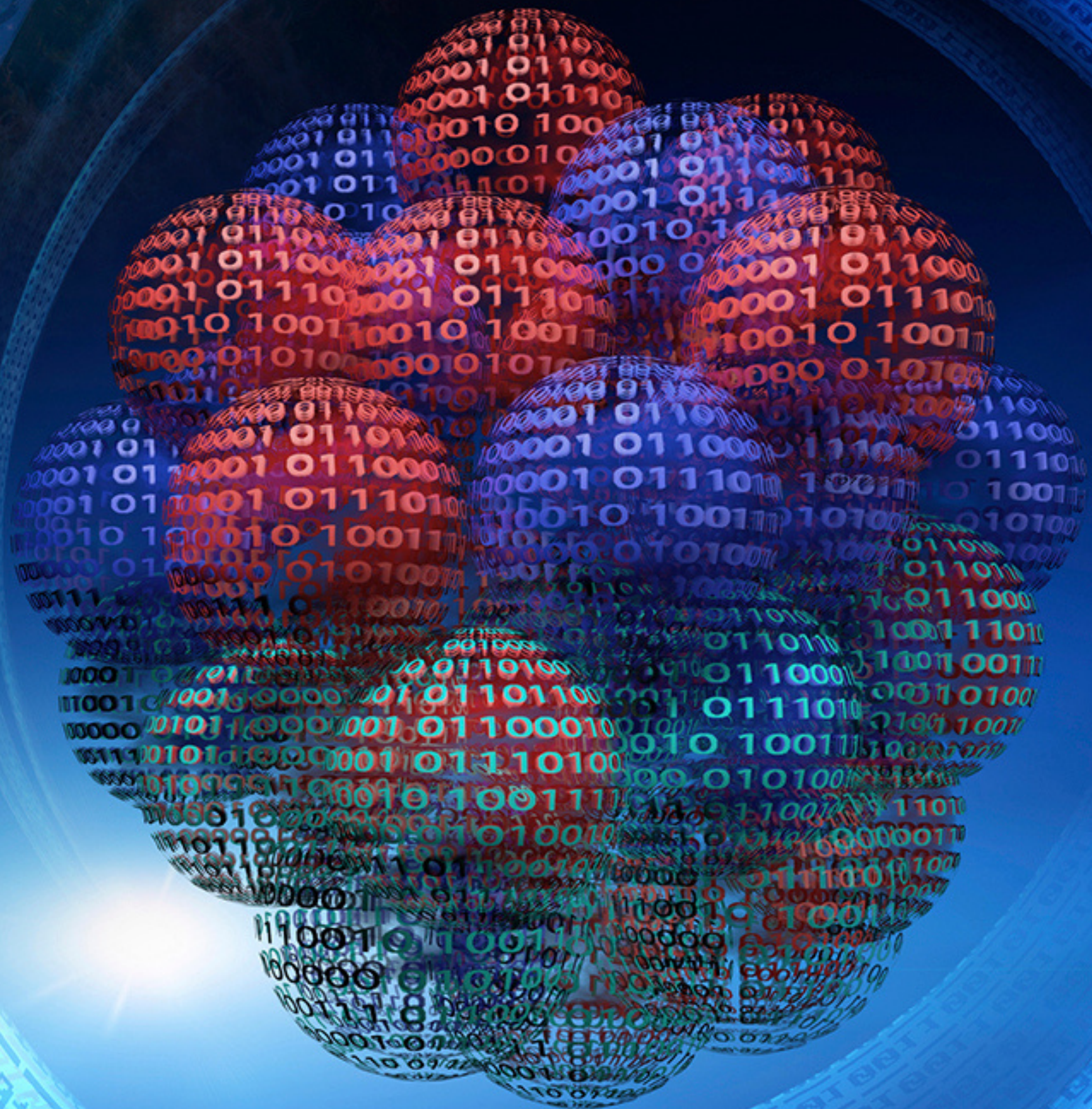
COMPUTING THE HEART OF MATTER

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April 29, 2024, 15:00 CET

https://www.youtube.com/live/zloU4UXZxiM?si=q2kQT3O0zCL_g6l



Atomic nuclei constitute the heart of matter. They drive the synthesis of chemical elements, serve as star fuel and as laboratories to test fundamental interactions and the Standard Model.

Today, thanks to advances in many-body theory and high performance computing, we can calculate nuclear structure and reactions in a unified way for increasingly large systems and estimate theoretical uncertainties.

I will present recent highlights that portrait the role of ab-initio calculations to tackle contemporary issues such as neutron skins in nuclei, giant dipole resonances, and lepton-nucleus cross sections.