



EINLADUNG

zum

VERA - SEMINAR

von

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## **What is the Atomic Nucleus Doing These Days?**

The atomic nucleus is a manifestation of a fundamental level of organization of matter. It is also a unique manifestation of the quantum mechanical many-body problem. This saga began with the nuclear shell model in 1949, followed soon after by the Bohr collective model in 1952, and the nuclear pairing model in 1958. Many other models have come and about as many other models have gone in the past 60 years.

Our understanding of nuclei is driven by experimental data. Our models have value for organizing data and designing new experiments; but they are only a “shadow”, at best, of nuclear structure. A presentation will be made of the current perspective of nuclear structure based upon the latest data; and a basic assessment of models and modeling of nuclear structure will be made.

### References:

- [1] David J. Rowe and John L. Wood, “Fundamentals of Nuclear Models: Foundational Models”, World Scientific (2010).
- [2] Kris Heyde and John L. Wood, “Shape Coexistence in Atomic Nuclei” Review of Modern Physics **83**, 1467 (2011).

Donnerstag, 31. Oktober 2019, 16:30 Uhr

**1090 Wien, Währinger Str. 17, "Kavalierstrakt",  
1. Stock, Victor-Franz-Hess Hörsaal**