



# Münchner Physik- Kolloquium

sommer  
2018

## Nuclear physics as precision science

**Prof. Dr. Ulf-G. Meißner**, *Universität Bonn and Forschungszentrum Jülich*

Monday, 9 April 2018, 17:15 h

Hörsaal 2, Physik-Department der TUM, Garching

Theoretical nuclear physics has entered a new era. Using the powerful machinery of chiral effective Lagrangians, the forces between two, three and four nucleons can now be calculated with unprecedented precision and with reliable uncertainties. Furthermore, Monte Carlo methods can be adopted to serve as a new and powerful approach to exactly solve nuclear structure and reactions. I discuss the foundations of these new methods and provide a variety of intriguing examples. Variations of the fundamental constants of Nature can also be investigated and the consequences for the element generation in the Big Bang and in stars are considered. This sheds new light on our anthropic view of the Universe.

## Student event: Meet the speaker

We invite you to a **student-only** discussion-round with Prof. Dr. Ulf-G. Meißner before his Munich Physics Colloquium talk.

*Be curious and feel free to ask any question.*

Monday, 9 April 2018, 16:00 h

Seminar room PH 3076 (upper floor), Physik-Department der TUM, James-Franck-Straße 1, Garching

