



# **Hermann Kümmel Early Achievement Award in Many-Body Physics**

Recent Progress in Many-Body Theories RPMBT22, Tsukuba, Japan

September, 23-27, 2024

- The International Advisory Committee responsible for the International Conference series on "Recent Progress in Many-Body Theories" and for awarding the Feenberg Medal, decided in 2005 (RPMBT-13) to establish a new award for young physicists whose published work is a significant contribution to quantum many-body theory.
- The title of this award, "**THE HERMANN KÜMMEL EARLY ACHIEVEMENT AWARD IN MANY-BODY PHYSICS**", honors Prof. Kümmel's long and distinguished career as a leader in the field and as a mentor for younger generations.

# Herman Kümmel

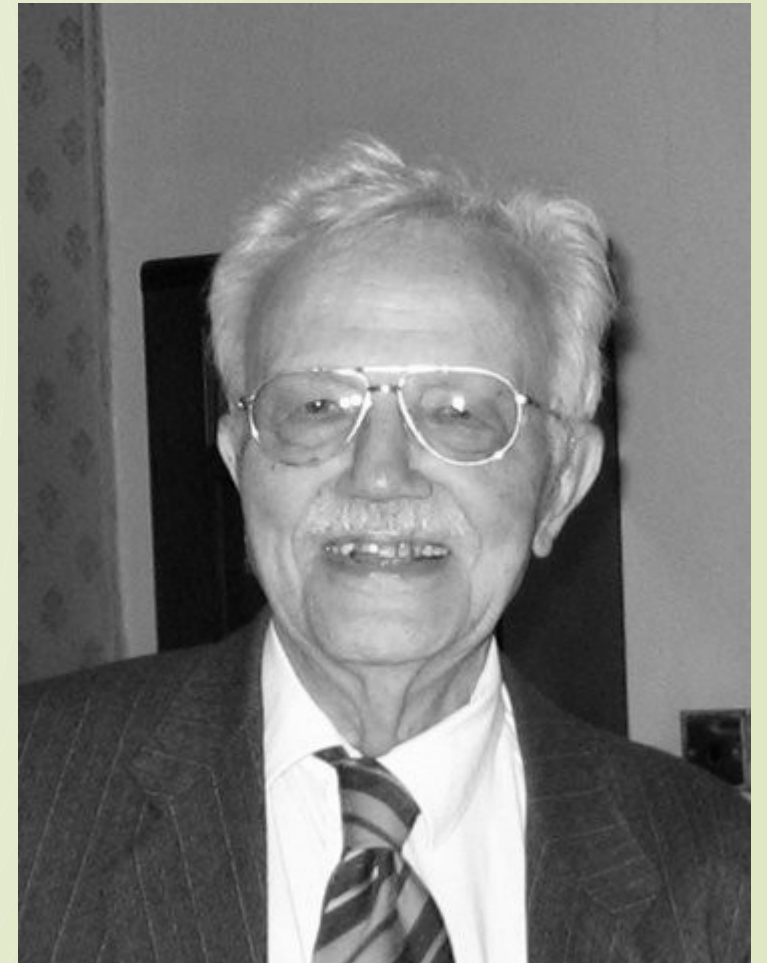
Born in 1922 in Berlin

Diploma degree in 1950 from Humboldt University in East Berlin,  
Ph.D. in Theoretical Physics from the Free University in West Berlin

Research associate in Iowa State University in Ames. With Fritz Coester established the foundations of the [coupled cluster method \(CCM\)](#)

In 1969 Professor Kümmel moved to the newly established Ruhr University in Bochum (RUB), Germany, where he established RUB as one of the world's leading centers in quantum many-body theory. Theoretical development and computational application of the CCM to nuclear systems and fermionic systems in general

Prof. Kümmel, together with Prof. Raymond Bishop, received the [Feenberg Memorial Medal in 2005](#) for development of the coupled cluster method



The committee for the award this year was composed by

Ana Maria Rey (chair)

Alessandro Lovato

Jordi Boronat

and we decided to give this prestigious award to

**Dr. Riccardo Rosi,**

for **“groundbreaking advances in computational quantum field theory for many-fermion problems, including determinant algorithms for connected-diagram expansions and resummation techniques, leading to key results on the unitary Fermi gas and the Hubbard model”**

# Riccardo Rosi

Born in 1990

Bachelor, Bologna, Italy

Msc in Theoretical Physics, ENS, Paris (France)

PhD in Statistical Physics, ENS

Current position: **Staff CNRS Researcher**, LPTMC, ENS

Previous post-doc positions: EPFL (Switzerland); Center for Computational Physics, NY; Collège de France, Paris

> 25 publications, some PRL, PRX, Science

One of the present main experts in **Diagrammatic Monte Carlo** with several original contributions that helped to speed up the method and understand much better hard problems as the pseudogap regime in Hubbard models

