

# Conference on Quantum-Many-Body Correlations in memory of Peter Schuck (QMBC 2023)



ID de Contribution: 159

Type: **Talk**

## Superfluidity in nuclear systems

*mardi 21 mars 2023 11:15 (30 minutes)*

Peter Schuck devoted much attention to the study of nuclear superfluidity and to many-body effects that renormalize the pairing interaction in nuclear systems, going from his works with the Catania group to his recent papers with E. Litvinova.

I will resume the research done on this topic by the Milano group, starting from a paper we wrote together with him [1]. Such research deals not only with atomic nuclei but also with superfluidity in the inner crust of neutron stars and with the structure of vortices.

[1] F. Barranco, P.F.Bortignon, R.A. Broglia, G. Colò, P. Schuck, E. Vigezzi and X. Vinas, Pairing matrix elements and pairing gaps with bare, effective and induced interactions, *Phys. Rev. C* 73 (2005) 054314

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**Classification de Session:** Tuesday 11:15-12:45

**Classification de thématique:** Pairing and Superfluidity