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Type: **Talk**

dRPA, RPAX, SRPA, SCRPA, rRPA, ...: tell me who you are and I will tell your RPA

mercredi 22 mars 2023 14:30 (30 minutes)

The many-body problem, *i.e.* the solution of the Schrödinger equation in interacting many-body systems, is a formidable problem in condensed matter and nuclear physics, as well as in quantum chemistry, so far insoluble despite considerable efforts of a whole generation of physicists and chemists. Every community has attacked the problem from a different point of view; has along the years elaborated varied theories, from wave-function to density-functional, up to Green function based approaches; and has achieved sometimes common findings, but also, and more often, different insights and complementary comprehension. Merging these insights and comprehension was the intuition of Peter Schuck's "RPA multidisciplinary conference" series, which was very stimulating and led to fruitful work in collaboration. Taking inspiration from this work, I will try to present here the largest landscape available, within my comprehension limits, about RPA flavors and many-body approaches encompassing quantum chemistry, condensed-matter and nuclear physics, speaking in a common, as much as possible, Esperanto language.

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Classification de Session: Wednesday 14:00-15:30

Classification de thématique: Many-body