

9<sup>th</sup> September 2015 - 2:00 p.m. CFEL-bldg. 99, seminar room IV

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Validity of time-dependent density-functional theory: Time to move on?

Time-dependent density-functional theory (TDDFT) is deemed to be a formally exact way of describing the time-evolution of many-body quantum systems at the density level, without recourse to solving the original time-dependent Schrödinger equation. Do we understand the rationale for such an extraordinary claim? And do we understand the physics possibly captured by the usual linear response form of TDDFT? Both issues will be addressed and critically examined.

Host: Robin Santra - CFEL-DESY Theory Division