

## **Theory of Liquids applied to colloidal solutions: from the DLVO description to Molecular DFT**

*Tuesday, 16 December 2025 16:40 (20 minutes)*

The golden age of colloidal physics began in the early 1980s with the simultaneous development of scattering techniques (X-ray, neutron, light) and simple liquid theories (integral equations, Poisson-Boltzmann) applied to the interaction between colloids in solution.

From the very beginning, a very fruitful collaboration with Thomas Zemb led to the writing of numerous practical numerical codes capable of linking, in a few seconds, scattering spectra to microscopic characteristics: size, effective charge, Hamaker constant, depletion, etc.

What was achieved at the time for spherical nanometric particles immersed in a continuous dielectric solvent is now being extended to the level of molecular description, in order to predict the structural and thermodynamic properties of solvation.

### **Abstract Title**

**Presenter:** BELLONI, Luc (CEA/Saclay)

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