

## **The Solvay Science Project and the Milestones of the first Quantum Revolution**

*Thursday 11 December 2025 11:30 (20 minutes)*

The meeting patronized by the Belgian industrialist Ernest Solvay in Brussels, the first Solvay Council (1911), marked the beginning of the first quantum revolution. This event also led to the birth of the International Solvay Institute of Physics and its International Scientific Committee (ISC). Placed under the enlightened chairmanship of Hendrik A. Lorentz, the ISC organized five conferences that, in Heisenberg's words, culminated in 1927 with the completion of quantum mechanics. However, these meetings were only part of a broader design envisioned by the Belgian philanthropist. The project comprised other very poorly known actions of the International Solvay Institutes, such as the granting of subsidies to physicists and laboratories from all nations. This talk aimed at clarifying how ISC started operating by dividing Lorentz's chairmanship (1911–1927) into parts. First, we review the pre-WWI period to explain how ISC developed the subsidy program by complementing the discussions held at the first two Physics Councils. Then, we discuss some aspects of the post-war Solvay meetings that contributed to the birth of wave mechanics. The talk is based on a book recently published by World Scientific on the same subject.

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