

Thematic Semester on
QUANTUM MATHEMATICS

The Mathematics inspired by Quantum Mechanics

What Makes Quantum Mechanics Different from Earlier Physics?

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Abstract: *The advent of Quantum Physics in early 20th century provided the key to understand the bizarre behavior of microscopic systems, such as atoms and molecules.*

Mastering this scientific discipline has allowed us to unleash new technologies -- including e.g. the laser industry and guided chemical synthesis producing ever better drugs and chemicals-- as well as some emerging ones, such as quantum computation.

In this talk, we will provide an introductory view of the aspects that make Quantum Physics different from Classical Physics. The first part of the talk will focus on conceptual differences: the dual particle-wave nature of matter, the uncertainty principle and the discrete character of energy spectra. In the second part, we will survey some of the basic mathematical concepts underlying Quantum Physics: the Schrödinger equation, the use of operators, Dirac notation, and Hilbert spaces.

Fecha: 23 de enero de 2019.

Hora: 11:00 horas

Lugar: IMAC (Seminario TI1329SD), ESTCE.

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