

Solvay Colloquium

Professor Ingrid Daubechies
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Wilson bases and gravitational waves

The talk will review the construction, in the early 90s, by Stephane Jaffard, Jean-Lin Journé and the speaker, of special orthonormal bases associated with the standard Weyl-Heisenberg unitary group representation in the Hilbert space of square integrable functions. An earlier argument by Balian and Low seemed to prevent the existence of such orthonormal bases, but a clever twist (using co-sines and sines instead of complex exponentials!) made it possible to circumvent this obstruction. In an interesting twist of fate, these constructions turned out to have interesting properties that made them especially appropriate for the celebrated LIGO detection of gravitational waves, a few decades later.

Tuesday 27 February 2018 at 4.00 P.M.

COFFEE AND TEA WILL BE SERVED AT 3.45 P.M. IN FRONT OF THE SOLVAY ROOM

SOLVAY ROOM

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