14:20-15:00

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Title: Groups in mathematics: from motives to motives

Abstract:
Groups are ubiquitous in the physical world. Everywhere there is symmetry there is a group hidden behind. The concept of group was formalized in mathematics at the beginning of the 19th century, following Galois' remarkable intuition. Since then - and despite the simplicity of their definition - groups have turned out to be incredibly intricate objects, which keep fascinating and defying the modern mathematician. Nowadays, group theory is a central branch of mathematics, with applications ranging from practical or theoretical uses in physics, computer theory or arts to extremely abstract constructions - as those arising in the Langlands' program and Grothendieck's philosophy of motives.

In this talk, I would like to track some conceptual achievements of group theory through history with the hope to convey a flavor of what a group really looks like for a mathematician today and how mysterious they still remain.