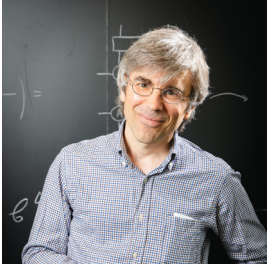


2025 Jacques Solvay International Chair in Physics



Professor Vyacheslav Rychkov

IHES, Bures-sur-Yvette, France

The renaissance of axiomatic methods in quantum field theory

The textbook approach to quantum field theory is to start from the Lagrangian and then either do perturbation theory or, if the theory is strongly coupled, resort to lattice Monte Carlo simulations. Recently there has been renewed interest in developing and applying “bootstrap methods”, which have different spirit. They use nonperturbatively valid “axioms” to obtain concrete numerical results about experimentally relevant strongly coupled QFTs. After a pedagogical background introduction, I will describe these bootstrap methods and some of their applications in the study of critical phenomena and scattering processes.

Inaugural Lecture on Tuesday 25 March at 4:00 P.M.

COFFEE AND TEA WILL BE SERVED AT 3:45 P.M. AND DRINKS AT 5:00 P.M IN FRONT OF THE SOLVAY ROOM

Prof. Rychkov will deliver five other lectures on:

Tuesday 15 April: 11:30 am to 1:00 pm (Solvay Room)

Wednesday 16 April: 2:00 to 3:30 pm (Solvay Room)

Thursday 17 April: 2:00 to 3:30 pm (Solvay Room)

Tuesday 22 April: Time TBC (UGent)

Early May: Day and time TBC (KULeuven)

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