

PRISMA+ Colloquium

June 21, 2023 at 1 p.m.
Lorentz-Raum, 05-127, Staudingerweg 7

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Resurgence and non-perturbative physics

Perturbation theory remains one of the main tools in physics, in particular in quantum theories. However, most perturbative series diverge factorially, and it is not obvious how to extract information from them. Their divergence also suggests that, in order to obtain accurate results, one might need additional non-perturbative information. The theory of resurgence has been proposed as a general framework to address these issues. In this talk the referent will give an introduction to this theory and will illustrate it with applications -old and new - in quantum mechanics and in quantum field theory.