

Quantum Field Theory on a Highly Symmetric Lattice

Marco Aliberti

Università degli Studi di Torino

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Why Lattice Quantum Chromodynamics?

In quantum field theory scattering amplitudes in the form

$$\langle f|i\rangle = \int_{\phi_i}^{\phi_f} \mathcal{D}[\phi] e^{-S[\phi]}$$

need to be evaluated.

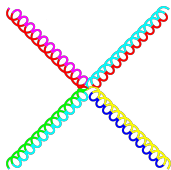
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Perturbative



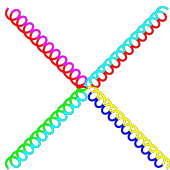
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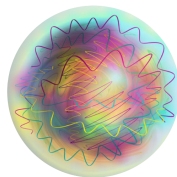
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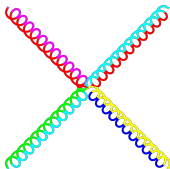


Non-Perturbative



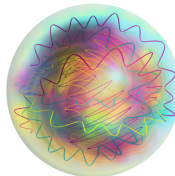
Perturbative vs Non-Perturbative

Perturbative



- pro
- contro

Non-Perturbative



- pro
- contro