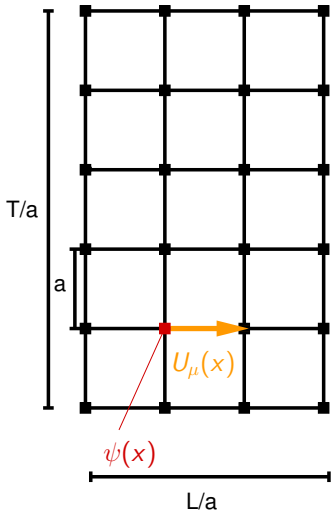
Summer term 2023

Lecture course with tutorials

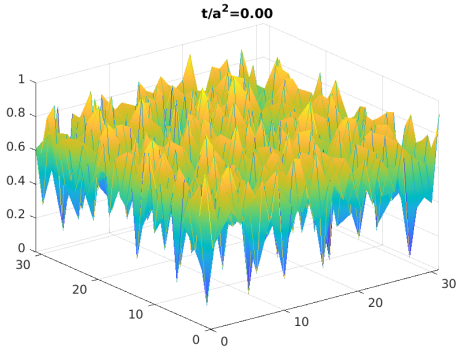
Introduction to Lattice Field Theory

Dr. Oliver Witzel



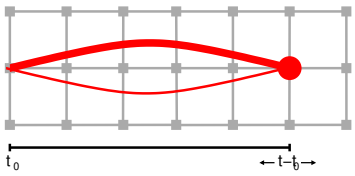
The lecture course gives an introduction to concepts of lattice field theory as they are used to study in particular nonperturbative aspects of QCD covering the topics:

- Discretizing space and time
- Gauge fields on the lattice
- Fermions on the lattice
- Generating gauge field configurations
- Calculation of 2-point functions
- Gradient flow
- Scale setting



Dates:

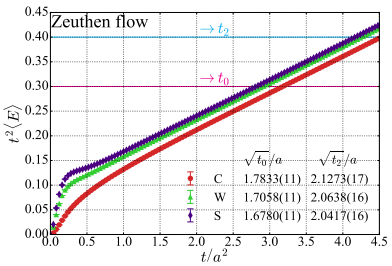
Lecture (4PHY94081V)
Tuesday 14:15 – 15:45, ENC-D 120 (starting 04.04.2023)



Lecture/Tutorial (4PHY94082V)
Monday 12–14 h (exact time to be finalized)
(starting 17.04.2023)

Video-Link
https://uni-siegen.webex.com/meet/oliver.witzel

Excursion
Jülich Supercomputing Centre



Contact
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The lecture course is intended for students at the Master level and will be organized in a setup with 3 SWS lectures and 1 SWS tutorials i.e. lectures always take place on Tuesday, whereas lectures and tutorials alternate on Friday. Language of instruction is English.