

# Foundations of quantum mechanics

## Online - lecture

<https://www.thphys.uni-heidelberg.de/~wetterich/fqm21/>

## Summary

- 1) Basic principles of quantum mechanics and classical statistics
- 2) Explanation of some “quantum mysteries”
- 3) Initial value problem for Ising chains and wave function in classical statistics
- 4) Probabilistic cellular automata
- 5) Generalized Ising models for fermions
- 6) Reduction of the wave function, conditional probabilities and measurement correlation

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## Material:

Perhaps a useful paper covering some aspects of this lecture is  
“Probabilistic world”

<https://inspirehep.net/literature/1828609>

A script is available on the lecture home page for registered students.

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Required knowledge:

Basic quantum mechanics ( theory course )

Basic notions of probabilities and classical statistics