

$$\nabla \times \mathbf{B} - \mu_0 \epsilon_0 \frac{\partial \mathbf{E}}{\partial t} = \mu_0 \mathbf{j} \qquad i\hbar \frac{\partial}{\partial t} \Psi = \left[ -\frac{\nabla^2}{2m} + V(x) \right] \Psi$$

# MATHEMATICA

## for Theoretical Physics

### Symbolic and Numerical Computing

PRACTICAL COURSE in SS 2019

Elective subject (Wahlfach) within the Master Study in Technical Physics

Prof. B. Schnizer and E. Arrigoni,  
Introductory lecture Fri. Mar. 8th 2019 at 10:00  
in the Computer room PHK1130

Benefit from the opportunity  
to directly grasp Theoretical Physics by means of practical applications.

For example just “touch” a Quantum Mechanics Wavefunction  
and observe its time dependence

MATHEMATICA will take care of the lengthy mathematical details  
and you can concentrate on Physics!

The course is suitable for **both beginners and advanced students**:  
there will be a lecture to bring the essential aspects of MATHEMATICA  
(optional for the ones who are already familiar).

In addition, the required MATHEMATICA knowledge will be learned individually  
during the practical applications.

See also

<https://itp.tugraz.at/~arrigoni/vorlesungen/mathematica/description.html>