

Theoriekolloquium

Am **9. Dezember 2010** um **14.15 Uhr** in **W2 1-143** hält

Herr Prof. Dr. Michael Thies (Uni Erlangen)

einen Vortrag mit dem Titel

“Fermions, solitons and strings from an exactly solvable quantum field theory”

The Gross-Neveu model is an exactly solvable relativistic quantum field theory of N species of Dirac fermions interacting via a four-fermion interaction in 1+1 dimensions. In condensed matter theory it has been applied successfully to various quasi-one-dimensional systems like conducting polymers, carbon nanotubes or 1d superconductors. In the large N limit the Gross-Neveu model can be mapped either onto classical soliton theory (sinh-Gordon equation) or onto the theory of classical strings in 3d anti de Sitter space. We exhibit this relationship and use it to find novel exact solutions of a quantum field theory.

Interessierte sind herzlich eingeladen.

gez. Prof. Jutta Kunz-Drolshagen