

# Rethinking Quantum Field Theory



DESY THEORY WORKSHOP  
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**Rethinking  
Quantum Field Theory**

DESY Hamburg, Germany



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## Locality and Quantum Physics: the Algebraic Approach to Quantum Field Theory

*Friday, September 30, 2016 9:00 AM (30 minutes)*

The locality of fundamental interactions and the nonlocal character of quantum correlations are reconciled in the framework of algebraic quantum field theory. The theory is based on the concept of local fields which are mathematically characterized as natural transformations between suitable functors. The framework covers quantum field theories on generic Lorentzian manifolds including also perturbative quantum gravity.

**Presenter:** FREDENHAGEN, Klaus

**Session Classification:** Plenary Session