

# Rethinking Quantum Field Theory



DESY THEORY WORKSHOP  
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**Rethinking  
Quantum Field Theory**

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## Numerical Stochastic Perturbation Theory

*Tuesday, 27 September 2016 15:30 (30 minutes)*

Perturbation theory for lattice regularization of field theory is known to be a quite hard subject and this holds true in particular for lattice gauge theory. In the 90's the numerical implementation of stochastic perturbation theory (NSPT) was introduced. NSPT can not only make perturbative computations on the lattice (in some cases much) easier, but also enable the computation of extremely high orders. We will discuss foundations and key features of NSPT and review a few significant computations which were made possible by NSPT.

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**Session Classification:** Plenary Session