

HARVARD UNIVERSITY

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**Tuesday, May 12, 2020**  
**10:00 a.m.**

**Mathematical Picture Language Seminar**  
**Join by Zoom**

**<https://harvard.zoom.us/j/779283357>**

**“Euclidean quantum field theory: Axioms and  
Automorphic Forms”**

**Werner Nahm**

Dublin Institute for Advanced Studies

**Abstract:** The partition functions of euclidean quantum field theory can be described as functions on the moduli space of compact manifolds with Riemannian metric that have few generalized derivatives. The conventional derivative with respect to the metric yields the energy-momentum tensor. All fields can be described in an analogous fashion, but one has to introduce derivatives that can change the topology, The idea is tested for the (2,5) minimal model in two-dimensional conformal field theory, where the partition function yields a natural generalization of the Rogers-Ramanujan functions to arbitrary genus