

## MP 7: Quantenfeldtheorie

Zeit: Dienstag 17:15–18:05

Raum: ZHG 003

MP 7.1 Di 17:15 ZHG 003

**The ABJ anomaly in regularized gauge theories** — •BENJAMIN LÉVÉQUE and CHRISTOPH KOPPER — Centre de Physique Theorique, Ecole polytechnique

We analyse the triangular anomaly in Pauli-Villars regularized axial U(1) gauge theory and within the Standard Model, using well-defined euclidean functional integrals. In axial U(1) gauge theory, we prove the presence of the anomaly and explain its relation to the IR non-analyticity of the fermion triangle. In the electroweak sector of the Standard Model, we confirm the cancelation of the anomaly to one-loop order in the regularized theory. We expose the theoretical tools based on which we aim to extend this result to all loop orders.

MP 7.2 Di 17:40 ZHG 003

**Characterization of local operators in factorizing scattering models** — •DANIELA CADAMURO<sup>1</sup> and HENNING BOSTELMANN<sup>2</sup> — <sup>1</sup>Institute for Theoretical Physics, Göttingen, Germany — <sup>2</sup>Department of Mathematics, York, UK

Lechner has given in 2006 an abstract existence proof for interacting quantum field theories, using a novel approach for a large class of models in two dimensions. We supplement this result by an explicit characterization of the local observables in these theories. We have established how local observables can be described in terms of an infinite hierarchy of holomorphic functions, and analysed the recursive system of relations among these functions. We have formulated a theorem that gives the complete characterization, and outline the general strategy for its proof, preparing all its ingredients.