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**Mathematische Institute der WWU – Kolloquium Wilhelm Killing**

# Gauge Theory in the Calculus of Variations

Professor Tristan Rivièrē (ETH Zürich)

26.1.2012, 16:30 Uhr, Hörsaal M 5

We will first present some aspects of the influence of gauge theory on classical problems from the calculus of variations such as the general parametric Plateau problem. We will explain in particular how gauge theory is providing an enlightening framework for the recent resolution of the Heinz-Hildebrandt regularity conjecture.

In the second part of the talk we will describe how this theory in return is posing new challenging difficulties to the calculus of variations.

We will illustrate this fact by looking at the analysis of high dimensional Yang-Mills Fields stimulated by geometric applications.

Tee wird ab 16:00 Uhr im Sitzungszimmer SR o des Mathematischen Instituts serviert.

Fachbereich 10  
Mathematik und Informatik  
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