

Rigid Local Systems

Abstract:

Classically, local systems are sheaves which describe the behaviour of holomorphic functions which are solutions of integrable connections (locally given by integrable systems of differential equations) under analytic continuation (i.e., monodromy). A local system is called rigid, if its local monodromy determines its global monodromy. This concept was first used by Riemann in his work on hypergeometric functions and turns out to be very fruitful. We will discuss various incarnations and applications of rigid local systems, ranging from hypergeometric functions to families of potentially automorphic motives, used in the proof of the Sato-Tate-conjecture.

Prof. Dr. Michael Dettweiler