



THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Seminar in Geometry and Topology

Room 290C ,Ziskind Building
on Tuesday, May 31, 2016
at 16:00

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Topological Galois theory

Abstract:

In the topological Galois theory we consider functions representable by quadratures as multivalued analytical functions of one complex variable. It turns out that there are some topological restrictions on the way the Riemann surface of a function representable by quadratures can be positioned over the complex plan. If a function does not satisfy these restrictions, then it cannot be represented by quadratures. This approach, besides its geometrical appeal, has the following advantage. The topological obstructions are related to the character of a multivalued function. They hold not only for functions representable by quadratures, but also for a more wide class of functions. This class is obtained adding to the functions representable by quadratures all meromorphic functions and allowing the presence of such functions in all formulae. Hence the topological results on the non representability by quadratures are stronger than those of algebraic nature.