Vorträge

Mittwoch, 11. Jänner 2012, ab 15:00 Uhr, Olga Taussky-Todd Raum (C 209), UZA 4
Mathematisches Kolloquium

15:00 Uhr Ass. Prof. Dr. I. Fischer
„Combinatorics of Fully Packed Loop configurations in a triangle“

15:30 Uhr K & K (Common Room)

16:00 Uhr Ass. Prof. Dr. D. Burde
„Post –Lie Algebra Structures and Nil-affine Actions of Lie Groups“

16:30 Uhr Ass. Prof. Dr. B. Lamel
„Maps of real-analytic CR manifolds“

Abstract

Ilse Fischer:
Fully Packed Loop configurations are certain subgraphs of a square grid such that each internal node is of degree two. While these objects arise naturally in astatistical physics context, they lead to intriguing enumerative problems. Fully Packed Loop configurations of triangular shape turn out to be of particular interest as, for instance, their enumeration in a special case is given by Littlewood-Richardson coefficients. This establishes an unexpected link to algebra. I will sketch a new combinatorial approach to the enumeration of these objects. This is joint work with Philippe Nadeau (CNRS, Université Lyon 1).

Dietrich Burde:
Post-Lie algebras have been invented by Vallette and Loday in 2007 in the context of operad theory, which may be described shortly by "algebra meets homotopy".
They also appear in the work of Connes and Kreimer in the context of renormalization theory in quantum field theory. We describe a third topic, which leads again to Post-Lie algebras. They emerge in the study of simply transitively actions by of one Lie group G on another Lie group N, acting by so called nil-affine transformations. We present several structural results on such actions and on the existence of post-Lie algebra structures (joint work with Karel Dekimpe, KU Leuven).

Bernhard Lamel:
Starting with an observation of Poincaré, we describe an approach to reconstructing maps between CR manifolds from their defining equation and finite-dimensional additional data. This will lead us to a theorem (joint work with R. Juhlin and G. Della Sala) which implies that the locus of points in a holomorphically nondegenerate, minimal real-analytic CR manifold where the germs are biholomorphically equivalent to the germ at a given point is a locally closed, real-analytic submanifold. We also give an outlook on a solution to the biholomorphic equivalence problem for minimal, holomorphically non degenerate CR manifolds based on thetechniques developed in that paper.

Dekan Univ.-Prof. Dr. Harald Rindler

Montag,. 9. Jänner 2012 bis Dienstag, 28. Februar 2012, Erwin Schrödinger Lecture Hall, Boltzmanngasse 9, 1090 Wien
ESI Workshop
Automorphic Forms: Arithmetic and Geometry
J.W. Cogdell, C. Moeglin, G. Muic, J. Schwermer
(Details siehe Attachment)