

Přednášky se konají v 17:00 v posluchárně M2 na Janáčkově nám. 2a v Brně, pokud není explicitně uvedeno jinak.

2. dubna

Werner Kuich (Technische Universität Wien)

Semirings: A Basis for a Mathematical Automata and Language Theory

Abstrakt:

In this lecture we report on generalizations of some results on regular and context - free languages, and finite and pushdown automata. These generalizations are achieved by an algebraic treatment using semirings, formal power series, fixpoint theory and matrices.

23. dubna

T. Beke (Michigan University)

Fibrations of simplicial sets

Abstrakt:

Simplicial sets were introduced by Samuel Eilenberg in the 50's. They retain the good geometric properties of simplicial complexes, but form a much better category. Kan, also in the 50's, developed a purely algebraic-combinatorial theory of homotopy for simplicial sets, which Quillen axiomatized via his notion of "model category". One of the distinguished classes of morphisms in a model category are the fibrations. For a long time, no one seemed to think that there is any other choice for the fibrations than what Kan and Quillen defined them to be. Recently I proved that there are infinitely many possibilities, reflecting many ways to think about the discrete version of homotopy. The subject turns out to be surprisingly combinatorial, with connections to iterated simplicial subdivisions, graphs, and conditions on categories (or monoids) that generalize the Ore conditions.

21. května

Jaroslav Jaros (MFF, Univerzita Komenského, Bratislava)

Dusledky zpozdení (v diferenciálních rovnicích)

Abstrakt:

Cielom prednasky je prezentovať zakladne vysledky teorie oscilacie rieseni linearnych funkcionálnych diferencialnych rovnic prveho radu, popisat metody, ktorymi boli tieto vysledky dosiahnute a naznacit smer, ktorym sa ubera vyvoj v tejto oblasti.

26. června

Gerd Schmalz (University Bonn)

Non-linearizable CR-automorphisms and Shear-invariant ODE's

Abstrakt:

Téma na pomezí komplexní analýzy, teorie funkcí, diferenciální geometrie a Lieovské teorie.