

Set Theory, Model Theory and Topology

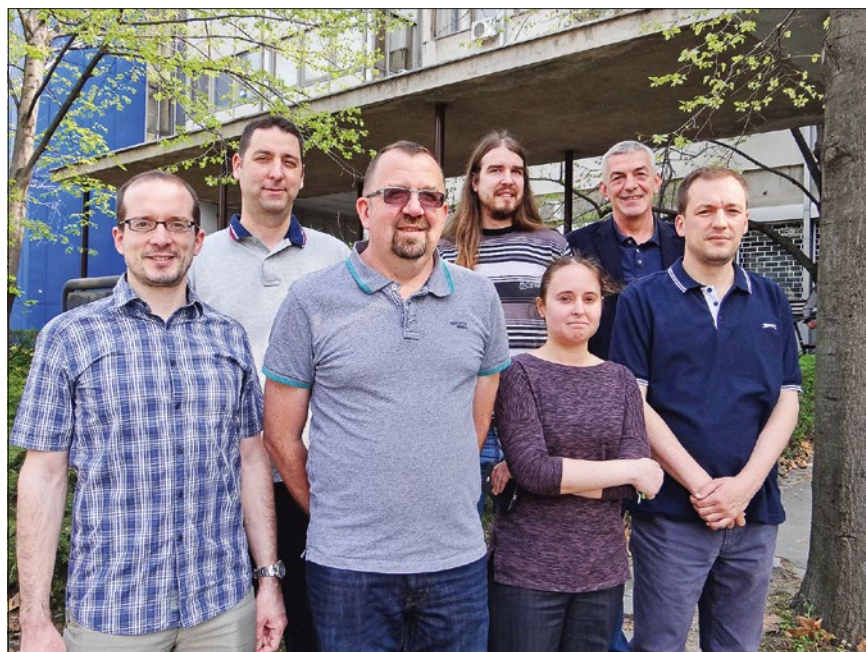
set theory, model theory and set-theoretic topology

POSETS OF SUBMODELS: We investigate the collections of (elementary) submodels of first order structures ordered by the inclusion and some other natural orderings. These partial orders are observed from the aspect of set theory, their cardinal and order invariants are explored and they are examined as forcing notions as well.

SET-THEORETIC FORCING: The conditions under which forcing violates certain structures of a given model of set theory, such as ultrafilters, maximal almost disjoint families and inseparable sequences, are investigated.

GAMES ON BOOLEAN ALGEBRAS: The cut-and-choose games on Boolean algebras are examined, searching for equivalent conditions for the existence of winning strategies and for the examples of Boolean algebras on which the games have different outcomes.

CONVERGENCE STRUCTURES ON BOOLEAN ALGEBRAS: The topologies on complete Boolean algebras generated by convergence structures are explored. The relations between the topological properties of the spaces obtained in this way and the algebraic and forcing properties of the corresponding Boolean algebras are examined.



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SELECTED PROJECTS

Title: *Forcing, Model Theory and Set-Theoretic Topology*

Type: Project MNTRS No 111768

Duration: 2002-2005

Contact person: M. Kurilić

Title: *Forcing, Model Theory and Set-Theoretic Topology 2*

Type: Project MNŽS No 144001

Duration: 2006-2010

Contact person: M. Kurilić

Title: *Set Theory, Model Theory and Set-Theoretic Topology*

Type: Project MPNTR No 174006

Duration: 2011-present

Contact person: M. Kurilić

COLLABORATIONS

- Project "Set Theory, Ultraproducts and Forcing" (bilateral cooperation „Pavle Savić" Serbia – France, Paris 7) with Boban Veličković, 2004-2005.
- Project "The relationships between the algebraic, topological and forcing related properties of complete Boolean algebras" (bilateral cooperation MNTRS, Serbia–CNRS, France, Paris 7) with Stevo Todorčević, 2009-2010.

MEMBERS OF GROUP

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