

SEMINAR ANNOUNCEMENT

SEMINAR ALGEBRA AND DISCRETE MATHEMATICS

368.158

PREREQUISITES FOR THE COURSE

Basic knowledge on abstract algebra as introduced in first year lectures for mathematics or computer science.

LANGUAGE OF INSTRUCTION

The course will be taught in German or English, according to the preferences of the participants.

CONTENT OF THE COURSE

We will study ways to represent certain algebraic structures and their polynomial functions. Topics: Algebras, term functions and polynomial functions, clones, representation of subpowers by forks, varieties, complexity of determining certain properties of an algebraic structure.

Students are expected to read parts of lecture notes and original literature, and to present the material in the seminar.

A Bachelor's thesis can be written in the framework of this seminar.

LITERATURE

- (1) E. Aichinger, Forks, finitely related clones, and finitely generated varieties, slides for the course at SSAOS53,
<http://www.algebra.uni-linz.ac.at/Students/Seminare/w16/>.
- (2) D. Mašulović, GenClo and TermEquiv are EXPTIME-complete, International Journal of Algebra and Computation 5:901–909, 2008.
- (3) R. Willard, Universal Algebra and Computational Complexity (Tutorial), 2008,
<http://www.math.uwaterloo.ca/~rdwillar/documents/slides.html>

ORGANISATION

The first meeting is on Tuesday, October 4, 10:15, S3 058. This is also the first meeting of the course 368.115. We will then try to find the time for all further meetings.

Please use <http://www.kusss.jku.at> to register for this course.