

Speaker: Valentina Harizanov

Title: Effective products of computable structures

Abstract: We consider an effective product of computable structures where elements are partial computable functions and a cohesive set is used to determine truth of formulas. A cohesive set is an infinite set that is indecomposable with respect to computably enumerable sets. In particular, a maximal set is a computably enumerable set with a cohesive complement. We investigate which first-order formulas are true in an effective product. For some familiar structures, we analyze the isomorphism types of their effective powers, and show how these powers arise naturally in computable algebra. Recent work is joint with Rumen Dimitrov.