The Ehrenfeucht-Mostowski Theorem in Abstract Logics

Xavier Caicedo

Compact logics satisfying the interpolation theorem and the Feferman-Vaugth (uniform reduction) property for finite disjoint sums of structures satisfies the Ehrenfeucht-Mostowski's theorem. That is, any theory with infinite models must have models containing any given linearly ordered set so that any automorphism of the order extends to an automorphism of the model. Without compactness, and under various weakenings of the definability and uniform reduction properties, we still get non rigid models. For example, any sentence having infinite models in a logic satisfying Beth's definability theorem and an infinitary version of uniform reduction for finite disjoint sums must have models with infinitely many automorphisms.

Address: Departamento de Matemáticas, Universidad de los Andes, A.A. 4976, Bogotá, Colombia
E-mail: xcaicedo@uniandes.edu.co