

Universal Algebra and its applications

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Abstract

Abstract: Universal algebra sits at the boundary of mathematical logic and model theory. It provides a general framework for the study of various properties of structures or classes of algebras arising from different areas of mathematics. Its significance is justified by many applied theoretical results; for example, in general algebra we find them in group theory and ring theory; in theoretical computer science we find them in computational complexity and automata theory; and lastly, in graph theory we see them in properties of various algebras arising from graphs. In recent years universal algebra has become an important tool in studying constraint satisfaction problems.”