

Model Theory Special Session B7

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Model Theory is a branch of mathematical logic that has had many interactions with various areas of mathematics. Over the years Model Theory has produced and developed very sophisticated techniques that apply to (and interact with) various fundamental areas of Mathematics, such as algebra, number theory, dynamical systems, valued fields, and algebraic/analytic geometry. Some notable examples are: o-minimality and its close connections with real analysis and real analytic and algebraic geometry; Hrushovski's work in Diophantine geometry contributing to Mordell-Lang and Manin-Mumford Conjectures; Pila and Wilkie's fundamental and startling results on counting rational points on definable sets connecting o-minimality and Diophantine geometry; work first by Macintyre (quantifier elimination) and successively by Denef (cell decomposition) and Loeser for the p -adic fields contributed to motivic integration and rationality of Poincaré series; Zilber's approach to a model theoretic analysis of complex exponentiation. More recently the abstract model theory found applications in combinatorics with significant contributions to the classification theory initiated by Shelah.

This special session will cover both aspects of Model Theory and includes speakers who are leading experts in the research in both areas of model theory, applied and more abstract.

For more information visit www.matfis.unicampania.it/home-model-theory