

What model companionship can say about the Continuum Problem

GIORGIO VENTURI²

University of Campinas and Universität Konstanz
gio.venturi@gmail.com

In this talk we will present recent results on the model companions of set theory. After introducing the relevant model-theoretical notions we will show that, modulo the choice of the right signature, ZFC admits model companions and that these are given by the theories of the H_{κ^+} , for κ an infinite cardinal. We will justify this model-theoretic approach on the basis of an Hilbert-style form of completeness and we will discuss its connection with absoluteness results in set theory. We end by discussing what the study of the model companions of set theory suggests about the Continuum Problem, giving compelling reasons to discard CH as its possible solution.

References

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