

An Introduction to Lower Bounds on Formula-size in Modal Logic

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I am going to present a number of recent results and open questions related to the problem of proving lower bounds on the size of modal formulae defining properties of Kripke frames and models. To put things in perspective, I am going to start by giving an informal overview of some techniques used for proving lower bounds on the size of Boolean formulae and then I am going to show how to extend and apply them in the modal case where we have obtained a number of succinctness results for various modal logics.

This is going to be an informal introduction to the area starting from first principles. Thus, the only real prerequisite for grasping the main ideas is familiarity with propositional truth-tables and Kripke models.

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