

The aim of this thesis is to study methods of constructing lower bounds on Boolean formula size. We focus mainly on formal complexity measures, generalizing the well-known Krapchenko measure to a class of graph measures, which we thereafter study. We also review one of the other main approaches, using random restrictions of Boolean functions. This approach has yielded the currently largest lower bounds. Finally, we mention a program for finding super-polynomial bounds based on the KRW conjecture.