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A Non Asymptotic Analysis of Information Set Decoding

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Abstract: We propose here a non asymptotic complexity analysis of some variants of information set decoding. In particular, we give this analysis for the two recent variants { published by May, Meurer and Thomae in 2011 and by Becker, Joux, May and Meurer in 2012 { for which only an asymptotic analysis was available. The purpose is to provide a simple and accurate estimate of the complexity to facilitate the parameter selection for code-based cryptosystems. We implemented those estimates and give a comparison at the end of the paper.

Category / Keywords: public-key cryptography / cryptanalysis, code-based cryptography

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