DECOUPLING INEQUALITIES FOR QUADRATIC FORMS

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Decoupling inequalities are known to be powerful tools in the study of the solution counting of a system of Diophantine equations. In this talk, I'll introduce translation- and dilation- invariant systems (TDI systems in short) and present some recent progress on decoupling inequalities for the systems. This talk will be based on joint work with Shaoming Guo, Pavel Zorin-Kranich, and Ruixiang Zhang.