

In this talk, we introduce a framework via the circle method in order to confirm the Hasse principle for random homogeneous polynomials in thin sets. We first give a motivation for developing this framework by providing an overall history of the problems of confirming the Hasse principle for homogeneous polynomials. Next, we provide a sketch of the proof of our main result and show a part of the estimates used in the proof. Furthermore, by using our recent joint work with H. Lee and S. Lee, we discuss the global solubility for random homogeneous polynomials in thin sets.