Total variation bound for Hadwiger's functional using Stein's method

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Let K be a convex body in $\mathbb{R}^d$. Let X_K be a d-dimensional random vector distributed according to the Hadwiger-Wills density μ_K associated with K, defined as $\mu_K(x) = ce^{-\pi \mathrm{dist}^2(x,K)}$, $x \in \mathbb{R}^d$. Finally, let the information content H_K be defined as $H_K = \mathrm{dist}^2(X_K, K)$.

In this talk, we will study the fluctuations of H_K around its expectation as the dimension d go to infinity. Stein's method plays a crucial role in our analysis.
This is joint work with Valentin Garino.

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