

Multidimensional local limit theorem for densities in Orlicz spaces.

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We will discuss the central limit theorem for densities on R^d with respect to the norms in Orlicz spaces. The purpose is to unite several classical results in this direction including uniform local limit theorem (due to Gnedenko-Kolmogorov), convergence in total variation (Prokhorov) and the entropic central limit theorem (Barron).