# A local CLT for some convolution equations with applications to self-avoiding walks

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We discuss a fixed point method to obtain a local central limit theorem for distributions defined by certain renewal type equations. The main motivation for investigating these equations stems from applications to lace expansions, in particular to high dimensional weakly self-avoiding walks. As an application we introduce and treat such self-avoiding walks in continuous space. The error bounds obtained are sharper that the ones obtained by other methods. Joint work with E. Bolthausen and C. Ritzmann.