## Toshifumi Futamase

Astronomical Institute, Tohoku University

## A New approach to calculate the evolution of the non-linear matter power spectrum

Authors: T. Futamase

New approximation method (Wiener-Hermite expansion) is applied for the non-linear evolution of Large-Scale Structure, and an approximated matter power spectrum in full order of expansion is obtained. The power spectrum agrees with N-body result within 2% accuracy in a wide range of the wavenumber k=0.1 0.5 h/Mpc at z=0.5-3. A merit of our method is that the computaional time is very short of the order of a few second.