Ergodicity, continuity, differentiability

see Ergo_Cont.doc.

<u>Empirical mean</u>,

$$\frac{1}{T}\int_{-T/2}^{T/2} x(t)\,dt$$

# EMPIRICAL AUTOCORRELATION

$$\frac{1}{T}\int_{-T/2}^{T/2} x(t)\,x(t+\tau)\,dt$$

This is too expensive to compute, for every $\tau$.

It resembles convolution, which can be computed rapidly with FFT's. See

Four p1.jpg $\rightarrow$ Four p5.jpg.