1000-60-114   **Shahar Mendelson** and **Joel Zinn*** (`jzinn@math.tamu.edu`), Department of Mathematics, Texas A&M University, College Station, TX 77843. *An empirical central limit theorem for pre-Gaussian classes of functions.* Preliminary report.

Given a pre-Gaussian class of functions, $\mathcal{F} \subseteq \mathcal{L}_\infty(S, P)$, with associated Gaussian $\{G_f\}_{f \in \mathcal{F}}$, we find a sequence of functions, $\phi_n : \mathcal{L}_\infty(S, P) \to \mathcal{L}_\infty(S, P)$, such that $\{\frac{1}{\sqrt{n}} \sum_{j=1}^{n} (\phi_n(f)(X_j) - Pf)\}_{f \in \mathcal{F}}$ converges to $\{G_f\}_{f \in \mathcal{F}}$ in $\mathcal{L}_\infty(\mathcal{F})$. The functions ϕ_n are determined by the quantities in Talagrand's majorizing measure results that are equivalent to the existence of the Gaussian. (Received August 20, 2004)

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