1052-60-188 **M Denker*** (`denker@math.psu.edu`). *Multivariate Averaging.*
The talk will consider averages of form

$$\frac{1}{n^2} \sum_{1 \le i,k \le n} h(X_i, X_k),$$

where h is a bivariate function, and more generally for d-variate functions. We prove a.s. and weak convergence results when $X_n,\ n \geq 1$ is a stationary ergodic process. These results depend heavily on the properties of h. The results is joint work with M. Gordin and H. Dehling. (Received August 27, 2009)