1112-49-253 **Alex Olshevsky*** (aolshev2@illinois.edu), 104 S. Matthews Ave, Urbana, IL 61801, and
Angelia Nedich, 104 S. Matthews Ave, Chicago, IL 61801. *Optimization over Directed Graphs.*

We consider the problem of optimizing a sum of convex functions in a network where each node knows only one of the functions. Further, we assume that the nodes can only communicate with neighbors in some time-varying sequence of directed graphs. We develop a version of the stochastic gradient method which is fully decentralized and, up to logarithmic factors, achieves the optimal error decay with number of iterations. (Received August 05, 2015)