1023-D1-633   **D. Jacob Wildstrom*** (`dwildstr@math.ucsd.edu`), Department of Mathematics, 9500 Gilman Drive, Mail Code #0112, La Jolla, CA 92093-0112. *Dynamic service scheduling on directed graphs.* Preliminary report.

The necessary information to optimally serve sequential requests at the vertices of an undirected, unweighted graph with a single mobile resource is a known result of Chung, Graham, and Saks; however, generalizations of this concept to directed and weighted graphs present unforseen and surprising changes in the necessary lookahead for strategic optimization. This talk presents several results connecting optimal service-plan determination to number-theoretical properties of edge-weights and the properties of certain matrices in the min-sum semiring. (Received September 19, 2006)