Heather Jordon* (hjordon@ilstu.edu), Illinois State University, and Dean Hoffman (hoffmdg@mail.auburn.edu), Auburn University. Signed Graph Factors and Degree Sequences.
For a signed graph $G$ and function $f: V(G) \rightarrow Z$, a signed $f$-factor of $G$ is a spanning subgraph $F$ such that $\operatorname{sdeg}_{F}(v)=f(v)$ for every vertex $v$ of $G$, where $\operatorname{sdeg}(v)$ is the number of positive edges incident with $v$ less the number of negative edges incident with $v$, with loops counting twice in either case. In this talk, for a given vertex-function $f$, we provide necessary and sufficient conditions for a signed graph $G$ to have a signed $f$-factor. As a consequence of this result, an Erdős-Gallai-type result is given for a sequence of integers to be the degree sequence of a signed $r$-graph, the graph with at most $r$ positive and $r$ negative edges between a given pair of distinct vertices. (Received August 29, 2005)

