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Wasin So* (so@math.sjsu.edu), Department of Mathematics, San Jose State University, San Jose, CA 95192. *The skew spectrum of an oriented tree*. Preliminary report.

An oriented graph is a simple graph with an orientation, which assigns each edge a direction so that the resulting graph becomes a directed graph. With a labeling of its vertices, an oriented graph is associated with a skew symmetric matrix defined by $s_{ij} = 1$ and $s_{ji} = -1$ if (i, j) is an assigned direction of the edge $\{i, j\}$, otherwise $s_{ij} = s_{ji} = 0$. The skew spectrum of an oriented graph is defined as the spectrum of the associated skew symmetric matrix.

In this talk, we prove that the skew spectrum of an oriented tree is independent of its orientation. Indeed, the skew spectrum is determined by the spectrum of the underlying tree. (Received August 18, 2008)