1106-15-1663 **Wayne Barrett**, **Steve Butler** and **Minerva Catral*** (catralm@xavier.edu), 3800 Victory Parkway, Cincinnati, OH 45207, and **Shaun Fallat**, **Tracy Hall**, **Leslie Hogben**, **Pauline van den Driessche** and **Michael Young**. *Principal rank characteristic sequences.*

The principal rank characteristic sequence of an $n \times n$ matrix is a length $n+1$ sequence of 0s and 1s where, for $k = 0, 1, \ldots, n$, a 1 in the kth position indicates the existence of a principal submatrix of rank k and a 0 indicates the absence of such a submatrix. We discuss results on principal rank characteristic sequences for symmetric matrices over various fields, including determining all possible such sequences over $\mathbb{R}$ up to order 7 and characterizing all possible sequences over $\mathbb{Z}_2$. (Received September 14, 2014)