1117-05-11 **Zachary Hamaker**, **Joel Brewster Lewis**, **Bendan Pawlowsk** and **Bruce E Sagan\*** (`sagan@math.msu.edu`), Department of Mathematics, Wells Hall, East Lansing, MI 48824. *Pattern avoidance and quasisymmetric functions.*

Let $\mathfrak{S}_n$ denote the $n$th symmetric group. Given a set $\Pi$ of permutations we let $\mathfrak{S}_n(\Pi)$ be all permutations in $\mathfrak{S}_n$ which avoid all elements of $\Pi$. Following a suggestion of Woo, we consider the associated generating function defined by $Q_n(\Pi) = \sum_{\sigma \in \mathfrak{S}_n(\Pi)} F_{\mathrm{Des}\ \sigma}$ where $\mathrm{Des}\ \sigma$ is the descent set of $\sigma$ and $F$ is the associated fundamental quasisymmetric function. We discuss when this is actually a symmetric function and, in that case, when it is Schur nonnegative. (Received October 29, 2015)