1145-I1-2531   **Stefanie G. Wang***, stefanie.wang@trincoll.edu, and **Jonathan D.H. Smith**. *Free Quasigroup Conjugates and s-peri-Catalan Numbers.*

A quasigroup $(Q, \cdot, /, \backslash)$ is an algebra equipped with three binary nonassociative operations. The symmetric group S_3 naturally acts on the binary operations to yield conjugate quasigroups of a quasigroup $(Q, \cdot, /, \backslash)$. The n-th s-peri-Catalan numbers gives the number of reduced words in a free quasigroup on s generators. This talk will present results that connect the s-peri-Catalan numbers and conjugates of a free quasigroup on s generators. (Received September 25, 2018)