1112-05-330 **Christine Bessenrodt**, **Vasu Tewari*** (tewari.vasu@gmail.com) and **Steph van Willigenburg**. *Littlewood-Richardson rules for symmetric skew quasisymmetric Schur functions.*

Skew quasisymmetric Schur functions are a generalization of a natural refinement of Schur functions called quasisymmetric Schur functions, and contain an extremely important class of symmetric functions called skew Schur functions. One way of expanding skew Schur functions in terms of Schur functions is to use the famed version of the classical Littlewood-Richardson rule involving Yamanouchi words. This given, a natural question to consider is whether there exists an analogous rule for skew quasisymmetric Schur functions.

In this talk we will give two Littlewood-Richardson rules for symmetric skew quasisymmetric Schur functions that are analogous to the aforementioned version of the classical Littlewood-Richardson rule. Furthermore, both our rules have the nice property that they contain this version as a special case. We will then apply our rules to combinatorially classify symmetric skew quasisymmetric Schur functions, thereby answering a conjecture of Bessenrodt, Luoto and van Willigenburg affirmatively. This talk is based on joint work with Christine Bessenrodt and Steph van Willigenburg. (Received August 07, 2015)