1137-20-254 **Mariela Carvacho**, **Jennifer Paulhus*** (paulhus@math.grinnell.edu) and **Aaron Wootton**.
Potential Versus Actual Signature Space.

Riemann's Existence Theorem tells us that necessary conditions for a group G containing elements of order $m_1, m_2, \ldots m_r$ to act on a Riemann surface X with quotient genus h and signature $[h; m_1, \ldots, m_r]$ is if (1) the Riemann Hurwitz formula is satisfied, and (2) if there are elements $g_1, \ldots, g_r \in G$, with m_i being the order of the element g_i, so that $\{g_1, \ldots, g_r\}$ generate the group and $g_1 g_2 \cdots g_r = 1_G$, the identity of G. We call numbers $h, m_1, \ldots, m_r$ which satisfy (1) *potential signatures*.

Fix a group G and consider all potential signatures $[h; m_1, \ldots, m_r]$. For which groups are all but a finite number of potential signatures in fact actual signatures? We present several new classification results towards answering this question. (Received February 05, 2018)