SEMINARIO CRUZ DEL SUR

# Potential Versus Actual Signature Space

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### Auditorio Prof. Manuel López Ramírez

RESUMEN.
Riemann's Existence Theorem tells us that necessary conditions for a group $G$ containing elements of order $m_1, m_2, \cdots m_r$, to act on a Riemann surface $X$ with quotient genus $h$ and signature $(h; m_1, \cdots, m_r)$ is if (1) the Riemann Hurwitz formula is satisfied, and (2) if there are elements $a_1, b_1 \cdots, a_h, b_h, g_1, \cdots, g_r \in G$, with $m_i$ being the order of the element $g_i$, so that $\{a_1, b_1, \cdots, a_h, b_h, g_1, \cdots, g_r\}$ generate the group and $\prod_{j=1}^{h}[a_j, b_j]\prod_{i=1}^{r} g_i = 1_G$, the identity of $G$. We call de numbers $h, m_1, m_2, \cdots m_r$ which satisfy (1) *potential signatures.*

Fix a group $G$ and consider all potential signatures $(h; m_1, \cdots, m_r)$. 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.

Joint work with:
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## REFERENCIAS

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