



Speaker: Meng-Che (Turbo) Ho
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Thursday, September 24, 2015

3:00 PM

125 Hayes-Healy Hall

Title: Describing groups

Abstract:

Recall that the index set of a computable structure is the set of indices for its computable copies. The calculation of the complexity of index set usually involves finding an optimal Scott sentence (a sentence in $L_{\omega_1, \omega}$ that describes the structure up to isomorphism.) J. Knight et al. determined the complexity of index sets of various structures. In this talk, we focus on finding the complexity of index sets of various groups, generalizing methods that were previously used by J. Knight et al. We found computable Scott sentences for various different groups, including nilpotent groups, polycyclic groups, and the lamplighter group. In some of these cases, we also showed that the sentences we had are optimal.