**ALEX CLOW**, Simon Fraser University
*Eternal Distance-k Domination in Trees*

This talk considers the eternal distance-$k$ domination problem, a variant of the eternal domination problem where guards can move any distance $t \in \{0, 1, \ldots, k\}$ on their turn. We prove upper and lower bounds for the eternal distance-$k$ domination number of a graph in terms of order, maximum degree, and $k$, before showing that both bounds are tight for trees. The rest of the talk will present open conjectures regarding the eternal distance-$k$ domination number of trees, along with evidence to support these conjectures.

This is joint work with Christopher van Bommel (University of Guelph).