ABSTRACT:
Partitioning a set into similar, if not, identical, parts is a fundamental research topic in combinatorics. In the literature, it is typically said that T tiles S if the set S can be partitioned into parts that are all “similar” to T in some sense. For instance, one can tile an 8 by 8 checker board (S) with 16 L-shaped tetrominoes (T). In this talk, I'm going to talk about tiling an infinite straight checker board (a.k.a. the set of integers $\mathbb{Z}$) with a given “polyomino” (or, n-set of integers with n=2,3,4).