Abstract: The successive minima of an order in a degree $n$ number field are $n$ real numbers encoding information about the Euclidean structure of the order. How many orders in degree $n$ number fields are there with almost prescribed successive minima, fixed Galois group, and bounded discriminant? In this talk, I will address this question for $n = 3, 4, 5$. The answers, appropriately interpreted, turn out to be piecewise linear functions on certain convex bodies. If time permits, I will also discuss a geometric analogue of this problem: scrollar invariants of covers of $\mathbb{P}^1$. 

Tuesday, March 28, 2023, 4:00 pm
Mathematics and Science Center: MSC W301