1150-28-313 **Annina Iseli*** (annina.iseli@math.ucla.edu). *Dimension and projections in normed spaces.*

In 1954, Marstrand established a theorem that describes to what extent the Hausdorff dimension of Borel sets in Euclidean two-space changes under orthogonal projections onto lines. Namely, he proved that given a Borel set A the dimension of the image of A under the orthogonal projection onto a line L equals the smaller of 1 and $\dim(A)$, for almost every line L that contains the origin. This theorem marked the start of a large series of results in the same spirit. In particular, there are Marstrand-type theorems for higher dimensional Euclidean space. In this talk we address the existence of Marstrand-type results for closest-point projections onto linear subspaces in finite dimensional normed spaces. We will discuss the minimal regularity required for a norm to guarantee such theorems, and the construction of norms for which they fail. (Received July 12, 2019)