# Subspace codes relevant for coding theory and geometry

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In the last decades, projective subspaces, pairwise intersecting in a $t$-space were investigated. In this presentation, I will give an overview of intersection problems in finite geometries, interesting for coding theory and geometry. I will start with an introduction on random network coding and subspace codes. In this research area, *t-intersecting constant dimension codes* are sets of $k$-dimensional subspaces pairwise intersecting in $t$-dimensional subspaces.

Related to this, I will mention classification results on several intersection problems in finite geometry. First I will speak about sets of $k$-spaces pairwise intersecting in a point, sets of $k$-spaces pairwise intersecting in a $(k-2)$-space and sets of $k$-spaces pairwise intersecting in at least a $(k-2)$-space.

In the second part of my talk, I will mention new results on sets of $k$-spaces such that any three of them meet in a $(k-t)$-space, for $t = 1, 2, 3, 4$. For this topic, I will give classification results and discuss the largest examples for these sets.

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