16. **Norbert Bogya**

Playing card game with finite projective geometry

High school students learn the standard Euclidean geometry. Although they have a lot of applications, neither projective geometry nor finite geometries are included in the general high school curriculum. In this talk, we give an elementary introduction to finite projective geometry with the help of a card game, called Dobble. It is not a traditional logical game, it is based on speed, and players need good reflexes. This game almost perfectly models PG(2,7), the finite projective plane of order seven and gives us a playful approaching method. We investigate its most important properties as well as we consider the possibility of constructing similar cards based on finite projective planes, or other ways. We also discuss the problems arising at the constructions. We show some algorithms and demonstrations that help to generate such card games in Wolfram Mathematica.