Abstract:

Error-correcting codes are often used when data is transmitted over a channel in which noise can occur, thereby damaging some of the data. There are several types of error-correcting codes. In this talk, we will discuss an error-correcting code that is defined in terms of a particular finite geometry. This finite geometry comes from the incidence matrix of the so-called Wenger graphs. These graphs are well-known to those working in extremal graph theory. The talk will begin with a brief introduction to error-correcting codes, followed by linear codes. We will then define the finite geometry, and discuss some progress on an open problem of Cioabă, Lazebnik, and Li.