

Speaker: Eitan Bachmat

Title: On queues and numbers

Abstract: We will show that certain symmetries which have traditionally played an important role in number theory are also important for analyzing certain simple queueing systems. This connection between number theory and queueing theory leads to some interesting questions in number theory and also helps understand results from several queueing theory papers. We will demonstrate the connection by examining the problem of managing a mini-market with an express line queue. If time permits we will explain how the management problem in a supermarket setting relates to space-time geometry and how the introduction of curvature changes the behavior of the queue. The talk will be self contained, no experience in managing mini-markets will be assumed.