

Department of Mathematical Sciences

Seminar Announcement

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Multimagic Squares

Thursday, October 8, 2009

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2:45 – 3:45 PM

Science East – Room 124

A magic square M is an $n \times n$ matrix of integers such that all row sums, all column sums and the two diagonal sums are equal. Such a magic square is called normal if the entries are $1, 2, 3, \dots, n^2$. The construction of normal magic squares goes back as far as 2200 B.C. Let M_k be the matrix obtained from M by raising all entries to the power k . A magic square is called N -multimagic if M_1, M_2, \dots, M_N are all magic squares. Some of the history of the construction of magic and multimagic squares will be presented. I will also discuss my joint work with Christian Eggermont and Arno van den Essen where we construct N -multimagic squares for all N .