October 15

William Fulton, University of Michigan, visiting MSRI

Eigenvalues of sums of Hermitian matrices, after A. Klyachko.

The problem solved by Klyachko is to characterize the possible eigenvalues of a sum of a given number of Hermitian matrices in terms of the eigenvalues of the summands. The solution is related to Schubert calculus, and the proof uses geometric invariant theory. There will also be a brief discussion of work of Agnihotri and Woodward, and Belkale, on a similar problem for products of unitary matrices; here the solution is related to quantum Schubert calculus.