Idaho State University
Department of Mathematics

Colloquium

Spectra of Cayley graphs of complex reflection groups

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4:00 pm

PS 307

It is reasonably surprising when polynomials encountered "in nature" have particularly nice roots. We present an integrality result for eigenvalues of the adjacency, distance, and codimension matrices of the Cayley graphs of finite reflection groups with respect to all reflections. This generalizes a similar result of Renteln for real reflection groups, but requires new techniques because the reflection length function and codimension function can differ for complex reflection groups.

The talk will include definitions and examples for all terms used in the statement of the result as well as a brief aside on Hamiltonian cycles in related Cayley graphs.

The spectral result is joint work with Briana Foster-Greenwood and the Hamiltonian result is joint work with Terry Lay.

For Colloquium attendees, there will be light refreshment in PS 317 at 3:30 pm