

CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES
COLLOQUIUM

Wednesday, February 27
11:30 AM – 12:30 PM
Maria Sanford, Room 103

HAMILTONIAN CYCLES
IN DIRAC GRAPHS

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(JOINT WORK WITH JEFF KAHN)

Abstract: A graph on n vertices is said to be Dirac if its minimum degree is at least $n/2$; this is in honor of the seminal 1952 result of Dirac proving that any such graph has a Hamiltonian cycle. We show that any Dirac graph has at least $n!/(2+o(1))^n$ Hamiltonian cycles, which confirms a conjecture of G. Sarkozy, S. Selkow, and E. Szemerédi. We also mention that the number of Hamiltonian cycles in a Dirac graph is determined to within a subexponential factor by a simple parameter, the "entropy" of the graph.

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