CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES

COLLOQUIUM

Friday, September 12
2:00 – 3:00 PM
Maria Sanford, Room 101

ON A WEAKER FORM OF LOCKE'S CONJECTURE

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ABSTRACT

Locke's conjecture states that the binary hypercube Q_n with f deleted vertices of each parity is Hamiltonian if $n \geq f + 2$. In this talk we shall present a proof of the following theorem which is weaker than Locke's conjecture: Let $n \geq 2$ and F be a set of vertices in Q_n of cardinality $0 \leq f \leq n - 2$. Then there exists a set of vertices F' with cardinality f, such that $F \cap F' = \emptyset$ and the graph $Q_n \backslash \{F \cup F'\}$ is Hamiltonian. We shall also discuss the current status of Locke's conjecture and shall mention some related open problems and conjectures.

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