CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES

COLLOQUIUM

Friday, September 21
2:00 – 3:00 PM
Maria Sanford, Room 101

CRAFT'S CONJECTURE

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Abstract

In this talk a solution of the following conjecture of David Craft from 1995 will be presented: For every integer $n > 1$ there is a coloring of the edges of the binary hypercube Q_n with n colors, one being black, such that the black edges together with the edges of any other color induce a Hamiltonian cycle.

It was known to David Craft that such colorings exist when $n = 2,\ 3$ and 4. In 2005, Rastislav Královič and Richard Královič proved Craft's conjecture for every odd $n > 1$. In 2009 Vasil Gochev and Ivan Gotchev found many solutions for $n = 6$. Recently Vaithiyalingam Chitra and Appu Muthusamy noticed that for every even n > 4 Craft's conjecture is a corollary from a 2006 theorem of Richard Stong.

This colloquium is sponsored by the CSMP Scholarship Program at CCSU and is aimed at undergraduate and graduate students interested in mathematics. No previous knowledge is needed to understand this talk. All recipients of the CSMP scholarship are urged to attend.

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