Meeting: 1003, Atlanta, Georgia, SS 24A, AMS Special Session on Design Theory and Graph Theory, I

1003-05-90 **Sarah A. Spence*** (sarah.spence@olin.edu), Franklin W. Olin College of Engineering, Olin Way, Olin Hall, Needham, MA 02492-1200. *Constructing Complex Orthogonal Space-Time Block Codes.*

The theory of orthogonal designs dates back over a century. More recently, orthogonal designs and their generalizations have been used as space-time block codes for wireless communications with multiple transmit antennas. A $p \times n$ complex orthogonal space-time block code is used to transmit over n antennas, with decoding delay or memory length of p, and rate $R = \frac{k}{p}$. We will present some new constructions for these generalizations of orthogonal designs. (Received August 02, 2004)