MA5231, Error-Correcting Codes

Fall 2018

TR 9:35 am - 10:50 am, Fisher Hall 327B

Prof. Vladimir D. Tonchev
Fisher 309, 487-3360, tonchev@mtu.edu
http://www.math.mtu.edu/~tonchev

Office hours: MTWR 11:00 am -12:00 pm, or by appointment.

Objectives. Error-correcting codes are used for improving the reliability of data transmission. This course reviews some advanced algebraic and combinatorial techniques used in the construction of error-correcting codes, deriving bounds on their optimality, and designing efficient decoding algorithms.

Text: Instructor's Lecture Notes.

Additional texts (optional):

- W. Cary Huffman and Vera Pless, *Fundamentals of Error-Correcting Codes*, Cambridge, 2003.

- Vera Pless, *Introduction to the Theory of Error-Correcting Codes*, Third Ed., Wiley.

- Vladimir D. Tonchev, *Combinatorial Configurations: Designs, Codes, Graphs*, Wiley, 1988.

Grading will be based on homework assignments.