

## **A Petersen Graph construction of the Extended Ternary Golay Code**

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This lecture will describe a new construction of the Steiner System  $S(5,6,12)$  and the Extended Ternary Golay Code, using the Petersen Graph plus two auxiliary nodes. This construction of the code includes the all-ones codeword, which makes it useful for studying the small Mathieu Groups.

Keywords: Steiner System, Ternary Golay Code, Mathieu Group