

Construction of MIMO MAC Codes Achieving the Pigeon Hole Bound

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Abstract

This paper provides a general construction method for multiple-input multiple-output multiple access channel codes (MIMO MAC codes) that have so called generalized full rank property. The achieved constructions give a positive answer to the question whether it is generally possible to reach the so called pigeon hole bound, that is an upper bound for the decay of determinants of MIMO-MAC channel codes.