

# Abstract

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## **A new sequence for embedding side information in SLM for PAPR reduction in OFDM**

Orthogonal Frequency Division Multiplexing (OFDM) is one of the most promising technologies for high data rate wireless communications. Peak-to-average power ratio (PAPR) presents one of the main problems that deteriorate its performance. Selected Mapping (SLM) is a robust technique that can tackle the PAPR problem. However side information SI need to be sent which reduces the average rate of successful message delivery. In SLM without explicit SI transmission, the SI index is embedded in the transmitted symbols. In this paper, new sequences for embedding the SI index in the transmitted symbols are proposed. The proposed sequences have robust correlation properties. Simulation results show that the proposed sequences perform well in term of both the probability of SI index error and bit error rate.