

Seminar

Interleaver Design of Turbo Codes

The LTE standard adopted a Turbo Code (TC) as channel code. And TCs could remain promising channel coding candidates for 5G. A typical TC is constructed by parallel concatenating two convolutional codes via an interleaver. The design of the interleaver is critical to the performance of the TC, particularly for short frame sizes. They can in general be separated into two classes: random interleavers and deterministic interleavers. The task of the student is to give an overview of three kinds of deterministic interleavers: Quadratic Polynomial Permutation (QPP) [1], Almost Regular Permutation (ARP) [2] and Dithered Relative Prime (DRP) Interleavers [3]. References: [1] <http://ieeexplore.ieee.org/document/1377495/> [2] <http://ieeexplore.ieee.org/document/1312507/> [3] <https://ieeexplore.ieee.org/document/957178>

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