

## Edge Spreading in Spatially-Coupled LDPC Codes

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Spatially-coupled low-density parity-check (SC-LDPC) codes are a class of graph-based codes with a special “coupling” structure that gives rise to superior density evolution (DE) thresholds. One common construction method is to take several copies of a chosen base graph and “spread the edges” in a special way to obtain the SC-LDPC protograph. The corresponding SC-LDPC code is then defined by a lift of the SC-LDPC protograph, as is typical with protograph-based codes. The edge spreading method used in the construction has been shown to affect the performance of the resulting code. We present preliminary results on a new edge spreading method for these codes.

Keywords: spatial-coupling, LDPC codes, protograph codes, edge spreading