TUM

Master's Thesis

Product codes with polar component codes

The task of the student would be to implement an iterative decoding of a product code composed of polar component codes. S/he should start by regenerating the results from [1]. Then, the work is extended **to have improved decoding, which still allow for high-throughput applications, for such product codes**. Later, s/he will enhance the code construction tailored to the introduced algoithms to improve the performance. The performance might be compared to the results from [2,3].

[1] https://arxiv.org/pdf/1901.06892.pdf

[2] https://arxiv.org/abs/2008.06938

[3] https://arxiv.org/abs/1908.10397

Prerequisites

The student

- should have taken the Channel Codes for Iterative Decoding, Information Theory and Channel Coding courses.
- should have some experience with programming and should be eager to implement.

Contact

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Advisors

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