An Introduction to Finite Length Codes for SoCs

High data integrity is a key in modern SoC communication. However, due to the ever decreasing feature size, modern silicon devices become more vulnerable to transient faults. At the same time, on-Chip communication operates on rather small chunks of data, in contrast to traditional unreliable communication scenarios like wireless communication. Therefore, conventional measures like the channel capacity as introduced by Shannon do hold anymore, paving the way to new methods to quantify channels and codes alike that take the code length into account. The goal of this seminar is to provide an introduction into the field and methods of finite length codes.

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