

Forschungspraxis

Construction of Identification Codes via Prime Numbers

In original scheme of **identificaion via channels** ([Ahlswede and Dueck, 1989](#)), a non-constructive method for coding for noiseless channel was studied. To address the explicit construction of identifcaion codes, foremost [Ahlswede and Verboven, 1991](#) provide a number theoretic approach based on the two successive prime number encryption. This method require the knowledge of first 2^n prime numbers for a block-length of n codeword. In this research internship, this method along with related prime number encryption tools and theorems would be investigated. Further, the extension of this scheme to a general DMC will be analyzed.

Prerequisites

Background in Information Theory and Channel Coding

Familiarity with Fundamental of Identificaion Theory

Familiarity with Prime Number Theorem (Chebyshev)

Advisors

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