Associate Professorship of Coding and Cryptography
TUM Department of Electrical and Computer Engineering
Technical University of Munich

Master's Thesis

How to guess an n-digit number

In a deductive game for two players, Alice and Bob, Alice conceals an n-digit number x, and Bob, who knows n, tries to identify x by asking a number of questions, which are answered by Alice. Each question is an n-digit number y, and each answer is the number of positions at which the corresponding symbols of x and y are different. Moreover, we require Bob to ask all questions at once. The goal of this project is to design and implement an efficient coding scheme for Bob with an asymptotically optimal number of questions.

Prerequisites

Coding theory, combinatorics, analysis

Good programming skills

Contact

Advisors

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