

PhD research topic proposal
BME, Doctoral School of Mathematics and Computer Science

Name and degree of supervisor :

NAGY Gábor Péter, DSc

Are you willing to supervise Stipendium Hungaricum applicants?

yes

Title of the topic:

Algebraic structures in coding theory and cryptography

Short description:

Modern cryptography and the theory of error correcting codes uses a lot of discrete algebraic structures: finite fields, finite geometries, combinatorial designs, latin squares, linear groups, algebraic curves of finite fields, and their automorphisms. We are interested in recent results on these structures, their interplay and applications in protocols. The constructions and classifications of these objects is usually hard and requires the use of smart computing and heavy computer calculations.

Requirements:

Undergraduate algebra, group theory and basic computer skills

Contact:

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