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

Name and degree of supervisor :

Dániel Gerbner, PhD

Are you willing to supervise Stipendium Hungaricum applicants?

Yes

Title of the topic:

Generalized Turán problems

Short description:

In ordinary Turán problems, the basic question is the largest number of edges in graphs on n vertices, avoiding a fixed subgraph. In generalized Turán problems, we look for the largest number of copies of another fixed subgraph instead. After several sporadic results, the sytematic study of these problems was initiated by Alon and Shikhelman. Their paper was on arXiv in 2014 and published in 2016, yet it already has 180 citations on google scholar. Despite this extensive research, several basic problems have not even been studied.

Requirements:

Basic knowledge of graph theory

Contact:

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Place of work:

Rényi Institute