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

Name of supervisor :

István Faragó

Degree:

PhD, Doctor of HAS

Title of the topic:

Operator splittings and their applications

Short description:

The main topic of the research is to analyse the basic numerical properties of the operator splittings, as a special time.discretization numerical method , namely, the consistency, stability and convergence. We investigate the splitting methods of higher order accuracy and also . we consider the problem of the applied numerical methods for solving the different sub-problems obtained by operator splitting. The theortical results will be demonstrated on real-life (mainly engeneering) problems.

Requirements:

English language, , programming skills (Matlab)

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Place of work:

Department of Differential Equations, Institute of Mathematics, BUTE

Statement: *The conditions of the research above are satisfied, the theme is confirmed by the Head of the Department/Institute*