

## INVITATION TO THE LECTURE

JULY 8, 2020

9:00

CONFERENCE ROOM

# SCHWARZ DD METHODS FOR COUPLED FLOW AND ELASTICITY IN POROUS MEDIA

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The lecture overviews space decomposition methods, especially based on overlapping domain decomposition and coarse-fine decomposition of finite element problems. The combination of both decompositions is suggested together with possible analysis via strengthened CBS constant and weighted Friedrichs inequality. The standard and hierarchical Schwarz methods are suggested as solvers for Darcy flow, elasticity and poroelasticity problems.

The lecture aims at future collaboration in the outlined direction, especially in the development of codes for the realization of the methods. Potential collaboration with D. Horák, R. Kohut, J. Kružík, T. Luben, O. Axelsson and others.