Structure-preserving unfitted finite element discretizations

Organizers: Gunilla Kreiss[1] and Sara Zahedi[2]

[1]Uppsala University, Sweden, gunilla.kreiss@it.uu.se
[2]KTH Royal Institute of Technology, Sweden, sara.zahedi@math.kth.se

Short Description

There has been an extensive development and progress of so called unfitted finite element methods for solving Partial Differential Equations (PDEs) in complex geometries. These methods allow the external and/or internal boundaries to cut through the mesh without compromising on accuracy and can be combined with different interface representation techniques. This minisymposia will focus on unfitted discretizations that inherit or mimic fundamental properties of the PDEs they discretize such as conservation, symmetries, and positivity structures etc. Contributions that target the development, analysis, or large computations of such unfitted discretizations are of interest.