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Recent Progress on Mixed Finite Element Methods of Linear Elasticity

by

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Time: 4:00 – 5:00 pm

ABSTRACT

The finite element method was invented for stress analysis of elasticity problems in the 1960s. Since the Hellinger-Reissner variational principle takes both stress and displacement as independent variables, it has become very important in numerical simulations. Surprisingly, more than half century's research proves that it is extremely difficult to develop stable finite element schemes that are able to preserve the stress symmetry exactly. This talk presents recent mixed finite element methods of linear elasticity in both 2D and 3D. In addition, their adaptive versions and fast solvers for the corresponding discrete system are discussed.

Register in advance for this talk:

<https://cityu.zoom.us/meeting/register/tJ0uf-uuqjgrHt3u0bu7WZSVI4pHHBP-fL0j>

[Zoom link will be provided via email after registration.]



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