

## Partition of Unity Methods for Nonmatching Grids

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In this talk, we first give a general framework on applying the partition of unity method for nonmatching grids. Numerical aspects of discretization by partition of unity finite elements are considered for a model problem. We then present recent results on applying the method to Stokes equations discretized on nonmatching grids. The approach is based on creating global discrete spaces for velocity and pressure by gluing subspaces associated with subdomains. One main technical issue is the establishment of the Babuška-Brezzi's in-sup condition for the new method.

### References

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