



Introduction to the Virtual Element Method

Virtual Element Methods (VEM) can be considered as an extension of Finite Element Methods for dealing with polygonal and polyhedral meshes of very general shape. Polytopic meshes allow high flexibility in many applications, such as: treatment of complex geometries, mesh refining and coarsening, contact problems, fractures, and moving objects.

This introductory seminar presents the essential ingredients in VEM using the Poisson equation in 2D and 3D as a model problem. Emphasis is given on the numerical implementation. In the final part, directions of actual and future research are provided.

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DICAr MS1 Meeting Room

Via Ferrata, 3 – Pavia