XVIII International Conference on Computational Plasticity, COMPLAS 2025
September 2-5, 2025, Barcelona, Spain

VIRTUAL ELEMENT METHOD FOR ENGINEERING APPLICATIONS

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ABSTRACT

In the last decade, a vivid development of the virtual element method (VEM) as a new approximation technology took place. It was applied to solid and fluid mechanics problems. Due to the multidisciplinary nature, the range of application includes problems of mathematics and engineering. It is constantly extended to new fields.

Engineering applications are on:

- elasticity for small and inelastic deformations,
- plasticity across the scales,
- fracture mechanics in two and three dimensions,
- homogenization techniques,
- plate problems- contact mechanics,
- coupled and multi-scale problems,
- topology optimization.

The mini symposium aims at gathering researchers in the **COMPLAS** communities who work active in the VEM field. It welcomes contributions both from the theoretical, applicative and computational point of view, and is intended as a fruitful moment of interdisciplinary exchange of ideas.

Key words: Virtual element method (VEM), stabilization, inelastic material behavior, 2D/3D problems, engineering problems.