

COMPLAS IN GEOMECHANICS

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ABSTRACT

Computational plasticity has undoubtedly had a tremendous impact on the modeling of the behavior of geomaterials. The last few decades have seen this technique applied to a variety of problems in geomechanics, geotechnical engineering, geological sciences, and other related fields. For this special edition of COMPLAS honoring the 70th birthday of its founder, we are delighted to organize this mini symposium to celebrate the many fruitful years of computational plasticity in geomechanics and related fields. Topics of interest include, but are not limited to, unsaturated poromechanics, energy geotechnics, digital twins for geosystems, phase field fracture, brittle-ductile transition in porous rocks, soil liquefaction under quasi-static and dynamic loads, soil dynamics under high-strain-rate impacts, machine-learning design-of-experiments, snow mechanics, and problems involving very large deformation including landslides, debris flow, and avalanches. Apart from finite elements, we encourage developments in other computational platforms such as SPH, peridynamics, MPM, and DEM.