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FINITE ELASTOPLASTIC DEFORMATION THEORY

YUKI YAMAKAWA*, KOICHI HASHIGUCHI†

* Department of Civil and Environmental Engineering, Tohoku University
6-6-06, Aramaki-Aza-Aoba, Aoba-ku, Sendai 980-8579, Japan
yuki.yamakawa.c7@tohoku.ac.jp

† MSC Software, Ltd.
KANDA SQUARE 16F, 2-2-1, Kanda Nishikicho, Chiyoda-ku, Tokyo 101-0054, Japan
hashikoi87@gmail.com

ABSTRACT

Various finite strain elastoplasticity models based on the hypoelastic-based plasticity and the multiplicative hyperelastic-based plasticity have been proposed in order to describe the large elastoplastic deformation. Although various classes of constitutive models have been developed and utilized for a broad range of engineering purposes, their similar/distinctive features, as well as their advantages/disadvantages, can be identified. This Invited Session intends to serve as a discussion forum for researchers and engineers involved in this active research topic. The topics addressed in this Invited Session will include, but are not limited to:

- Fundamental theory for finite strain elastoplasticity;
- Development of advanced constitutive models for various materials, such as metals and geomaterials, involving finite strains;
- Computational techniques for finite strain elastoplasticity;
- Engineering applications of finite strain elastoplasticity models.

REFERENCES

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