

RECENT ADVANCES IN FORCE-BASED METHODS FOR STRUCTURAL ANALYSIS AND OPTIMIZATION

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ABSTRACT

This mini-symposium intends to address researchers that are currently working on any type of numerical procedure(s) for structural analysis that is entirely or partially based on the force (or “mesh”) method.

The topics will include (but will not be limited to) force-based structural analysis for static and dynamic problems, force-based structural optimization procedures, force-based finite elements (e.g. fiber elements), etc. The participants are expected to address both elasticity and plasticity problems.

The main goal is to gather around people with similar research interests in order to communicate the recent advances in the aforementioned fields, but also exchange experience from things that didn’t work (after all, even bad ideas are to learn from).

We expect at minimum a single session of six (6) presentations with a typical duration of twenty (20) minutes each, but that will depend on the number of participants, which cannot be known a priori.

REFERENCES

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- [3] T.N. Patsios, K.V. Spiliopoulos, “A Force-Based Mathematical Programming Method for the Incremental Analysis of 3D Frames with Non-Holonomic Hardening Plastic Hinges”, *Computers & Structures*, Vol. **208**, pp. 51–74, (2018).