

عنوان مقاله:

On/off Nodal Reconfiguration for Global Structural Control of Smart 2D Frames

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خلاصه مقاله:

This paper proposes an on/off semi-active control approach for mitigation of free structural vibrations, designed for application in 2D smart frame structures. The approach is rooted in the Prestress–Accumulation Release (PAR) control strategies. The feedback signal is the global strain energy of the structure, or its approximation in the experimental setup. The actuators take the form of on/off nodes with a controllable ability to transfer moments (blockable hinges). Effectiveness of the approach is confirmed in a numerical simulation, as well as using a laboratory experimental test stand.

کلمات کلیدی:

structural reconfiguration, Structural control, semi-active control, Frame Structures, Controllable nodes

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