

عنوان مقاله:

ONLINE MODAL IDENTIFICATION OF STRUCTURES BY NATURAL GRADIENT ALGORITHM

محل انتشار:

هشتمین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله (سال: 1398)

تعداد صفحات اصل مقاله: 6

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خلاصه مقاله:

This paper presents an adaptive blind source separation technique, natural gradient algorithm (NGA) to identify modal characteristics of structures in real-time. To do this, at first, the NGA algorithm is used to estimate modal matrix and modal coordinates online, then modal parameters extracted from modal coordinates. The NGA updates the un-mixing matrix for each step. With characteristics such as the need for little data, lower computational cost, small storage capacity and lower analysis time the NGA algorithm is more suitable in civil engineering applications, especially in online structural identification. The efficiency of the proposed method is investigated with synthetic example

کلمات کلیدی:

Adaptive blind sources separation, Modal identification, Natural gradient algorithm, On-line structural identification, Output-only system identification

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