



## Tutorial Review

## Explaining operational modal analysis with data from an arch bridge

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## ABSTRACT

This tutorial paper aims to introduce the topic of operational modal analysis to non-specialists on the subject. First of all, it is stressed the relevance of this experimental technique particularly in the assessment of important civil infrastructure. Then, after a synthesis of required theoretical background, three of the most powerful algorithms for output-only modal identification are presented. The several steps of these identification procedures are illustrated with the processing of data collected on a concrete arch bridge with a span of 280 m. As the use of operational modal analysis in the context of structural health monitoring is a subject under active research, this theme is also introduced and briefly exemplified with data continuously recorded at the same bridge.

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