

## Bridge in service structural monitoring: the SCSHM benchmark

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### ABSTRACT:

In 2023, the Data-Enhanced Infrastructures Management Committee of the Society of Civil Structural Health Monitoring (SCSHM) launched a benchmark study on in-service structural monitoring of bridges. A comprehensive dataset, developed in collaboration with the University of Manitoba, was made available to the engineering community to promote the validation and comparison of methods for structural performance evaluation.

The benchmark structure is a span of a multi-supported bridge with a total length of 291 meters. A monitoring system was installed on the structure and operated for approximately nine months. The instrumentation included strain gauges and thermocouples to record strain measurements and air/structure temperatures beneath the deck.

This presentation outlines the details of the structure, the objectives of the study, the dataset shared with the engineering community, and reports some initial applications that leverage the dataset to validate in-service monitoring approaches.

