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Autore	Firus Andrei
Titolo	A contribution to moving force identification in bridge dynamics / / Andrei Firus
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Descrizione fisica	1 online resource (363 pages)
Collana	Mechanik, Werkstoffe und Konstruktion im Bauwesen, , 2512-3246 ; ; 65
Disciplina	624.25
Soggetti	Bridges - Design and construction Bridges - Live loads Bridges - Testing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- Force identification methods – state of the art and research -- Fundamentals of bridge dynamics under moving loads -- Introduction to inverse problems -- Formulation of an inverse problem for moving force identification -- Numerical validation with simulated measurement data -- Experimental validation: railway bridge in operation -- Experimental validation: pedestrian bridge -- Conclusion and outlook.
Sommario/riassunto	The knowledge of the real forces acting on a structure are of great importance in the condition assessment process of existing structures. In this sense, this work provides a novel approach for identification of dynamic moving forces acting on a bridge structure. It seeks to find the optimal time dependent force values that minimize the difference between the computed and measured displacement and acceleration time histories for a limited number of sensor locations. The work also presents extensive experimental investigations of the developed method on real structures in operation, which consistently show that it can be successfully used on a wide range of applications: from small structures excited by rather low pedestrian forces up to the "heavy

category" of a complete train passing a railway bridge. In this context, a set of particularities and limitations arising in the practical application of the method on real structures are also discussed. Andrei Firus studied civil engineering at the University "Politehnica" Timisoara, Romania and at the HTWG Konstanz - University of Applied Sciences, Konstanz, Germany. Between 2015 and 2021, he completed his PhD in structural dynamics at the Institute of Structural Mechanics and Design (Prof. Dr.-Ing. Jens Schneider), Technical University of Darmstadt, Germany. In 2020, he co-founded iSEA Tec GmbH in Friedrichshafen, Germany. Since then, he has been managing director of the company, which is active in the fields of structural design of lightweight structures, structural dynamics as well as monitoring and condition assessment of existing structures.

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2. Record Nr.

Autore

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Titolo

Dumézil, Georges

Heur et malheur du guerrier : aspects mythiques de la fonction guerrière chez les Indo-européens / par Georges Dumézil

Pubbl/distr/stampa

Paris : Presses universitaires de France, 1969

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148 p. ; 25 cm

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Soggetti

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