The inspection of bridges is currently made by visual inspection or by wired sensor techniques, which are relatively expensive, vulnerable to damage, and time consuming to install. In contrast, wireless sensor networks are easy to deploy and flexible in application so that the network can adjust to the individual structure. Different sensing techniques have been used with such networks, but the acoustic emission technique has rarely been utilized. With the use of acoustic emission (AE) techniques it is possible to detect internal structural damage, from cracks propagating during the routine use of a structure, e.g. breakage of prestressing wires. In this presentation technical questions regarding sensing issues will be addressed. This is followed by giving some application examples demonstrating how modern sensor systems performed during several monitoring campaigns at bridges and other structures.
Im Orginal in einer russischen Zeitschrift veröffentlicht.

Occurences:

- Einrichtungen > Fakultäten > Ingenieurfakultät Bau Geo Umwelt > Lehrstühle > cbm - Centrum Baustoffe und Materialprüfung > Lehrstuhl für Werkstoffe und Werkstoffprüfung im Bauwesen (Prof. Gehlen) > Publikationen > 2013

entries: