

Structural Monitoring of Lezíria Bridge – 12 years of continuous observation and assessment

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Towards a more pro-active approach in asset management along the lifetime of bridges, this lecture gives an overview in one of the most well-documented case studies that might be found in the literature – Lezíria Bridge, Portugal.

This bridge, one the longest bridges in Europe with 13 km length, is equipped with an integrated Structural Health Monitoring that has been working continuously since the early stage of the construction in 2006.

Based on the 12 years of continuous data and the deep knowledge of the author in this pilot study, the objective of this lecture is to give insights in the three main aspects of this type of projects: (i) design, installation and maintenance, (ii) data validation by means of advanced FE analysis and (iii) data processing and knowledge extraction.

The author aims that, at the end of this lecture and based on the case of Lezíria Bridge, the audience might get a holistic vision on how Structural Health Monitoring might be effectively embedded, and by consequence, used, by bridge owners/concessionaires.