

Objective

Improved and more continuous condition assessment of bridges has been demanded by our society to better face challenges presented by aging civil infrastructure. Indeed, the recent collapses of the Hintze Ribeiro Bridge that killed 59 people, in Portugal, and the I-35W Bridge over the Mississippi River that killed 13 people, in the United States of America, pointed out the need for new and more reliable tools to prevent such catastrophic events. In addition to life-safety issues, the bridges have a vital economic role as part of a multi-modal transportation infrastructure.

In the last two decades, bridge condition assessment techniques have been developed independently based on two complementary approaches: Structural Health Monitoring (SHM) and Bridge Management System (BMS) modeling. Recent developments suggest that, in an effort to create a more robust bridge management capability, the concepts of SHM and BMS fields should be merged. Therefore, in order to have a broad discussion on the past, present, and future of that topic, a seminar will be held at the Catholic University of Portugal, Campus Palma de Cima, Lisbon, as part of the Bridge and Special Structures course of the Master of Science program.

This seminar intends to bring together designers, owners, researchers, and students to discuss the current condition of the bridges in the world, with special focus on our nation's bridges, in order to highlight shortcomings in current inspection and maintenance strategies. By identifying the limitations of the current methodologies, it is anticipated that new pathways to more robust bridge condition assessment can be identified.

The proceedings of the seminar and the main conclusions will be included in a textbook, which will be distributed among the community.

Local

Auditorium Cardeal Medeiros
Catholic University of Portugal (UCP)
Palma de Cima, 1649-023 Lisbon, Portugal
(<http://goo.gl/maps/dnr7>)

Registration fees

Type	Rate (€)	
	Till Nov. 20 th	On/after Nov. 21 st
Full	85	100
Partial	55	65
Student	25	30

General contact information

Faculty of Engineering, UCP
Estrada Octávio Pato, 2635-631 Rio de Mouro
Tel.: +351 214 269 852
E-mail: scabppf@fe.lisboa.ucp.pt
Website: <http://www.fe.lisboa.ucp.pt/scabppf>

Organizing committee

Elói J. F. Figueiredo
Ionut Moldovan
Manuel Barata Marques



UNIVERSIDADE
CATÓLICA
PORTUGUESA | FACULDADE DE
ENGENHARIA



International Seminar

Structural Condition Assessment of bridges: Past, Present, and Future

December 11, 2012

Institutional support



Sponsored by



FUNDAÇÃO
CALOUSTE
GULBENKIAN



Program

08:30-09:00	Reception
Session 1: Status of our nation's bridges	
Chairman: Manuel Barata Marques , Director of the Faculty of Engineering, Catholic University of Portugal Rapporteur: Elói J. F. Figueiredo, Faculty of Engineering, Catholic University of Portugal	
Bridge's designers	
09:00-09:20	Armando Rito , Armando Rito Engenharia <i>"Bridge inspections as a tool for rehabilitation design and maintenance"</i>
09:20-09:40	António Perry da Câmara , PC&A Consultores de Engenharia Lda and Faculty of Engineering, Catholic University of Portugal <i>"From structural assessment for retrofitting to integration of SHM on new design of bridges"</i>
Visual inspectors	
09:40-10:00	Luis Oliveira Santos , Laboratório Nacional de Engenharia Civil <i>"Visual inspections as a tool to detect damage: shortcomings and needs"</i>
10:00-10:15	Discussion
10:15-10:30	Coffee Break
Bridge's owners	
10:30-11:00	Paulo Lima Barros , Brisa Auto-estradas de Portugal S.A. <i>"Bridge management and current state condition of the Brisa's bridges"</i>
11:00-11:30	Carlos Santinho Horta , EP - Estradas de Portugal S.A <i>"Implementation, shortcomings, and needs of a bridge maintenance system"</i>
11:30-12:00	José Carlos Clemente , REFER <i>"Bridge management and current state condition of the REFER's bridges"</i>
12:00-12:15	Discussion
12:15-13:45	Lunch
Session 2: Management of bridges	
Chairman: Carlos Alberto Matias Ramos , Bastonário da Ordem dos Engenheiros Rapporteur: Elói J. F. Figueiredo, Faculty of Engineering, Catholic University of Portugal	
Structural Health Monitoring	
13:45-14:15	Charles R. Farrar , Los Alamos National Laboratory, USA <i>"An overview on SHM and outstanding research issues"</i>
14:15-14:45	Joaquim A. Figueiras , Faculdade de Engenharia, Universidade do Porto <i>"A decade of bridge monitoring in Portugal: the LABEST experience"</i>
14:45-15:15	Keith Worden , The University of Sheffield, UK <i>"Applicability of the statistical pattern recognition paradigm on SHM for bridges"</i>
15:15-15:30	Discussion
15:30-15:45	Coffee Break
Bridge Management Systems	
15:45-16:15	Tiago Mendonça , Betar Consultores Lda <i>"An overview of BMS systems and the applicability of the Portuguese bridge management system: GOA"</i>
16:15-16:45	Helmut Wenzel , Vienna Consulting Engineers, Austria <i>"The role of SHM in lifecycle of bridges"</i>
16:45-17:00	Discussion
Panel Discussion	
Chairman: Charles R. Farrar , Los Alamos National Laboratory, USA Rapporteur: Elói J. F. Figueiredo, Faculty of Engineering, Catholic University of Portugal	
17:00-18:00	Research needs for the next decades