Sérgio Bruno Martins de Oliveira

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Professional summary

2000 - PhD Civil Engineering, Oporto University (FEUP)
1986 - Master of Science degree in Civil Engineering. Lisbon Univ. (IST)
1988 - Trainee research officer, LNEC, DB, Núcleo de Estudos Especiais
1990 - Research Assistant, LNEC, DB, Núcleo de Estudos Especiais
1999 - Guest prof., Instituto Superior de Engenharia de Lisboa
2000 - Research Officer, LNEC/DBB, NMMF

Main areas of interest and activity

-Dynamic analysis of structures. Monitoring and modeling the seismic behavior of dam-foundation-reservoir systems. Fourier Analysis and modal identification
- Development of 3D finite element models (3DFEM) for non-linear analysis of dams using damage models
- Software development for structural dynamic analysis using MATLAB
- Development of software to support the safety monitoring of large concrete dams: integrated use of models for effects separation (MES) and FEM3D considering viscoelastic effects.

Selected publications

C**hapters in scientific books**

- Oliveira,S. (2014, 2013) - Análise de Fourier e Aplicações em Dinâmica de Estruturas. In, Matemática do Planeta Terra. p.247. Ed.: F. Pestana da Costa, J. T.Pinto, & Jorge Buescu, IST Press. 1ª Ed.2013, 2ª Ed.2014.

Articles in scientific journals

- Oliveira,S.; Toader,A.M.; Vieira,P. (2012) - Damage identification in a concrete dam by fitting measured modal parameters J.Eng.Math.(v.13 p2888-2899).

- Oliveira,M.; Nápoles,S.; Oliveira,S. (2012) – Fourier Analysis: Graphical Animation and Analysis of Experimental Data with Excel. Spreadsheets in Education (eJSiE). Vol.5 Issue2. (3869 downloads, até dezembro de 2014)

- Espada, M.; Mendes, P.; Oliveira, S. (2011) – Observação e Análise do Comportamento Dinâmico da Torre das Tomadas de Água da barragem do Cabril. Rev. da APAET ISSN 1646-7078. Mec.Exp., Vol 19, P. 153-163.

- Oliveira, S., Faria, R. (2006) - Numerical simulation of collapse scenarios in reduced scale tests of arch dams. Eng. Structures 28, Elsevier, pp.1430-1439.