

# M.Sc. Course



## **Nonlinear Analysis of Structures: Seismic Response of RC Bridges - Blind Prediction**

**April 23rd to 27th, 2018  
and September 3rd to 7th, 2018  
in Ljubljana, Slovenia**



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# Description



## Content

- Basic requirements of modern standards for the seismic design of reinforced concrete bridges
- The basic numerical models for nonlinear analysis of reinforced concrete bridges
- The basics of state-of-the-art simplified nonlinear static pushover based analysis of bridges
- The influence of substandard structural details to the seismic response of bridges
- The state-of-the-art software for the nonlinear analysis of structures.

## Pre-requisites

Basic knowledge about:

- Analysis and design of reinforced concrete structures
- Dynamic and seismic analysis of structures
- Structural analysis
- Strength of materials
- Construction and building materials
- Knowledge of English language

# Aims & Outcome



## Aims

The objective of the course is to train the students to be able to make an assessment of the seismic response of RC bridges by means of the simplified nonlinear pushover based analysis and to be familiar with the basic requirements of modern standards for their seismic analysis and design.

## Learning Outcome

Knowledge and understanding of . . .

- . . . differences between elastic and nonlinear analysis of structures.
- . . . the basic principles of simplified nonlinear pushover based seismic analysis of RC bridges.
- . . . basic advantages and deficiencies of simplified nonlinear analysis.
- . . . basic engineering models, which are typically used for the nonlinear seismic analysis of bridges.
- . . . basic requirements of modern standards for the seismic design of RC bridges
- . . . software for the nonlinear analysis of structures

# Coordination



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