

# STSM Scientific Report

## Reference

Short Term Scientific Mission, COST Action TU0904

Beneficiary: Sura Josef, Faculty of Civil Engineering, Czech Technical University in Prague

Host: Fillo Ludovit, Faculty of Civil Engineering, Slovak University of Technology in Bratislava

Period: from 05/06/2012 to 15/06/2012, Place: Bratislava (Slovakia)

Reference code: COST-STSM-ECOST-STSM-TU0904-050612-018466

### • Purpose of the STSM

Establishing cooperation with the Slovak University of Technology in Bratislava in the field of design of concrete structures. Study of design methods of reinforced concrete slender columns according to European standards. Consultation to the behaviour of the reinforced concrete slender columns under normal conditions and under high temperatures, especially under fire. Exchange of experiences in the design of reinforced concrete structures according to the European standards.

### • Description of the work carried out during the STSM

I spent two weeks studying design methods of the reinforced concrete slender columns under normal conditions according to the European standards with preparation for this behaviour under high temperatures, especially under fire. These methods were discussed with prof. Fillo and compared with each other. Consultation continues to the computer program for design of reinforced concrete slender columns under the normal and fire conditions using the Annex B.3 of EN 1992-1-2.

### • Description of the main results obtained

Design methods for assessment of reinforced concrete slender columns, taking into account second order effects were mutually compared. The results are currently evaluated.

### • Future collaboration with host institution

After completion of the STSM continue communication with the host institution in the field of design of reinforced concrete structures and testing of slender columns under the normal and fire conditions.