EUCEET 2018

4th International Conference on Civil Engineering Education

CHALLENGES FOR THE THIRD MILLENNIUM

SEISMOCODE: a life long e-learning platform to help civil engineers keep pace with building codes evolution

Radu Pascu^{*}, Iolanda-Gabriela Craifaleanu^{*,†}, Ovidiu Anicăi[‡], Livia Ștefan[‡], Viorel Popa^{*}, Vasile Virgil Oprișoreanu^{*}, Ionuț Damian^{*}, Andrei Papurcu^{*} and Cristian Rușanu^{*}

*Technical University of Civil Engineering Bucharest
122-124 Lacul Tei Blvd., Sector 2, 020396 Bucharest, Romania
r_pascu@hotmail.com, www.utcb.ro

† National Institute for Research and Development in Construction, Urban Planning and
Sustainable Spatial Development, "URBAN-INCERC"
266 Pantelimon St., Sector 2, 021652 Bucharest, Romania
iolanda.craifaleanu@utcb.ro, iolanda@incd.ro, www.incd.ro

† Institute for Computers, ITC S.A.
11A Fabrica de Glucoză St., Sector 2, 020331 Bucharest, Romania
ovidiu.anicai@itc.ro, www.itc.ro

ABSTRACT

Within the preparation for the 2007 accession of Romania to the EU, a thorough process of harmonization of the national legal framework with the European counterparts was carried out. This process included the entire set of building codes and regulations, which were revised over the span of more than one decade, prior to the accession. Moreover, several European standards, among which the Eurocodes, were adopted as national standards. This radical change, performed in a relatively short interval, had a significant impact on the capacity of the civil engineering community to assimilate the new norms and to apply them in everyday practice. The case of the national code for the seismic design of buildings, P100, is illustrative for this situation. Issued in 2006 [1] and revised in 2013 [2], the code underwent substantial changes in comparison with its previous edition, being completely restructured and following closely the structure and content of Eurocode 8, Part I [3]. It also implemented results from earthquake engineering research performed in Romania in the previous years. Even though various initiatives were taken for the assimilation of this new code, many of its topics were still regarded by structural engineers as difficult to understand. The development of an online lifelong learning system, facilitating the assimilation of the new provisions, was found to be the most efficient solution. The SEISMOCODE platform [4], created in Romania within a recently finalized R&D project, is built around a body of knowledge with information on the seismic design of concrete structures according to the new norms. The platform also includes a Wiki system, several interactive e-learning modules for (self-)evaluation, a multimedia collection and a user's forum. The platform is conceived in support to lifelong learning programs in civil engineering, as well as an auxiliary tool for graduate and postgraduate university courses.

REFERENCES

- [1] MDRT. P100-1/2006, Code for the seismic design of buildings. Part I Design rules for buildings, Construction Bulletin, 12-13, INCERC, Bucharest, Romania, 2006 (in Romanian).
- [2] MDRAP. P100-1/2013, Code for the seismic design of buildings. Part I Design rules for buildings, Monitorul Oficial, Part I, No. 558 of 03.09.2013, Bucharest, Romania, 2013 (in Romanian).
- [3] CEN. EN 1998-1:2004, Eurocode 8: Design of structures for earthquake resistance. Part 1: General rules, seismic actions and rules for buildings, Doc. CEN/TC250 /SC8 /N317, , Bruxelles, Belgium: European Committee for Standardization, 2004.
- [4] SEISMOCODE platform. http://seismocode.elearning.itc.ro/. Accessed: January 11, 2018.