

Predavanja u HDMu:

- 1) A review of the vertical systems used in buildings to resist earthquakes. How to design for earthquake attack from any direction. The potential problem of buildings twisting during earthquake. Introduction to the software “RESIST”.**
- 2) Roles of horizontal structure like floor slabs as diaphragms. Common problems and solutions to achieve adequate diaphragms**
- 3) Seismic design philosophy. New seismic technologies. Vertical configurational problems and solutions**

Andrew CHARLESON, Associate Professor

Victoria University of Wellington
New Zealand

ABSTRACT

Of all loads that building are designed for, earthquake loads are the most problematic. Not only are their effects catastrophic, their intensities unknown, their directions of attack directionally random, they hit a building in its weakest direction – horizontally. The structure required to prevent severe damage requires a relatively large foot-print in plan, and this has significant architectural implications.

In this series of three lectures followed by discussion, the basic seismic design concepts relevant to architects will be outlined. At the end of the series, participants will be confident enough to begin the preliminary seismic design of their own design projects. They will even be empowered to determine the size and placement of their structural members using very user-friendly and freely available software. As well as explaining seismic design concepts and strategies, common design deficiencies will be discussed, and solutions offered.

These lectures will present seismic-resisting structures firstly as elements to ensure buildings are safe, but then also as opportunities to not only integrate with the overall architecture, but to enrich it.