

Session ID: SDM-14

Title

MYTHS AND FALLACIES IN EARTHQUAKE ENGINEERING - A NEW LOOK

Convenors

M. Speicher ¹

Description

As a remix of Nigel Priestley's iconoclastic monograph (Myths and Fallacies in Earthquake Engineering, Revisited) interrogating some commonly accepted philosophies of the day, this session plays off the same theme and questions ideas that influence current earthquake engineering practice. One example topic is an examination of code complexity, testing the hypothesis of simple is better. This topic is somewhat reminiscent of the refined analysis myth explored by Priestley. Some argument can be made that complexity in the building code is preventing innovation. Therefore, simple yet effective approaches should be revisited or created. An example of code complexity is the handling of second order geometric effects at a reduced force level (i.e., $1/R$). It can be argued these complexities like this add very little to the structural performance, but rather distract from what really matters. Another topic explored in the original publication is the myth of maximum energy absorption. A renewed look into the importance of re-centering versus damping is warranted, particularly in the context of the last two decades of research demonstrating the effectiveness of low-damage rocking systems. Additional topics will also be explored, maintaining the theme of challenging the status quo while provoking out-of-the box thinking.

Invited Speakers

M. Bruneau ², L. Fahnestock ³, N. Makris ⁴, S. Pujol ⁵

Affiliations

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