

**Session ID:** CMS-8

**Title**

RECENT RESEARCH ON COLUMN BASE CONNECTIONS AND THEIR IMPLICATIONS ON SEISMIC DESIGN

**Convenors**

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**Description**

Column base connections are arguably the most important connections transferring forces from the entire structure into the foundation. Since the publication of the American Institute of Steel Construction's Steel Design Guide One on Base Plates (in 2006), significant research has accumulated on the topic of column base connections (especially in the context of their seismic response and design). When integrated, this research has the potential to entirely transform the design and simulation practice for column base connections themselves, as well as the systems they are a part of. However, the translation of this research into professional practice requires serious coordination on the part of researchers and industry leaders that are invested in these connections.

The purpose of this technical session is to generate this coordination, focused on the following themes: (1) reviewing recent findings on column bases (including bending and shear transfer mechanisms) strength and stiffness models, best practices for simulation, and impact on building performance, (2) examining opportunities to transfer these research and technologies to practice, given the economic tradeoffs of structural performance, construction, design and manufacturing, and (3) strategies to facilitate these technology transfers, e.g., development of design documents, codes, or examples.

We propose a session that features a few speakers followed by a panel discussion. These presentations (which will be coordinated for maximum synergy) will include historical context on column base connections, and key findings of recent research. The participants will include a mix of academics and structural designers.

**Invited Speakers**

H. Inamasu <sup>4</sup>, F. Wald <sup>5</sup>, A. Karvinde <sup>3</sup>, R. Herrera <sup>6</sup>, C. Yao <sup>7</sup>

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