

Emerging Developments in Structural Systems for Tall Buildings

Abstract: New developments of tall buildings of ever-growing heights have been continuously taking place worldwide. Consequently, many innovations in structural systems have emerged. This presentation discusses developments of structural systems for tall buildings with emphasis on the advancements of recent, emerging, and potentially emerging systems. Recent trends of tubular structural systems in modified forms including the braced megatubes and varying-angle diagrids are presented. Core-outrigger structural systems are discussed with emphasis on their adaptability. The potential of employing superframes for conjoined megatall buildings is predicted. As a means to solve today's various project-specific complex design requirements, different mixed structural systems for supertall and megatall buildings are presented. Finally, the future of tall buildings is predicted as the race for height continues.