

# Concrete Day 2016

## The Philosophy of Engineering for the Burj Khalifa, the World's Tallest Structure

by

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**11:00am – 3:00pm**

**Student Center 2222/2223**

The **Burj Khalifa Tower**, formally known as the Burj Dubai, is the world's tallest manmade structure. The multi-use skyscraper soars to over a half mile high (2,717 feet). The 3 million ft<sup>2</sup> reinforced concrete multi-use Tower is utilized for Retail, a Giorgio Armani Hotel, Residential and Office. The goal of the Burj Khalifa Tower is not simply to be the world's highest building; it's to embody the world's highest aspirations.

Designers purposely shaped the structural concrete Burj Dubai—"Y" shape in plan—to reduce the wind forces on the tower, as well as to keep the structure simple and foster constructability. The structural system can be described a "buttressed" core; each wing, with its own high performance concrete core and perimeter columns, buttresses the others via a six-sided central core, or hexagonal hub. The result is a tower that is extremely stiff and uniquely equipped to resist lateral loads.

The presentation will discuss the philosophy behind the structural design and sustainable design of the world's tallest structure.

Lawrence Novak is the Director of Engineered Buildings for the Portland Cement Association. Prior to joining PCA, he was an Associate Partner with Skidmore, Owings & Merrill where he served as the **lead structural engineer** for the **Burj Khalifa, the world's tallest building**.

To learn more and to register please follow the link below:

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Or contact Jamieson Matthews, V.P. of Auburn ACI:

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