

**Department of Structural Engineering  
University of California, San Diego  
SE 290 Seminar**



**Dr. John Osteraas**  
Group Vice President  
Exponent Failure Analysis Associates

**"Structural Design in Tesla Time- the New Paradigm"**

Monday, October 24, 2016  
1:00 pm - 1:50 pm, Center Hall, Room 212

<http://structures.ucsd.edu/node/2126>

**Abstract**

The Tesla Gigafactory being built near Reno, Nevada is currently the largest building project in North America and when completed will be the largest building in the world. Design and construction are proceeding with unprecedented speed to keep pace with the rapid emergence of zero-carbon vehicles. The innovative performance-based seismic force-resisting system consisting of mechanical fuses and rocking strongbacks was designed, detailed, fabricated, and erected before interior floor areas and manufacturing equipment layout were completed. The robust lateral system has been designed to accommodate virtually any configuration and use of several million square feet of factory floor space.

**Biography**

John Osteraas is a Group Vice President at Exponent Failure Analysis Associates with overall responsibility for their Structural, Geotechnical, and Construction Consulting Practices. For over thirty-five years he has specialized in the investigation and analysis of buildings subjected to extreme forces with a focus on earthquake engineering. Dr. Osteraas received his PhD and MS Degrees in Civil Engineering from Stanford University and his BS in Civil Engineering from the University of Wisconsin. He is a Member of SEAONC, a Fellow of ASCE, and Member of EERI. He also served as a Structures Specialist in FEMA's Urban Search and Rescue Program and was deployed to the Oklahoma City Murrah Building Bombing in 1995, the World Trade Center Attack in 2001, and Hurricane Katrina in 2005.