

OKLAHOMA ENGINEERING CONFERENCE

AGENDA

JUNE 12-13, 2025
TULSA TECHNOLOGY CENTER - OWASSO CAMPUS
10800 N. 137TH E. AVE.
TULSA, OK 74055

THURSDAY, JUNE 12

7:30-8:00 a.m. **Registration/Continental Breakfast**

GENERAL SESSION

8:00-8:25 a.m.

Welcome

Doug Klassen, P.E.; OSPE VP of Education

1. OEF Update (.5)

Jennifer McCollum, APR; OEF Executive Director

8:30-8:55 a.m.

2. Board of Licensure for Professional Engineers and Surveyors Update (1)

Kathy Hart, Executive Director

Oklahoma Board of Licensure for Professional Engineers and Surveyors

9:00-9:55 a.m.

3. Transportation Update (1)

Tim Gatz, Executive Director

Oklahoma Department of Transportation

9:55-10:10 a.m.

NETWORKING BREAK

Sponsored by Freese & Nichols



10:10-11:05 a.m.

4. State of Engineering In Oklahoma (1)

Dr. Hanchen Huang, OSU Dean of Engineering

Oklahoma State University

11:10 a.m.-12:05 p.m.

5. Tulsa Airport Control Tower Construction Update

Sponsored by Tulsa Airports Improvement Trust

Alexis Higgins, CEO of Tulsa Airports Improvement Trust and

Brad Schapp, VP Shaffer, Stevens and Schapp



The replacement Air Traffic Control Tower (ATCT) and Terminal Radar Approach CONTROL (TRACON) at the Tulsa International Airport is owned by the Tulsa Airports Improvement Trust and is funded by a variety of private- and public-sector entities. The facilities were designed using the Terminal Facilities Design Standard (TFDS) recently-issued by the Federal Aviation Administration (FAA), which

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introduced new high-performance requirements given their critical importance to the nation. The presentation covers the design and construction of the ATCT, Link, and TRACON structures for “Very

Large” Earthquakes, Wind, Snow, and even Rain events while minimizing structural damage. Controller comfort is improved with a Tuned Mass Damper placed in the Expanded Portion of the ATCT. The resulting structures are intended to be robust and resilient, providing functionality for the important roles the facilities serve both at the Airport and for the Tulsa Region.

12:00-1:00 p.m.

Luncheon

OSPE and NSPE Update

Geoff Covalt, P.E., President, OSPE and

Julia Harrod, P.E., F.NSPE; President-Elect, NSPE

CONCURRENT SESSIONS

1:00-1:55 p.m.

6. OSHA Inspection and Incident Trends (1)

Meghan Christie, ASP, Acting Director Oklahoma City Area Office

OSHA

OSHA Inspection and Incident Trends”-This presentation will cover local, regional, and national enforcement inspection trends, injury and illness trends and emphasis programs for industries with high injury rates. Case studies related to work related fatality incidents in Oklahoma over the last year will be reviewed. An overview of cooperative programs will be included.

7. Legal Waters: Navigating Oklahoma’s Small Watershed Flood Control Program (1)

Janet Stewart, General Counsel

Oklahoma Conservation Commission

2:00-2:55 p.m.

8. Engineering Ethics NSPE Board of Ethical Review Cases: A Discussion on Competence and Standard of Care (1)

Julia Harrod, P.E., F.NSPE

NSPE President-Elect

This session will explore real-world ethical dilemmas reviewed by the NSPE Board of Ethical Review, with a focus on issues related to competence and the standard of care expected in the engineering profession. Through selected case studies, participants will examine how ethical principles are applied in practice and discuss the responsibilities engineers hold in protecting public health, safety, and welfare. Attendees will gain insights into the NSPE Code of Ethics, understand how to navigate complex professional situations, and strengthen their ability to make sound, ethical decisions in their own work.

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9. Green Ammonia (1)

*Greg Steelhammer, P.E., Sr. Project Manager
LSB Industries, Inc.*

2:55-3:10 p.m.

NETWORKING BREAK

3:10-4:05 p.m.

10. Oklahoma Department of Transportation Update (1)

*TJ Dill, Chief Engineer
Oklahoma Department of Transportation*

11. 3D Printing with Concrete (1)

*Massoud Forsat, PhD Student
Oklahoma State University*

4:10-5:05 p.m.

12. Modernizing the Grid – 100 Years in the Making: Claremore Electrical Grid

*Matt George, Power Delivery Practice Leader, CEC
Garrett Ball, P.E., City Engineer, City of Claremore
Paul Riess, Power Distribution Department Manager, CEC
Justin Blue, P.E., Power Distribution Project Engineer, CEC*

Claremore Electric, one of the oldest municipal-owned-and-operated electric utilities in the state, is mandated to provide reliable electric power to an expanding residential, commercial and industrial customer base. The challenges to fulfill this obligation are numerous, including highway improvement projects that require utility relocation, growing commercial and industrial load, restoration from natural disasters, ever-increasing customer expectations, and commitment to Claremore's comprehensive growth and development plan. City of Claremore management has prioritized investment in the electrical grid to improve system capacity, reliability and resiliency, including some near-term actions to alleviate load imbalances, and long-term approaches to accommodate growth and expansion. Through field surveys, system studies, leveraging smart meter data and subsequent engineering recommendations, the City of Claremore has developed a plan to improve the infrastructure reliability for the foreseeable future.

13. City of Wichita Drought Response and Water Resiliency

*Gary Janzen, Director of Public Works & Utilities
City of Wichita*

As the Wichita region continues to navigate through impacts of a historic drought, the commissioning of a new, state-of-the-art 120 MGD water treatment plant is one component of a strategic plan for future water supply resiliency.

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FRIDAY, JUNE 13

7:15-7:45 a.m. **Registration/Continental Breakfast**
Sponsored by The Beauty of Block



GENERAL SESSION

7:45-8:40 a.m.

**14. The Words We Use, The Stories We Tell and the Heroes We Celebrate:
Effective Tools for a Healthy Workplace (1)**

Chris Zervas

Inspiring others and crafting a culture of respect requires purposeful words and actions. Discover the power of words, stories, and heroes as together we grow your culture:

- What inspires positive action the most?
- What stories are you telling about whom?
- Who should you celebrate and why?

CONCURRENT SESSIONS

8:45-9:40 a.m.

15. Tulsa Ports (1)

Deanne Hughes, P.E., Board Chair, Tulsa Ports;
Drue Smallwood, Burns McDonnell;
Dainel Grisham, Deputy Director, Tulsa Ports

16. Mapping the Invisible: A Journey Through SUE (1)

Aaron Finley, P.E., SUE Department Manager; CEC

An introduction to Subsurface Utility Engineering Quality Levels, techniques, applications, and advantages over traditional (One-Call) utility options.

9:40-9:55 a.m. **NETWORKING BREAK**

9:55 – 10:50 a.m.

17. From Punching in to Plugging In: Secrets to Leading Millennials in the Workplace (1)

Chris Zervas

This program is designed to help leaders tap into the incredible potential of the millennial generation. Through engaging discussions and actionable strategies, participants will explore:

- Three powerful millennial motivators
- Why authenticity rules the day
- Mentoring for engagement and relationship

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18. Analysis of the Engineering Method (1)

Dr. Larry Hoberock, Ph.D., FASME, P.E. (Inactive)
Professor and Head, Emeritus School of Mechanical and Aerospace Engineering
Oklahoma State University

Our quality of life is largely determined by engineering and technology, yet most don't know what engineering is. Should not laypersons, as well as engineers, understand the actual strategies engineers use to cause change? While there have been numerous studies of the scientific method, there have been very few of the engineering method. How are these substantially different? Many believe that engineering is simply applied science and mathematics, that it can be adequately described by a number of well-defined steps, or that it is like what an architect does. While there may be some truth in such descriptions, they fall far short of actually defining how engineers do their jobs. In this workshop, we discuss a better and fairly recent approach, analyze elements of this approach, and present illustrations of its use.

10:55-11:50 a.m.

19. History of the Arkansas River Through Tulsa and the Vision, Concept, Design and Construction of Zink Lake and the Tulsa Wave Park (1)

Brooke Caviness, Stormwater Design Lead; City of Tulsa
Jeff Edwards, Executive Director; River Parks Authority
Joe Medlin; River Parks Authority

20. Tulsa Metrolink Autonomous Vehicle Pilot Program

Michelle Merchant, Senior Sustainability Planner
INCOG; Tulsa Area Clean Cities

The Tulsa AV Project aims to bring autonomous, on-demand transit service to North Tulsa, an area with a concentration of households lacking a personal vehicle. The goal of the project is to collect information about how AVs can be used to support transit operations and improve transportation outcomes in high-need communities. Four electric AVs will be deployed through the project, using technology from Perrone Robotics.

12:15 - 1:15 p.m.

Luncheon

Alvin Fruga, Mayor of Owasso

GENERAL SESSION

12:45 p.m. – 1:40 p.m.

21. Oklahoma Turnpike Authority Update (1)

Joe Echelle, P.E., Executive Director,
Oklahoma Turnpike Authority

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1:45 p.m. - 2:40 p.m.

22. OHP Anti-Drone Program (1)

*LT Scott Patton, ESU – Command Post Operations
Oklahoma Highway Patrol*

2:40 p.m. – 2:55 p.m. NETWORKING BREAK

2:55 p.m. - 4:15 p.m.

23. Red Rover, Red Rover, Send Curiosity Right Over (1.5)

Todd Barber, Propulsion Engineer, NASA

Curiosity's mission to the red planet will be covered in detail. Topics to be discussed include a bit on the history of Mars rovers at JPL, the scientific motivation for Curiosity, and the preparations for launch two days after Thanksgiving 2011. The science suite on board this one-ton mega rover will be presented, as well as the engineering challenges involved in getting Curiosity to the launch pad, traveling 352 million miles to Mars over 8.5 months, and “sticking the landing” following the so-called “seven minutes of terror” on 5 August 2012. Early mission science results will be presented as well, followed by pop-culture reaction to the rover landing.

Adjourn

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