

NC Society of Engineers Meeting February 20 and 21, 2020

NCSU Alumni Center (Park Alumni Center)

2450 Alumni Dr, Raleigh, NC 27606

NCSU Centennial Campus

Thursday, February 20:

1:00 pm - 2:00 pm: Occupant Evacuation Elevators (OEE) with Andrew Frantilla and Eric Burket

It has been taught and reinforced throughout most of our lives not to use elevators in fire and similar emergencies. Yet, newer elevator and building technology and recent fire/life safety code changes permit specialized elevators to be used by building occupants for evacuation. This program will provide a short history to date of OEE, cover Integration of 3 Code Authorities (Fire, Building, & Elevator), and provide a System Overview.

Andrew Frantilla is Senior Project Manager with Schindler Elevator Corporation. He is highly specialized in complex major projects all with sale values in excess of 5 million dollars. He has been involved with managing schedules, manpower allocation, complex schedule of values, and material logistics. He works directly interfaced with highly skilled field Union labor, mechanical, structural and electrical engineering, and office administration. He has a BS degree from University of Illinois at Urbana-Champaign.

Eric Burket is a Senior New Installation Sales Representative from Schindler. He is an elevator professional with over 22 years of Industry experience. He is a BA graduate from Salisbury State University.

2:15 pm - 3:15 pm: Engineering Disasters - And What We Can Learn from Them with John O'Connor, PE

This presentation will examine several famous engineering disasters, giving a brief summary of what occurred and what failed. Three case studies will be discussed to illustrate how simple assumptions, risk tolerance (CRAT), and other human performance factors played a role. Lessons learned from these three case studies are intended to be applicable to our jobs as engineers. Sneak Preview: Chernobyl Nuclear Plant disaster is one of the three.

John O'Connor has 39 years of experience in the operation, maintenance and engineering of electric power systems. He graduated from N.C. State University with a BS in Electrical Engineering, is a registered professional engineer in North Carolina, and holds an electrical contractor license. John recently retired as a Principal Engineer in the Duke Energy Progress Transmission Planning group, where he was responsible for transmission system stability studies.

3:30 pm – 4:30 pm: NCDOT Financial Update and First Commission Update with Burt Tasaico

Nearly everyone has heard that the NCDOT had to drastically reduce its spending in 2019. We will get the update on that situation and hear about the First Commission devoted to study the finances for NCDOT for the next decades.

Burt Tasaico is the N.C. Department of Transportation's director of strategic initiatives and program support. As part of his role, he is responsible for expanding and transforming traditional data into timely and meaningful information to reinforce the department's mission, initiatives, policy decisions and to synchronize efforts to ensure the highest delivery of NCDOT's programs. Tasaico's previous work experience primarily consists of transportation, both in the private and public sector, in all phases of transportation planning, modeling, programming, funding, revenue forecasting and cash management. Tasaico has held various positions at NCDOT, including working in the Program Development Branch, Information Technology Division and Financial Management Division. A licensed professional engineer, Tasaico earned his undergraduate and graduate degrees from North Carolina State University and a graduate degree from the University of North Carolina at Chapel Hill School of Government.

Friday, February 21:

9:00 am - 10:00 am: Transit Mobility Software with Alex Gibson (1 PDH)

10:15 am - 11:15 am: Construction Challenges with Dorton Arena with Don Kline, PE

J. S. Dorton Arena is a 7,610-seat multi-purpose arena located in Raleigh, North Carolina, on the grounds of the North Carolina State Fair. It opened in 1952. It was originally named the "State Fair Arena", and was dedicated to Dr. J. S. Dorton, former North Carolina State Fair manager, in 1961. Its design features a steel cable supported saddle-shaped roof in tension, held up by parabolic concrete arches in compression. It has a unique structure and difficult design that presented construction challenges along the way. It was built in the days slide rules, primitive calculators, and old-fashioned survey equipment. This talk will discuss those challenges and how they were overcome.

Don Kline has a BCE degree from NC State and a MSCE from the University of Illinois. He has worked for various design companies with his last 29 years being with Kimley Horn. He had a 16-year career as a structural engineering consultant working on all types of buildings, principally serving architects, in a three-state area. He founded the Bridge Inspection Program for Kimley Horn and oversaw its growth into six states. He first represented ACEC in the writing of the well-received and widely bought Manual 73, Quality of the Constructed Project, and later served on ASCE committees that published the second edition in 2000. He is associated with many publications throughout his career. He is an NSPE and ACEC Fellow.

11:30 am to 12:30 pm Engineering Ethics with David Tuttle

David Tuttle has served the NC Board of Examiners for Engineers and Surveyors as Board Counsel since July 1, 1994, providing legal guidance to the Board, to staff and to licensees. Having graduated

from North Carolina State University with a Bachelor of Environmental Design in Architecture and having earned a Juris Doctor degree from the University Of North Carolina School of Law and as a licensed attorney, he returned to the engineering/architectural field with a national firm for seven years where he served as Project Manager in all phases of the design and construction process including contract administration. He then entered the private practice of law for eight years in the areas of business, real property, and estate planning law prior to his present position with the Board.

Mr. Tuttle is an associate member of the National Council of Examiners for Engineering and Surveying (NCEES), presenting at national meetings on numerous topics, and having served for five years on the Law Enforcement Committee and five years as a member of the Uniform Procedures and Legislative Guidelines Committee. In addition, he served on the City of Raleigh Board of Adjustment. After moving to Chapel Hill he served on the Greenways Commission and the Central West Focus Area Steering Committee.