



WELCOME

The Ohio Society of Professional Engineers (OSPE) is proud to present this Conference – featuring 12.5 CPD hours, networking, entertainment and guest activities – in conjunction with our Technical Society Partners, the American Society of Civil Engineers (ASCE) and the Institute of Electrical and Electronics Engineers (IEEE).

DAY 1

THURSDAY - JUNE 15	
OSPE Annual Member Meeting	3:30 – 4:15 p.m.
EFO Annual Member Meeting	4:15 – 5:00 p.m.
Welcome Reception	7:00 – 9:00 p.m.
Engineers and guests registered for the Conference are invited for networking and hors d'oeuvres.	

DAY 2

FRIDAY - JUNE 16	
Registration / Exhibits / Beverage Break Station Open	7:00 a.m. – 1:30 p.m.
Full Breakfast Buffet	7:00 – 8:00 a.m.
OSPE-EFO Past Presidents Breakfast	7:00 – 8:00 a.m.
Kickoff & Color Guard	8:15 – 8:30 a.m.
National Anthem presented by Nathan Ogg, Assistant Music Director, The Alliance Chorus	
Keynote Seminar (0.5 CPD Hour)	8:30 – 9:00 a.m.
<i>"Ohio Federal Research Network," by Dennis Andersh, MSEE, Executive Director, Wright State Research Institute (Endorsed by PEG & PEHE)</i>	
Participants will learn:	
<ul style="list-style-type: none">How the Ohio Federal Research Network is helping to focus university research to better support Wright Patterson Air Force Base, NASA Glenn as well as other federal and state institutions statewideThe Ohio Federal Research Network supports research-oriented engineering and the technology readiness required for commercialization in six areasThe engineering opportunities and challenges that the aerospace establishment faces in both the military and commercial world	
Plenary Seminar (1.0 CPD Hour, ASCE speaker).	9:00 – 10:00 a.m.
<i>"Are We Ready for Innovative Transportation?," by Deb McAvoy, PhD, PE, PTOE, Associate Dean for Academics, Ohio University, Professional Traffic Operations Engineer through the Institute of Transportation Engineers</i>	
Participants will learn:	
<ul style="list-style-type: none">The effect unfamiliar drivers have on the operations of a roundaboutThe intersection of automated/connected vehicles and the human aspect	
Plenary Seminar (1.5 CPD Hours)	10:30 a.m. – 12:00 p.m.
<i>"Operational Safety Assessment Methodology for Navigation Services," by Michael DiBenedetto, PhD, Director, Avionics Engineering Center, Ohio University, Russ College of Engineering & Technology (Endorsed by PEHE)</i>	



Dennis Andersh, MSEE



Deb McAvoy, PhD, PE, PTOE



Michael DiBenedetto, PhD

DAY 2

FRIDAY - JUNE 16 (Continued)	
Participants will learn:	
<ul style="list-style-type: none">The DIAAT (Describe, Identify, Analyze, Assess, Treat) process used for performing safety analysesHow to conduct an Operation Safety Assessment (OSA) using DIAAT processKey OSA components	
John J. Troy, PE, F.NSPE, Memorial Legislative Luncheon (Bonus 0.5 CPD Hour)	12:00 – 1:00 p.m.
<i>Special guest speaker State Senator Joe Schiavoni (D-Boardman), Ohio Senate. Separate registration is required. Call 614-223-1144 for more information or to register.</i>	
Participants will learn:	
<ul style="list-style-type: none">Engineering and technology issues advancing in Ohio's legislature	
Tech Tour: AEP Dolan Technology Center & Distribution Training Facility (3.0 CPD Hours)	1:15 – 5:00 p.m.
<i>See tour description for details.</i>	
Presidents' Party: Dinner & Installation Ceremony	6:00 – 8:00 p.m.
<i>Installing Officer: Tom C. Roberts, PE, F.NSPE, NSPE President-Elect. Entertainment: Blue Spectrum.</i>	
Hospitality Suite Open.	8:30 p.m. – 12:00 a.m.
<i>Engineers and guests registered for the Conference are welcome.</i>	



State Senator Joe Schiavoni



Tom C. Roberts, PE, F.NSPE

DAY 3

SATURDAY - JUNE 17	
Registration / Exhibits / Beverage Break Station Open	7:30 a.m. – 5:30 p.m.
Full Breakfast Buffet	7:30 – 9:00 a.m.
OSPE Professional Interest Group Breakfasts (PEC, PEG, PEHE, PEI & PEPP)	7:30 – 9:00 a.m.
Plenary Seminar (1.5 CPD Hours)	9:00 – 10:30 a.m.
<i>"Entrepreneurship - Lessons from Engineering," by Raymond Waite, Jr., MS, PMP, Founder, Lighthouse Force (Endorsed by PEC & PEG)</i>	
Participants will learn:	
<ul style="list-style-type: none">How engineering skills can be put to good use in business endeavorsTo contain risk, use testing and feedback to guide progress and use critical thinking to avoid common trapsHow agile, lean development and design thinking skills apply to business decisions	
Concurrent Seminar (1.0 CPD Hour).	11:00 a.m. – 12:00 p.m.
<i>OPTION A – "A National Roadmap for Materials Joining & Forming Technologies," by Tom McGaughy, BSc Mechanical Engineering, Director of Technology, Edison Welding Institute (EWI) (Endorsed by PEI)</i>	
Participants will learn:	
<ul style="list-style-type: none">EWI's roadmap presents a national perspective on the status of materials joining and forming technologiesThe cross-industry canvassing methods employed in developing the roadmap, discuss the key needs identified by industry, and prioritize the research topics designed to address those needsEWI's Grand Challenge initiative to address industry gaps and enhance U.S. manufacturing competitiveness	
<i>OPTION B – "Soil Stabilization, Fines Preservation & Dust Control for Unpaved Road Portfolio Management," by Steven Vitale, President, Midwest Industrial Supply, Inc. (Endorsed by PEG)</i>	
Participants will learn:	
<ul style="list-style-type: none">With stagnating revenues and escalating costs, county engineers are pressured to address failing secondary road systemsAlternative solutions to maximize county budgets by categorizing and prioritizing road maintenance schedulesWhen and where to use dust control options, fines preservation options, soil stabilization options	
Annual OSPE-EFO Awards Luncheon	12:00 – 1:30 p.m.
<i>Celebrate with the winners of OSPE's & EFO's top awards for engineers, OSPE chapters, students, educators and legislators.</i>	
Concurrent Seminar (1.0 CPD Hour, IEEE speaker)	1:30 – 2:30 p.m.
<i>OPTION A – "Autonomous Vehicle Control," by Jim Zhu, PhD, Associate Fellow AIAA, Professor, Ohio University, Russ College of Engineering & Technology, School of Electrical Engineering & Computer Science</i>	
Participants will learn:	
<ul style="list-style-type: none">About control engineering (EE/ME) and vehicle technologyThe anatomy of an autonomous vehicle control system architecture motivated by the biological central nervous system and psychological cognitive process	



Raymond Waite, Jr., MS, PMP



Tom McGaughy, BSc Mechanical Engineering



Steven Vitale



Jim Zhu, PhD

DAY 3

SATURDAY - JUNE 17 (Continued)	
<i>OPTION B (Start of 2-hour session) – "Navigation: Principles of GPS," by Mike Braasch, PhD, PE, SMIEEE, Fellow U.S. ION, Thomas Professor of Electrical Engineering, Ohio University, Russ College of Engineering & Technology (Endorsed by PEHE)</i>	
Participants will learn:	
<ul style="list-style-type: none">The roles of the satellites, monitoring network and receiversHow measurements are formed and how position is determinedThe errors that impact performance	
Concurrent Seminar (1.0 CPD Hour).	2:30 – 3:30 p.m.
<i>OPTION A – "What Lies Beneath: Preventing Groundwater Challenges From Exerting Havoc on Your Projects," by John Pitz, CPI, NGWAF, Owner & President, N.L. Pitz, Inc., Batavia, Illinois, and Former President, National Ground Water Association (Endorsed by PEC, PEG & PEPP)</i>	
Participants will learn:	
<ul style="list-style-type: none">When working on well or pump failure projects, there can be frustrated professionals and clientsEngineers operate in the visible realm, but groundwater is unseenGreater awareness of the potential challenges presented by groundwater can save time and moneyThe impact of design parameters on a projectWhen better communication between all project professionals can ensure a better outcomeWhen to employ problem-solving skills beyond the troubleshooting matrix	
<i>OPTION B (Continuation of 2-hour session) – "Navigation: Principles of GPS," by Mike Braasch, PE</i>	
Concurrent Seminar (1.5 CPD Hours).	4:00 – 5:30 p.m.
<i>OPTION A – "Trenchless Installation," by Trygve Hoff, BSCE, PE, West Region Engineer, American Concrete Pipe Association (Endorsed by PEG)</i>	
Participants will learn:	
<ul style="list-style-type: none">A growing segment of pipe installation includes trenchless applications and it's important to understand this competitive option as our nation's infrastructure approaches the end of its service lifeDesign, equipment and installationDifferent types of trenchless technology and how they are usedWhat design steps are necessary to complete a jacking or microtunneling projectWhat equipment is most frequently usedHow precast concrete pipe and concrete tunnel segments are being used to build massive tunnelsA case study on trenchless technology being used to replace failing culverts	
<i>OPTION B – "Navigation: Principles of Inertial Navigation," by Mike Braasch, PE, Thomas Professor of Electrical Engineering, Ohio University, Russ College of Engineering & Technology (Endorsed by PEHE)</i>	
Participants will learn:	
<ul style="list-style-type: none">How accelerometer and gyro measurements are processed to determine position, velocity and orientationHow the curvature and rotation of the Earth impacts measurement processingHow gravity and Earth rotation are exploited for system initializationThe impact of fundamental error sources	
Hospitality Suite Open.	5:30 – 7:00 p.m.
<i>Engineers and guests registered for the Conference are welcome.</i>	



Mike Braasch, PhD, PE



John Pitz, CPI, NGWAF



Trygve Hoff, BSCE, PE

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Call 614-223-1144 for sponsor opportunities

* As of date of printing

FRIDAY: ENGINEERS' TECHNICAL TOURS (3.0 CPD HOURS)

Embark on a technical tour conducted by engineers. Program includes lecture and discussion. *Wear comfortable shoes.*

AEP's Dolan Technology Center and Distribution Training Facility are key assets allowing AEP to perform research, test equipment and train employees to work in the increasing technology-rich environment of the modern electric utility environment. Both facilities are also used



FRIDAY: GUEST TOURS PACKAGE

Guests (family and friends) may register for Friday and/or Saturday tour packages. Guest tours are not included in the engineer's packages. Underwriting courtesy of OSPE's Buckeye Chapter and professional interest groups. *Wear comfortable shoes.*

BREAKFAST

GOOD MORNING BUFFET

Enjoy the most important meal of your day at the Columbus Airport Marriott.

SATURDAY: GUEST TOURS PACKAGE

Guests (family and friends) may register for Friday and/or Saturday tour packages. Guest tours are not included in the engineer's packages. Underwriting courtesy of OSPE's Buckeye Chapter and professional interest groups. *Wear comfortable shoes.*

BREAKFAST

GOOD MORNING BUFFET

Breakfast at the Columbus Airport Marriott.

HISTORIC TOUR

ORANGE JOHNSON HOUSE

This beautifully appointed property portrays both the pioneer period and, with its Federal-style addition, a more elegant lifestyle reminiscent of New England after the War of 1812. *A guided tour brings to life the Johnson family and the lifestyles of Worthington's settlers.*



by other utilities and outside companies to support their testing and training needs.

DOLAN TECHNOLOGY CENTER (DTC)

Participants will learn:

- The work in testing distribution line cover-up using DTC's 200 kV source and the mechanical testing of a ceramic string insulator
- Why corona free hardware is required for transmission lines that are energized above 138 kV
- To measure both the magnetic and electric fields and the effects on metal objects in these fields

WORKSHOP & LUNCHEON

GLASS ROOSTER CANNERY

Bring simpler days back to life with a Water Bath Canning Jam workshop and a "farm to fork" lunch at this licensed cannery and sustainable farm in the Village of Sunbury. *Tour included. Jam taste-test included. Bring home your own jar!*



SHOPPING

OLD WORTHINGTON & FARMERS MARKET

Although founded more than two centuries ago, Old Worthington's elegantly restored shops and eateries draw crowds with their small-town charm and unique offerings. Shop in more than 15 specialty stores for vintage and antique treasures, traditional art, letter press art, jewelry, personal care products, clothing, accessories, gifts, baby presents, decoratives, gallery furnishings, candles, wine and bakery goods. The Worthington Farmers Market is Central Ohio's largest. It boasts more than 70 local vendors. The market includes locally grown seasonal fruits and vegetables, locally produced cheeses, jams, jellies, honey and maple syrup, meats, eggs, flowers, herbs, plants, home-made soaps and foodstuffs.



- The effects of having metal objects and/or structures in close proximity to a 345 kV double circuit transmission line

DISTRIBUTION TRAINING FACILITY

Participants will learn:

- The engineers' development of the line mechanics' training
- Advanced distribution line training
- Distribution equipment with emphasis on distribution automation
- The engineers' involvement in safety and human performance in distribution training
- Interpreting OSHA requirements

SHOPPING

POWELL

Antique and gift shopping in this quaint community.



DINNER

PRESIDENTS' PARTY

Dinner and installation ceremony at the Columbus Airport Marriott. *Installing Officer: Tom C. Roberts, PE, F.NSPE, NSPE President-Elect. Entertainment: Blue Spectrum.*

LUNCHEON

THE WORTHINGTON INN

The Worthington Inn is a mainstay offering refined fare, Victorian-style décor and exceptional private dining, all in a historic 1831 landmark. *A "recipe share" is included with lunch.*



ARTS

WORTHINGTON ARTS FESTIVAL & MCCONNELL ARTS CENTER

Held on the lawn at the Peggy R. McConnell Arts Center, this festival has been ranked in sales of fine art and craft in the U.S. by *Art Fair Source Book*, and among the top 200 shows in *Sunshine Artist* magazine.



NSPE-OH™ OHIO SOCIETY OF PROFESSIONAL ENGINEERS

2017 All Ohio Engineering Conference

Registration Form

Name _____
OSPE/NSPE Member? ___No ___Yes, Member # _____
ASCE Member? ___No ___Yes, Member # _____
IEEE Member? ___No ___Yes, Member # _____
Title _____
Company _____
Address _____
City _____ State _____ ZIP _____
E-Mail _____
DayPh # _____ EvePh # _____
Your Guest's Name _____
Emergency Contact Ph # _____

Fees	OSPE/ASCE/IEEE Member 30% discount	Enterprise Member 50% discount	Professional Nonmember	Guest Tours
Entire Conference	<input type="checkbox"/> \$389	<input type="checkbox"/> \$278	<input type="checkbox"/> \$556*	<input type="checkbox"/> \$129
One Day-Friday	<input type="checkbox"/> \$242	<input type="checkbox"/> \$173	<input type="checkbox"/> \$347	<input type="checkbox"/> \$79
One Day-Saturday	<input type="checkbox"/> \$183	<input type="checkbox"/> \$131	<input type="checkbox"/> \$262	<input type="checkbox"/> \$59
Welcome Reception	<input type="checkbox"/> Free	<input type="checkbox"/> Free	<input type="checkbox"/> Free	<input type="checkbox"/> Free
Subtotal (professional's fees + any guest tours fees)..... \$ _____				
If postmarked after Thursday, June 8 , add 20%..... \$ _____				
Grand Total..... \$ _____				

Undergraduate students, call 614-223-1144 for reduced pricing.

Payment Options

☐ Check (payable: Ohio Society of Professional Engineers)
Or ☐ VISA ☐ MasterCard ☐ AMEX Exp. Date: __/__/____
Account Number: _____
Cardholder Name: _____ Security Code: _____
Signature: _____
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REGISTRATION INFORMATION

Four Easy Ways to Register

- Register online at www.OhioEngineer.com.
- Return the registration form above to OSPE with your check or credit card information.
Ohio Society of Professional Engineers
400 South Fifth Street, Suite 300
Columbus, Ohio 43215-5430
- FAX your registration and credit card info to 614-223-1131.
- Call 1-800-654-9481 (Ohio toll-free) or 614-223-1144.

Attendance at all paid events requires advance payment. The OSPE & EFO Annual Meetings are free to all OSPE members.

By registering for this program you acknowledge that your photographic image may be taken for publication purposes.

*** NONMEMBERS:**
Entire Conference registration includes FREE OSPE associate membership!

Recommended Attire
Business-casual is recommended for all events.

How You Will Benefit

This OSPE conference is worth up to 12.5 CPD hours (courses specifically designed for Ohio's design professionals) and includes most meals, entertainment, professional interest group meetings and OSPE & EFO Annual Member Meetings.

Professional's Entire Conference Package

The professional's entire conference package includes breakfast on Friday and Saturday, Engineers' Technical Tour, Presidents' Party, Awards Luncheon, and all meetings, seminars and on-site activities, except Friday's Legislative Luncheon, which is separate from the package. Call 614-223-1144 for tickets to the Legislative Luncheon.

Professional's One Day - Friday Conference Package

The One Day-Friday Conference Package includes breakfast, Engineers' Technical Tour, Presidents' Party, and all meetings, seminars and on-site activities on Friday, except the Legislative Luncheon, which is separate from the package. Call 614-223-1144 for tickets to the Legislative Luncheon.

Professional's One Day - Saturday Conference Package

The One Day-Saturday Conference Package includes breakfast, Awards Luncheon, and all meetings, seminars and on-site activities on Saturday.

Great News for State Employees!

State of Ohio exempt employees are eligible for reimbursement on conference, seminar and training events through the Employee Development Fund. Visit www.OhioEngineer.com and click on "All Ohio Engineering Conference" for a link. For more information, please call 1-888-577-6276 or e-mail edfunds@das.ohio.gov.

Download & Print Your Seminar Handouts

In keeping with technology trends and in an effort to conserve our environment, the handouts for this Conference will be available via Dropbox download only. If you wish to have a hard copy at the Conference, be sure to print handouts in advance.

Hotel Reservations

Make your overnight reservations at the Columbus Airport Marriott by calling 1-800-491-5717 or 614-475-7551. To reserve your overnight room rate of \$109 plus tax per night, mention "Ohio Society of Professional Engineers." Rooms are being held at this rate for Conference attendees through **May 26**. *Register early to ensure availability.*

Hotel Parking

The Columbus Airport Marriott is offering complimentary parking for All Ohio Engineering Conference overnight guests and/or Conference participants.

Conference Cancellation Policy

Registrants may withdraw from the All Ohio Engineering Conference with full refund less a \$75 processing fee provided OSPE is notified in writing no later than Thursday, June 8, 5:00 p.m. After that time, registrants are responsible for the full registration fee.

Legislative Luncheon Registration

Separate registration is required for Friday's Legislative Luncheon hosted by the OSPE Political Action Committee. Call 614-223-1144 to register.

Continuing Professional Development Hours

OSPE programs are designed to meet the requirements for Ohio's continuing professional development (CPD) law and State Board of Registration for Professional Engineers and Surveyors (Board of Registration) rules. For Ohio licensees, the Board of Registration determines the acceptance of individual courses for CPD credit. The Board of Registration does not preapprove any courses nor course providers. However, OSPE programs are designed to comply with the law in OH, KY, NC and WV. Be sure to consult those states' licensing authorities. The All Ohio Engineering Conference also meets continuing professional development (CPD) requirements in many other states. There are 12 CPD hours associated with this program, plus a bonus 0.5 CPD hour for those registering to attend the Legislative Luncheon. Professionals should only claim credit commensurate with the extent of their participation in the activity. Be sure to sign the attendance sheet at each CPD program so your attendance may be verified in case you are audited by the State.

Sponsorship Opportunities Are Available

For information, including details on complimentary registration benefits, download OSPE's 2017 Media Kit at <http://ohioengineer.com>.

Contributions, Gifts, Dues & Fees

Contributions, gifts, dues and fees to the Ohio Society of Professional Engineers are not tax deductible as charitable contributions. However, they may be tax deductible as ordinary and necessary business expenses. Please consult your tax advisor. Associate membership includes OSPE and chapter membership. Your dues deductibility is 23%.

Schedule of Events

Schedule and faculty are subject to change without notice. Attendee substitutions may be made at any time.



Call Hotel by May 26 & Register for Conference by June 8.

12.5 CPD HOURS!

2017 ALL OHIO ENGINEERING CONFERENCE

JUNE 15-17 • COLUMBUS AIRPORT MARRIOTT
HOSTED BY THE OHIO SOCIETY OF PROFESSIONAL ENGINEERS



TECHNICAL SOCIETY PARTNERS:



NSPE-OH™ OHIO SOCIETY OF PROFESSIONAL ENGINEERS