



Columbus Engineer

Franklin County Chapter

A chapter chartered by the Ohio Society of Professional Engineers.

P.O. Box 69
Reynoldsburg, OH 43068-0069

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President's Message

Dustin Doherty, P.E., CPESC
– FCC President

I am so thankful that I live in a country where we are able to choose our career paths, are able to explore



our desires, and are able to give to our support to family, friends, and the community. This past year has really taxed our ability to accomplish these efforts and goals. Nevertheless, I take great pride and joy in the fact that as a

professional engineer, I am able to invest and provide for safe infrastructure that may help the quality of life for all those around. It is for these reasons, and many others, that I have dedicated myself to volunteer countless hours of service to the Franklin County Chapter and the Ohio Society of Professional Engineers. Over the course of the last couple of years, I have worked alongside fellow engineers and FCC members to promote and protect the profession that we hold dear. It is at this time in particular that our organization is dependent on our members, and

their ability to hold true to what we profess. We now more than ever, need to attract new members, both young and seasoned. It is my hope that we can continue to blaze a path through this current culture and come out thriving on the other side. Please join me in supporting FCC in its critical initiative. Please reach out to those around you and be an advocate for this group. The future of our profession is at stake.

Thank you for your patience and commitment to NSPE, OSPE, your chapter and the Engineers Foundation of Ohio! Practice social distancing and follow any government mandates or recommendations. We will continue to weather this time, and we cannot wait to implement many of our ideas for membership drives and member benefits programs in the near future. Thank you, and I look forward to seeing you soon – whether virtually or in person.



FCC-OSPE/OSPE AWARDS PROGRAM

By Tina Sutermeister, PE, F.NSPE – FCC-OSPE
Awards Chair

Have you wondered whether you, an EI or PE colleague or one your companies' projects qualified for an FCC-OSPE award, an OSPE State award or an NSPE National award? With a new year starting for FCC-OSPE, this is your opportunity to consider

Awards Program - continued

submitting your company, your colleague or yourself for one of our awards. Most of our awards are given at the Chapter level and then submitted to the State for consideration at the State level.

What awards are available to your Company?

- Outstanding Engineering Achievement Award - (Application Due to OSPE by February 1, 2021)
- Ohio New Product Award - (Application Due to OSPE by March 31, 2021)

What awards are available to Engineering Students?

- Outstanding Engineering Student Award - (Application Due to OSPE by February 1, 2021)

What awards are available to Engineering Educators?

- Outstanding Engineering Educator Award - (Application Due to OSPE by February 1, 2021)

What awards are available to Legislators that support the Engineering profession?

- OSPE Legislator of the Year Award - (Application Due to OSPE by March 31, 2021)

What awards are available to either a PE Colleague or yourself?

- OSPE Young Engineer of the Year Award - Application Due to OSPE by December 1, 2020)
- OSPE Citation - (Application Due to OSPE by February 1, 2021)
- OSPE Meritorious Service Award - (Application Due to OSPE by February 1, 2021)
- OSPE Uncommon Engineer Award - (Application Due to OSPE by March 31, 2021)
- OSPE Professional Engineering Management - (Application Due to OSPE by March 31, 2021)

Are you a member of NSPE/OSPE/FCC-OSPE is good standing and are you interested in achieving Fellow membership status?

- NSPE Fellow Membership - (Application Due to OSPE by December 1, 2020)

What award is available to the Chapter?

- STAR Chapter Recognition - (Application Due to OSPE by December 1, 2020)
- Overall National Engineer's Week Observance - (Application Due to OSPE by March 31, 2021)

NOTE: To be considered for these awards, please contact the FCC-OSPE Awards Chair Tina Sutermeister, P.E., F.NSPE at tlsuterm@embarqmail.com. Submit your nominations to Tina **at least one to two months prior to the application due date** as many of these awards have application forms that must be completed prior to being submitted to the state level awards. All nominations will be presented at an upcoming FCC-OSPE Board meeting and you will be notified after the Board meeting of the status of your submission.

Awards Program - continued

KEEP READING for MORE DETAILS on the AWARDS:

Legislator of the Year Award – This award recognizes a state legislator who has given significant support to the engineering profession, allowing the profession to maintain its commitment to the health, safety and welfare of the public. The award candidate must be a member of the Ohio House of Representatives or of the Ohio Senate.

Meritorious Service Award – This award is presented on-the-basis of service to OSPE at both, the Chapter and the state levels and for outstanding contributions to the goals and objectives of OSPE. The award recipient shall be an active member in his/her Chapter and the emphasis is placed on continuous meritorious service over a long period of time.

NSPE Fellow Membership – The NSPE Fellow Program is a national program intended to recognize deserving professional engineers who have demonstrated long term professional service at the chapter, state and national levels of NSPE. The NSPE Board of Directors established the Fellow recognition program to honor those licensed members who have demonstrated exemplary service to the profession, the Society, and the community.

OSPE Citation – This is the highest honor that OSPE bestows upon an engineer. This award is presented annually to an Ohio Engineer with distinguished

leadership in the engineering profession and in appreciation of selfless devotion to the highest ideals of service to society and to fellow man; and for sustained contributions to the technical and professional aspects of the engineering professions.

Outstanding Engineering Achievement Award – This award is presented in recognition for outstanding engineering accomplishments in manufacturing, construction or design, or combinations thereof. The nominated projects must have been completed during the calendar year preceding the award presentation and the nominated projects may be located outside the chapter geographical area.

Outstanding Engineering Educator Award – This award is presented to a member of the engineering faculty of an ABET-accredited engineering program in an Ohio school and the educator shall have at least 5 years of experience subsequent to graduation from an accredited Engineering school and must be teaching an engineering course during the current term.

Outstanding Engineering Student Award – This award is presented to an engineering student from an ABET accredited Ohio engineering school based on scholastic achievement, participation in professional, technical, and other activities.

Professional Engineering Management Award – This award recognizes leadership, organizational, and management skills in an engineering environment. This award recipient has years of successful experience in Engineering management at various levels and has been instrumental in introducing a new process or change to an existing process within the Engineering organization that he/she has successfully managed.

Uncommon Engineer Award – This award recognizes the long and distinguished service to the engineering profession; devotion and commitment to the state society and the local chapter; high standards of professionalism; and guidance in the role of a team player.

Awards Program - continued

The candidate must be a registered PE and must be a member in good standing with OSPE.

Young Engineer of the Year – The FCC-OSPE Young Engineer of the Year Award is presented in recognition of the outstanding professional accomplishments of Franklin County Chapter's Young Engineers. Are you a Chapter and a State member in good standing? Will you be age 35 or younger as of January 1, 2021? You can be either a PE or an EI. The evaluation criteria for this award include: Educational and Collegiate Achievements, Professional Society Activities, Technical Society Activities, Civic and Humanitarian Activities, Continuing Competence, Engineering Achievements and Professional Experience.



Big Changes for Regional MathCounts 2021

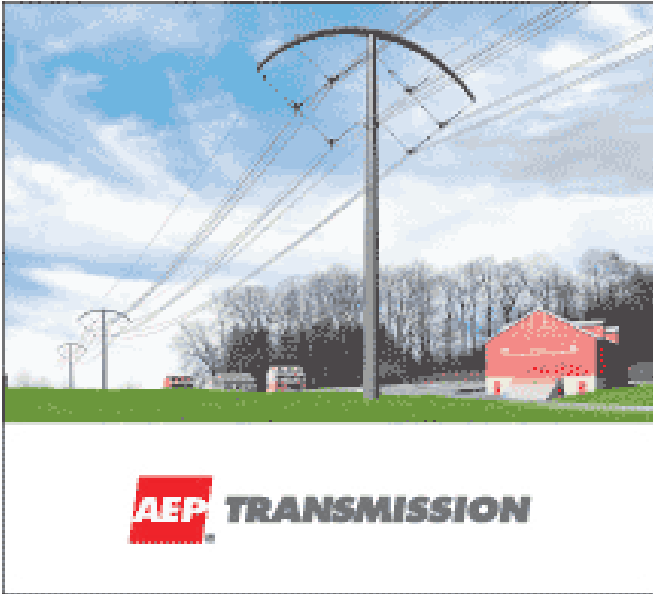
By Ben Brown, PE – Regional MathCounts Chair

Regional MATHCOUNTS registration is now open. One major difference this year is that the MATHCOUNTS competition will be virtual due to the COVID-19 Pandemic. Due to the change in the competition, below are some of facts that we already know:

1. Chapter and state competitions will be online events, held in a single 24-hour period to prevent cheating
2. There will be no Team or Countdown Rounds
3. Up to **15 students** from a school may participate (up from 10)
4. Since some schools will drop out, there is an option for Non-school competitors (NSC)
5. The top 20% of students will advance to a special Chapter Competition Invitational before advancing to state
6. All students will take the test at the same time
7. The top 4-6 from each chapter will go to the state, plus options for up to 10

Please see continue to check [MATHCOUNTS | Fun Math Competition and Club Programs for Middle School Students](#) for further instructions and I will continue to keep you up to date as we get closer to the 2021 competition. Please feel free to contact me with any questions you may have.





EFO FALL CPD Conference Earn up to 15 CPD hours, including your mandatory ethics education

Call 1-800-654-9481 (or 614-223-1144) for information.

Join us for EFO's EFO is hosting two days filled with seminars - courses specifically designed for Ohio's design professionals.

To get the maximum educational benefit and **15 CPD hours**, simply plan to attend the entire two-day program. One day is worth up to 7.5 CPD hours.

This year's two-day program features ethics/rules training per the new Ohio requirement - and it also includes exciting technical and managerial training! Watch for a link to register online or call 614-223-1177 for immediate registration processing during business hours, Monday through Friday.

The article below was previously published in the April issue of the Columbus Engineer. It is worth publishing again as COVID-19 has not delayed the Legislature from continuing to process legislation impacting engineering licensing:

Do not assume PE Licensure is in a state of permanence

By L. Steve Day, P.E. F.NSPE

- *What if all your hard work in earning an Ohio PE license was for naught?*
- *What if your license was removed with the pound of a legislative gavel or the stroke of an executive's pen?*

I hope you have heard about the legislative threats to the PE license that are taking place around the nation. In the last few years, 32 or more states have seen some form of legislation or policy proposal that would undermine or altogether eliminate the state's PE license.

There are currently both House and Senate Bills, introduced at the Ohio Statehouse, that attempt to undermine the importance of the engineering PE license or reduce the requirements for obtaining licensure in Ohio. In other states some have

suggested that "a voluntary system, such as the self-certification registry" be put in place of the PE license.

Two companion bills House Bill 432 and Senate Bill 246 seek to modify occupational licensing by requiring the licensing authority to issue a license or government certification to an applicant who holds a license, government certification, or private

PE Licensure – continued

certification or has “satisfactory work experience” in another state under certain circumstances.

West Virginia has just recently defeated two almost identical bills.

I have found in meetings that many legislators see no difference between an occupational license and a professional license. It appears that the thrust behind all-of these bills, is to make licensure easier to obtain, reduce the barriers or eliminate the need altogether. In some minds a license is a license is a license, there really is no difference.

Another bill, House Bill 258, proposes to require the licensing authority to issue an occupational license to an applicant who completes a registered apprenticeship program and meets other requirements for licensure.

Yet another bill, House Bill 263, revises the initial occupational licensing restrictions applicable to individuals convicted of criminal offenses, by only allowing a five-year look back on criminal convictions.

Who makes the decisions on what is “satisfactory work experience” or a registered apprenticeship program etc. and how can this possibly replace education, experience and examination for the PE? I certainly don’t have the answer to this question.

A new national survey has just come out from the

Alliance for Responsible Professional Licensing, which asked the public about professional licensure.

The survey results indicate widespread public support for maintaining rigorous professional licensing standards for professionals that have a clear impact on public health, safety and welfare.

NSPE/OSPE is the *only* organization that watches out for the PE license, and we are ever vigilant. We must because these threats keep coming year after year.



The eccentric engineer: the forgotten inventor who gave us the Real McCoy

By Justin Pollard

This month, we look at how the ‘underground railroad’ to freedom gave us a prolific inventor whose work transformed the railway in the age of American expansion.

There are two things you need to become an engineer – ability and opportunity. For a black American in the mid-19th century, the latter was in very short supply. Despite this, one navigated the obstacles in his path and helped oil the wheels of America’s coming of age.

Elijah McCoy was probably born in 1844, before the Civil War, and under other circumstances might have expected to spend his entire life as a slave on a Southern plantation. Yet Elijah was born free, thanks to his fugitive slave parents, George and Emilia, and the shadowy network of anti-slavery campaigners who helped them escape from the South via the ‘Underground Railroad’. George and Emilia (sometimes called Mildred) escaped to Detroit and then on to Canada, where Elijah and nine of his siblings could be born free.



Even here, being free wasn't the same as being equal and Elijah could only receive an education in segregated schools, but in 1859 he received what would be his great 'break' – the chance to go to Europe and study in Edinburgh. So, aged just 15, he travelled to non-segregated Scotland, where after five years of apprenticeship and study he qualified as a mechanical engineer.

By the time he returned to North America the Civil War was over, slavery was illegal and his family had moved back to the US. Yet life for a black engineer was hardly easy. It was impossible to practise his profession and he was forced to take a job as a fireman on the Michigan Central Railroad at Ypsilanti. At least this job brought him into contact with the great engineering masterpiece of his day – the steam engine. His job revolved around keeping them moving.

At the time, the greatest enemy of the steam engine was friction. Every few miles the train had to stop while the fireman oiled the axle bearings and cylinders, as the lubricants quickly wore off. This process was expensive in fuel and time, and there clearly had to be a better way of keeping the trains running on time, so McCoy set out to find it in his garden workshop.

The answer he came up with was surprisingly simple – the lubricating oil cup. This device consisted of an oil reservoir with a lid and a feed pipe in the base that dripped oil onto the bearing continuously through an adjustable valve. Perhaps only an engineer working in such close contact with engines could have come up with such an elegant solution. It proved revolutionary. The lubricating oil cup allowed trains to run for hours without stopping. It also reduced wear on bearings, increased the speed of the engines and reduced journey times. In 1872 McCoy took out

a patent for his device and finally had the money to begin his engineering practice proper.

Ten years later, we find him in Detroit, working as a consultant engineer for numerous companies and continuing to invent. In all he would be granted 57 patents, mainly in the realm of engine lubrication, but also including a collapsible ironing board and a lawn sprinkler.

Despite this business success, McCoy failed to make much of a fortune. Unable to secure the financial backing to set up his own factory, he was forced to assign his patents to companies he worked for or sell them to investors. The elegance of the lubricating oil cup also led to other problems – it was very easy to copy and 'pirated' versions soon appeared on everything from steam trains to ocean liners. In McCoy's favour, however, was the quality of his design, and it's often claimed that railwaymen's demands for 'the real McCoy' lubricators led to the coining of that phrase. As with many such expressions, the truth is murky and lost to time.

Even in his 70s, McCoy continued improving and patenting his devices, inventing the graphite lubricator in 1916, which used oil mixed with powdered graphite to lubricate the bearings on the newer 'superheater' locomotives.

In 1920, he finally set up his own company, The Elijah McCoy Manufacturing Company, enabling him to fully capitalise on his inventions, but tragedy soon struck.

Two years later, he and his wife were involved in a car accident that killed her and left him with severe physical and mental scars. Unable to work, he died seven years later, poor and largely unrecognised.

(Article excerpted from NSPE Daily Designs, E&T Engineering and Technology, published July 16, 2020)

2020-2021 CALENDAR

DATE	TIME	DESCRIPTION
Sept. 4	10:00 a.m.	Deadline for September <i>Columbus Engineer</i>
Sept. 8	5:30 p.m.	FCC Board Meeting @ CEC, Inc. (Virtual)
Oct. 5	5:00 p.m.	Deadline for October <i>Columbus Engineer</i>
Oct. 6	5:30 p.m.	FCC Board Meeting @ CEC, Inc. (Virtual)
Oct. 15	11:30 a.m.	Program: TBD (Virtual)
Nov. 5-6		EFO Fall CPD Conference
Nov. 9	5:00 p.m.	Deadline for November <i>Columbus Engineer</i>
Nov. 10	5:30 p.m.	FCC Board Meeting @ CEC, Inc. (Virtual)
Nov. 19	11:30 a.m.	Program: TBD (Virtual)
Dec. 5	5:00 p.m.	Deadline for December <i>Columbus Engineer</i>
Dec. 8	5:30 p.m.	FCC Board Meeting @ CEC, Inc. (Virtual)
Jan. 11	5:00 p.m.	Deadline for January <i>Columbus Engineer</i>
Jan. 12	5:30 p.m.	FCC Board Meeting @ CEC, Inc. (Virtual)
Jan. 21	11:30a.m.	Program: TBD (Virtual)
Jan. 30	5:00 p.m.	Deadline for February <i>Columbus Engineer</i>
Feb. TBD	8:00 a.m.	Regional MathCounts Competition – (Virtual)
Feb. 8	5:00 p.m.	Deadline for March <i>Columbus Engineer</i>
Feb. 9	5:30 p.m.	FCC Board Meeting @ CEC, Inc. (Virtual)
Feb. 21-27		National Engineers Week (see www.eweek.org)
Feb. 24	8:00 a.m. – 3:00 p.m.	Engineer for a Day Program
Feb. 25	11:30 a.m.	Program: E-Week Luncheon (TBD)
Mar. TBD	8:15 a.m. – 4:00 p.m.	Ohio MathCounts Competition (OSPE, see www.ohioengineer.com)
Mar. 9	5:30 p.m.	FCC Board Meeting @ CEC, Inc. (Virtual)
Mar. 18	11:30 a.m.	Program: TBD (Virtual)
Mar. 30	5:00 p.m.	Deadline for April <i>Columbus Engineer</i>
Mar. TBD		District Science Day @ CSCC
Apr. 13	5:30 p.m.	FCC Board Meeting @ CEC, Inc. (Virtual)
Apr. 14	5:00 p.m.	Deadline for May <i>Columbus Engineer</i>
Apr. 15	11:30a.m.	Program: TBD (Virtual)
May 11	5:30 p.m.	FCC Board Meeting @ CEC, Inc. (Virtual)
May 20	6:30 p.m.	Chapter Officer Installation/ Awards Dinner
May 24	5:00 p.m.	Deadline for June <i>Columbus Engineer</i>
June 8	5:30 p.m.	FCC Board Meeting @ CEC, Inc. (Virtual)
July TBD	(TBA)	FCC Budget Meeting - Location to be announced

Civil & Environmental Consultants, Inc.

Address: 250 Old Wilson Bridge Road, Suite 250, Worthington, Ohio 43085

WHERE DO I GET MORE INFORMATION?

OSPE-FCC President E-mail & Phone:	ddoherty@cecinc.com	(614) 359-6321
OSPE-FCC WEBSITE:	www.fccospe.org	
OSPE WEBSITE:	www.ohioengineer.com	
NSPE WEBSITE:	www.nspe.org	
To volunteer to help with MATHCOUNTS :	benjamin_brown68@yahoo.com	(614) 519-8978
To volunteer to help with Science Day:	yogesh.rege@terracon.com	(614) 863-3113
To volunteer to help with OSU Student Chapter:	mccarthy.226@osu.edu	(614) 247-1561
To volunteer to help with Imagine Engineering:	devonseal1@gmail.com	(614) 221-0678
FCC Luncheons / Programs:	ebriedis@cecinc.com	(614) 468-6222
New Members / Membership Application	www.nspe.org or www.ohioengineer.com	(614) 223-1144

2020-2021 OFFICERS, TRUSTEES & COMMITTEE CHAIRS

	Name	Phone # (w) or (h)	Cell Phone #	E-mail Address
President	Dustin Doherty, PE, CPESC	614-310-2075 (w)	614-359-9321 (cell)	ddoherty@cecinc.com
Vice President/Pres. Elect	TBD			
Chapter Secretary	Yogesh Rege, PE	614-328-5209	614-517-7864 (cell)	Yogesh.Rege@terracon.com
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	NEW FCC-OSPE Website			www.fccospe.org
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	Retired Engineers Trustee	TBD		
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	OSPE Director	Tina Sutermeister, PE	740-964-0828 (h)	tlsuterm@embargmail.com
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	Constitution & By-Laws	Devon Seal, PE	614-208-6986 (cell)	devonseal1@gmail.com
	PEPP Trustee	Greg Nortz, PE	614-790-0029 (cell)	gregnortz@otiscoengineering.com
	PEPP Trustee	Nathan Abele, PE	614-793-2226 (w)	Nabele@smeinc.com
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FIRST CLASS

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Remember To VOTE!
Election Day is Tuesday, November 3rd

Visit www.rockthevote.org for information.