



LEHIGH VALLEY CHAPTER
 PENNSYLVANIA SOCIETY OF
 PROFESSIONAL ENGINEERS

Lehigh, Northampton, Monroe, and Carbon Counties
(Organized 1935)

Valley Engineer Newsletter

October 2023

Activities:

Chapter meeting:

November 13, 2023

Christmas Party:

December 14, 2023, at Kingfish American
 Bistro in Bethlehem, PA



**PENNSYLVANIA SOCIETY
 OF
 PROFESSIONAL ENGINEERS**

**LEHIGH VALLEY CHAPTER
 (ORGANIZED 1935)**

CARBON, LEHIGH, MONROE, & NORTHAMPTON COUNTIES

President’s Message!

Alexa Rooney, EIT, JD, President

As the world adjusts to this “new normal” I am excited to see what this new year, new normal brings for LVPSPE. We now hold meetings in a hybrid capacity to allow our members the opportunity to meet in person or online as their schedule allows. In this next year we have many exciting in person opportunities that I am excited to participate in.

This year’s Holiday Party will be on December 14, 2023, at Kingfish American Bistro in Bethlehem, PA. This will be a great opportunity to network and share ideas with other professionals in our area. I hope to see everyone there.

Coming in 2024 we are planning multiple tours of various businesses in the Lehigh Valley. We will have a tour with Center City Allentown to see ongoing construction in downtown Allentown, a tour of Dorney Park, ATLSS Lab at Lehigh University, a winery tour, and a tour at the Mill; this facility represents early 20th century mill technology that is powered by a water turbine and not a water wheel.

Along with these tours, we will also have volunteer opportunities at MATHCOUNTS® on February 3, 2024. This event promotes STEM education and encourages students to pursue careers in engineering. LVPSPE has supported the MATHCOUNTS competition for many years and is excited to support the event again this year. We will be looking for volunteers as scorers, counters, and other tasks. I hope each of you are able to take part.

Our Chapter has the honor to nominate the annual Engineer of the Year and Young Engineer of the Year, presented by the Lehigh Valley Engineer Council at the LVEC banquet near the end of February. This year the deadline to nominate someone has been moved to December 14, 2023. This is earlier than years past to allow time for evaluation and selection process. This is a great way to recognize an individual for their contributions to the engineering community as well as the community as a whole. I highly recommended submitting a nomination for that deserving coworker. If you know someone who deserves this honor, please submit a Nomination form, which can be found on our website: <https://www.lvpspe.org/page-1505987>.

As you see, this coming year will be busy with many opportunities to volunteer and gather together in the community. Please mark your calendars. I hope to meet everyone in person in the coming months.

If you are interested in getting more involved with LVPSPE and taking on a board role in the future, please don't hesitate to contact any officer or board member. We are always looking for new members and excited to afford our new members opportunities to grow in the future. Thank you and stay safe!

**National Academy of Forensic
Engineers Winter Conference
Announcement**

Daniel Couture, P.Eng., DFE, FEC
and Robert O. Peruzzi, PhD, PE, DFE

The 2024 Winter Conference of the National Academy of Forensic Engineers (NAFE), (www.NAFE.org) will be held at the Shores Resort & Spa in Daytona Beach, Florida from Friday, January 19, 2024, to Sunday, January 21, 2024. Most events are open to members and non-members alike.

The Friday January 19, 10:00 a.m. NAFE Board meeting, is open only to members in good standing.

The Friday activities continue with a fantastic afternoon technical tour of Embry-Riddle Aeronautical University (ERAU) nearby (advance purchase ticket required), bus loading at 2:30 PM, followed by a ticketed Friday cocktail hour and Awards dinner at the hotel beginning at 6 p.m.

After the traditional meet and greet microphone welcome on Saturday morning, the Technical Session will feature presentations on a variety of topics including sidewalk micro texture measurement, fires caused by open neutrals, historical photogrammetry of the JFK assassination scene, cannabis industry forensics, applying reverse projection photogrammetry, and artificial intelligence (AI) applications for improved accuracy. Full program details as approved by the Technical Committee will be available in early November. Contact Robert Peruzzi, Peruzzi@RPeruzzi.com to receive these details when available.

Our Sunday Education Day theme: Expand the horizons of your forensic engineering practice based on examples from peer experience. The Sunday Educational and Ethical seminar will stimulate the crowd with talks on successfully engaging the media minefield, building a practice with the insurance industry, a primer on policy papers, and a very special HIGHLIGHT: an insider's look at the STS-107 Columbia space shuttle disaster.

The conference proceedings will end at 5 pm Sunday, January 21, 2024.

Why You Should Attend:

Come to Daytona Beach, for the sand, the sea, the weather and great food, but certainly to gain access to knowledge that will inform your professional practice! If you are new to Forensic Engineering/Expert Witnessing or interested, get focused on your career goals, and listen to earned wisdom. This conference is an investment in your future as a Forensic Engineer. Get a practice tune up if you have been a Forensic Engineer for five years or more, because the ground moves beneath our feet in this field.

Visit www.NAFE.org to learn about the National Academy of Forensic Engineers and the upcoming conference.

God must have loved dumb people. He made so many of them.

-Dr. August Polinske

A thousand words will not leave so deep an impression as one deed. -

-Henrik Ibsen

Touring Egypt

Alfred Gruenke, PE

One of the benefits of overseas travel is the opportunity to see sights one can't even imagine! Everyone knows about the pyramids, but Egypt is much more than that.

When we were living in Heliopolis (Masra Gedida), suburb of Cairo, we had a pretty liberal work schedule. A van driven by an Egyptian that worked for us drove us the ninety miles to work and back five and a half days a week. Thursday was half a day. Friday was a day off.

Our normal Thursday routine was to go to a local restaurant for lunch, then go to the Marine House at the American Embassy to eat, drink, mix with other expats and Marines, and generally enjoy ourselves. Taxis were readily available and relatively cheap, so getting around was easy. On Fridays we went wherever we wanted.

Sometimes we arranged for our driver to tour the countryside around Cairo. This was never a problem because they were paid overtime, so the extra work was extra pay.

Our drivers were paid very well by Egyptian standards. All college graduates were guaranteed a job, but the economy could not support so many graduates so the "job" was a position, not work. They were paid a miserable \$60.00 a month or so. Consequently, many supplemented their income driving taxis, at least utilizing their English language skills. Our drivers earned \$800.00-\$1,000.00 per month.

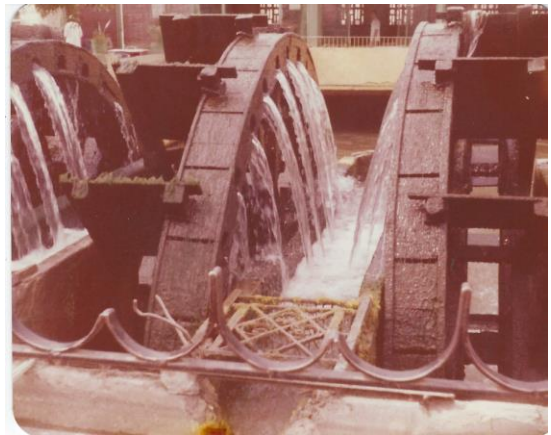
One of our trips was to El Faiyum, a large oasis about 50 miles southwest of Cairo, west of the Nile river. The oasis is about twenty miles across and twenty miles from the Nile River.

One of the features of a successful desert community is the distribution of water, which, of course, necessitates numerous canals and underground tunnels. El Faiyum is filled with them.

To raise water from one level to another a hollow wheel such as in the following picture is commonly used.



A water wheel, to raise the water to a higher level.



Unique to El Faiyum is a water powered water wheel!



Oxen powering the water wheel.

Continued on page 16

SCHOLARSHIP SPONSORS

A great way to be involved in the LVPSPE Chapter is to contribute to the **LVPSPE SCHOLARSHIP FUND**. Please Contact the Valley Engineer Editor to sponsor scholarships for the remainder of the calendar year.

If you would like to contribute any amount –please send your TAX-DEDUCTIBLE donation to PA ENGINEERING FUND. Donations should be mailed to:

**PA Engineering Foundation % LVPSPE
P.O. Box 195
Northampton, PA 18067**

Please note “LVPSPE Scholarship Fund” on the comment line.

Or, you may also contribute via the LVPSPE website <http://www.lvpspe.org/Donations>.

Scholarship application is at <http://www.lvpspe.org/Scholarships>. Any questions regarding scholarships can be directed to

Alex Dezubay, PE
610-597-2007
Scholarship@LVPSPE.org

PEF SCHOLARSHIPS

The Pennsylvania Engineering Foundation oversees the Pennsylvania MATHCOUNTS program and PEF Scholarships.

The purpose is to help nurture future engineers.

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515 W. Hamilton Street
7th Floor
Allentown, PA 18101

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fax 610 395 0694
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www.morganstanley.fa.com
patricia.peoples@morganstanley.com

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F-NSPE**

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Angelika Fordran, PE

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Alfred Gruenke, PE, MBA

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A photograph of a large industrial facility, likely a cement or mining plant. The image shows a complex network of grey steel beams and supports. Two workers in orange safety vests and white hard hats are standing on a yellow metal walkway with railings. Large, cylindrical industrial tanks are visible in the background. The lighting is dramatic, with strong highlights and deep shadows.

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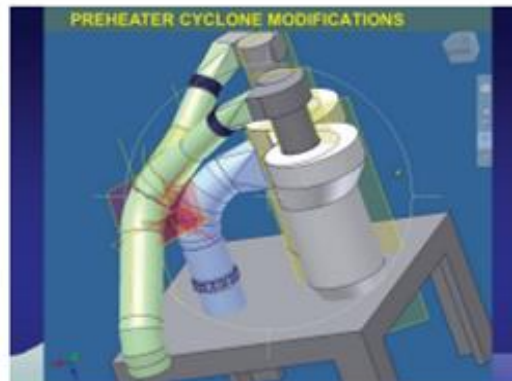


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The 7th Annual Joe Sommer Memorial Golf Tournament is almost upon us.

Joe was a valued employee of H.T. Lyons who touched the hearts of everyone he encountered. He loved to give back to the youth in the Lehigh Valley, the community and those interested in the trades. Each year, thousands of dollars are donated to various community organizations; Northampton Police Department, Friends of Bethlehem Mounted Police, Northampton Area Food Bank, Northampton Police Equipment Fund, The Boys and Girls Club of Bethlehem, PA Canine Search and Rescue, Beat the Streets/Concrete Barbell and Blue Star Mothers LVPA 20, just to name a few.

Please consider donating gift cards, money, or donations in kind to this great event!

If you require any other information, please contact Lee Millward at:

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Internet Addresses

National Society of Professional Engineers

www.NSPE.org

Pennsylvania Society of Professional Engineers

www.PSPE.org

Lehigh Valley Chapter – PSPE

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State Director – Michael Basta PE. F-NSPE

Directors@LVPSPE.org

Alt State Director – Angelika Forndran, PE

Directors@LVPSPE.org

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Marleen Troy, PE, PhD
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Board of Direction Meetings

The monthly Board of Direction meetings are 6:00 PM on the second (2nd) Monday of each month. Open to all members;

2022 – 2023 Chapter Officers

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ARooney@pplweb.com

610-774-6011

Vice President – Vacant

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Treasurer@LVPSE.org

610-614-1245

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ccallahan@barryisett.com

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Director – Angelika Forndran, PE

abf@cowanassociates.com

Director – Robert Peruzzi

peruzzi@rperuzzi.com

Director – Aaron Cali

aaron.cali@htlyons.com

El Faiyum was a farming community growing dates, grain, and vegetables. Our driver took us on a tour of the countryside.

Threshing grain was interesting. In most of the western world threshing is done by multi-story, multi-million dollar combines. In Egypt, threshing was by flailing, using a grain flail.



A grain flail consists of a six-foot-long stick loosely connected to a two-foot-long stick. The operator holds the long stick in his hands and beats the grain with the shorter stick. A grain flail has been used to thresh grain since biblical times.



Threshing grain in Egypt. Highly labor intensive.



Local teenagers, with a "western" touch

In the El Faiyum area there is another feature of Egypt, pyramids. When one mentions pyramids and Egypt the first thing that comes to mind is the three pyramids and the Sphinx in Giza. But there are dozens of pyramids on the West bank of the Nile! Not as big as the ones in Giza, but pyramids nonetheless.



One of the many lesser pyramids. There was a tunnel or cave under it, but we didn't dare to go in. I don't know the name (if any) of this pyramid. Obviously weather-beaten and neglected.

Egypt is more than pyramids, Cairo, the Nile, and wind-swept desert. Go outside the big cities and one finds rural Egypt.

Sorry about the quality of the pictures. I took them with an Instamatic, and Egyptian processing.



**Lehigh Valley Chapter
Pennsylvania Society of Professional Engineers
Lehigh, Northampton, Monroe and Carbon Counties**

Minutes for the October 9, 2023, Board of Directors Meeting
6:00pm on Microsoft Teams

Attendees: Alexa Rooney, Robert Peruzzi, Al Gruenke, Cody Callahan, Al Dezubay, Aaron Cali, Angelika Forndran, Mary Rooney, and Jonathan Kiechel.

A. Call to Order: 6:05

- If you didn't get the meeting invite for October/November, email Alexa.

B. Programs

- Alexa is working on organizing tours. If anyone has contacts, please reach out to help coordinate. Mary suggested setting up a tour for Haines Mill next spring, Dorney Park (would have to be in March, Cody will also look for a contact at Dorney).
- Spring 2024 – Center City: Alexa is setting up a tour of a development in Center City Allentown.
- Newsletter – Victaulic asked Al about advertising in the newsletter. We will charge the normal rate. Alexa will send a president's article to Al. Robert Peruzzi will write an article regarding National Academy of Forensic Engineer's (NAFE).

C. MATHCOUNTS

- None

D. Lehigh Valley EOY/YEOY & Scholarships

- Frank is looking for someone to help him with the scholarship fund this year and potentially take over next year.

E. Treasurer – Ray Szczucki

- None

F. State Director – Mike Basta

- None

G. Past President

- None

H. Old Business/New Business

- Alexa's sister is interested in helping us update the website. Features we are looking for: schedule activities, make payments, links to different forms/social media accounts, and links to sponsor's websites. AI mentioned discussing the website with Peter who originally helped create the website.
- Alexa confirmed Kingfish is available for the Holiday Party on Thursday, December 14, 2023. We discussed potential third party companies that would be willing to come to the party to give a presentation.
- Mary suggested moving up the deadline date (on the awards page of the website) for engineer of the year nominations to the LVPSPE December 14, 2023 meeting. We need to change the deadline date on the website. Mary discussed wanting to encourage college students to come up with professors as nominations for Engineer of the Year awards. LVEC banquet will be held at SteelStacks on February 23, 2024, from 6-9 PM. Professor from Lehigh will be there to discuss the aerospace program.
- Upcoming meeting dates:
 - i. November 13, 2023
 - ii. December 14, 2023 – Holiday Party
 - iii. January 8, 2024
 - iv. February 12, 2024
 - v. March 11, 2024
 - vi. April 8, 2024

I. Adjournment on motion by Alexa, seconded by AI at 6:38.