



LEHIGH VALLEY CHAPTER
 PENNSYLVANIA SOCIETY OF
 PROFESSIONAL ENGINEERS

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

Valley Engineer Newsletter

APRIL-MAY 2022

ACTIVITIES

August 1-3, 2022 - National NSPE PECON 2022
 Sheraton Hotel in Philadelphia

August 3, 2022 - Professional Engineer's Day

September 15, 2022 - Happy Engineer's Day

September 23-24, 2022 - PSPE Annual
 Conference, Wilkes University, Wilkes Barre



**PENNSYLVANIA SOCIETY
 OF
 PROFESSIONAL ENGINEERS**

**LEHIGH VALLEY CHAPTER
 (ORGANIZED 1935)**

CARBON, LEHIGH, MONROE, & NORTHAMPTON COUNTIES

Scholarship Awards and

Installation of Officers, LVPSPE

The Lehigh Valley Chapter, Pennsylvania Society of Professional Engineers held its annual scholarship awards and installation of officers for 2022-2023 on May 16th at DeSales University. It was a special event, the first such event that was held indoors since 2019. Also, contributors to our Scholarship Fund were honored.

The Scholarship winners were:

Nicholas Murgia



Nicholas Murgia, with presenter Jeff Kutz, EIT

Continued on page 2

Nicholas Murgia is the son of Pat and Vincie Murgia and lives in Williams Township. Nic will be graduating from Wilson Area High School and plans to attend Penn State. He is enrolled in the Honors College, and will major in mechanical engineering. Nic is a co-captain of the cross country, swimming, and track & field teams, as well as a member of the concert band, debate club, gifted seminar, National Honors Society, Warrior Club, Automotive Club, and is an aide for his church's religious education program. He is the Valedictorian of Wilson's class of 2022 and is a two-time student of the month. Nic has also received academic awards for achieving the highest overall grade in Math, Science, English, and Social Studies. He was chosen to be part of the 2022 swimming All America team and was named Rotary Club Student of the Month in October 2021. In his free time, Nic enjoys spending time with friends and family, passing time outdoors, and drawing.

Prince Patel



Prince Patel with presenter Ray Szczucki, PE

Prince Patel is the son of Girish and Nilam Patel and will be graduating from Parkland High School. He plans to attend Massachusetts Institute of Technology and major in Computation and Cognitive Sciences. He is an active leader on his school's VEX robotics team. He has shown his dedication and skill to robotics by designing, testing, building, and driving the robot. He participated in MOSTEC, a summer program for under-represented minorities hosted by MIT, where he took a class on neuroscience and wrote an award-winning article about brain-computer interfaces. Prince is president of UNICEF and the Hindu American Student Association at Parkland. He has volunteered over 250 hours at his Hindu temple and serves on the board of education of its international youth group organization.

Prince also qualified for the US National Chemistry Olympiad Nationals exam, won third in Marketing for FBLA nationals, was chosen for the EPC Volleyball Scholar-Athlete award, and is a CONRAD Innovator. Outside of school, Prince enjoys playing volleyball for fun and on a team, as well as spend time outdoors with friends.

Vibha Srinivasan



Vibha Srinivasan with presenter Jeff Johnson PE, representing FLSmidth

Vibha Srinivasan is the daughter of Sugantha Srinivasan and Srini Rajagopalan and will be graduating from Easton Area High School. She plans to attend Princeton University and pursue a degree in Engineering, with a certificate in Materials Science. Vibha is an AP Scholar with Distinction, a Lafayette College First Class Scholar, PTA Reflections National Finalist, and current salutatorian of her class. She is an advanced student and stage performer of Indian classical dance and vocal music and has received numerous regional and state awards in these fine arts. At her solo debut dance recital, Vibha raised over \$4,000 for children's education and for Indian artists affected by the pandemic. She co-founded GSV for Education, an organization that creates original illustrated short stories as an educational and cultural medium for children living in India's youth hostels, hosts virtual fundraisers, and maintains a YouTube channel. As an advanced piano student, Vibha has won multiple awards and performed at esteemed venues including Carnegie Hall and Columbia University. She

Continued on page 3
 runs her own Etsy shop and small art business, donating a third of the profits to local charities. Vibha is Vice-President of her school's chapter of the

Technology Student Association, Secretary of the South Asian Student Association, Treasurer for the National Art Honor Society, a member of National Honor Society, and 2-time participant in the Architecture, Construction, and Engineering Program with Lafayette College students and Turner Construction Company employees. She also previously volunteered at St. Luke's Anderson Campus. Vibha loves to spend spare time with family and friends, experimenting with baking, choreography, and making TikToks with her little brother, Vihaan.

Adam Walker



Adam Walker, with Mike Derr, PE, representing American Society of Civil Engineers

Adam Walker is the son of Les and Lori Walker and will be graduating from Freedom High School. He plans to attend Bucknell University and earn dual degrees in civil engineering and management. He is a member of Boy Scout Troop 317 and has achieved the rank of Eagle Scout, after designing and building a handicap ramp for his Eagle Scout project. He is the president of the Freedom High School Theater Company, participating in lead and supporting roles in all 8 shows during high school. He is vice president of Freedom High School Choir, where he is the section leader for the men's choir, as well as a member of the two select chorus groups, Chorale and Les Chanteurs. He was a member of the Northampton County Chorus for three years. He served as a captain of the Honor Guard in the Freedom High School Marching Band, a member of the National Honor Society, and a Captain in BASD Mini-thon. Adam is the Freedom High School recipient of the TPA Altruism Award for 2022. He has also received academic awards for Excellence in Introduction to Engineering Design, Excellence in Principles of Engineering, and Excellence in Civil Engineering and

Architecture, as well as straight A's for three years. Adam has completed over 200 hours of community service and works part time at Willow Park Pools and Spas. In his free time Adam enjoys spending time with his friends and family, watching movies and playing video games.



The slate of LVPSPE officers for 2022 – 2023. Past president Alex Dezubay PE; Alt State Director Angelika Forndran, PE; Chapter Director Mary Rooney, PE; Treasurer Raymond Szczucki, PE; Secretary Chris Williams, PE, LEED AP; Vice President Alexa Rooney, EIT; and President Jeffrey Kutz, EIT. Swearing in the officers is Daniel Cook, PE, PSPE VP Northeast Region. Missing. Director Frank Walsh, PE.

“Nostalgia isn’t what is used to be.”
-August Polinske, PE PhD MD

“Positive thinking can be contagious. Being surrounded by winners helps you develop into a winner.”
-Arnold Schwarzenegger

“America is the only country where a significant proportion of the population believes that professional wrestling is real but the moon landing was faked.”
-David Letterman

“If God had intended us to fly he would have made it easier to get to the airport.”
-Jonathan Winters

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.

2022 – 2023 LVPSPE SCHOLARSHIP DONORS

Graduate

American Society of Civil Engineers
Lehigh Valley ASCE, Bethlehem, Pennsylvania.
Victaulic Company
Easton, PA

Senior

FLSmidth, Inc.
Bethlehem, PA

Junior

Barry Isett & Associates
Allentown, Phoenixville, Hazleton, Wilkes-Barre,
Mechanicsburg, Wyomissing, Furlong,
Stroudsburg, PA
The Pidcock Company
Allentown, PA
Alfred Gruenke, PE
Wescosville, PA
H.T. Lyons
Allentown, PA
Bridge Gap Engineering
Northampton, PA

Sophomore

Jeffrey Johnson, P.E., FLSmidth Inc
Allentown, PA
Dreyer Consulting
Allentown, PA
Hanover Engineering Associates
Bethlehem, PA

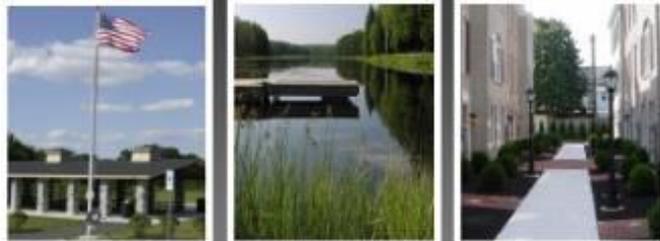
Freshmen

Deilen Development
Dezubay Engineering Services
Colliers Engineering & Design
Allentown, PA
Richard Dumbach
Nermin Ferhadbegovic
Mass Mutual, Center Valley, PA
Robert Peruzzi
Bethlehem, PA

Contributors

William Erdman, PE

50 YEARS HanoverEngineering



HanoverEng.com

- Municipal Engineering & Planning
- Subdivision & Land Development
- Stormwater Management
- Transportation Planning
- Utility Line Design & Permitting
- Structural Engineering
- Environmental Services
- Surveying
- 3D Laser Scanning
- GIS Services

Envisioning and Engineering sustainable, cost-effective, and environmentally responsible projects for a half-century

Bethlehem	Allentown	Poconos	Lancaster	Wellsboro
610.691.5644	610.395.9222	570.688.9550	717.721.7444	484.893.3931

Colliers Engineering & Design

Customized Solutions

All your project needs under one roof.

610 868 4201 | colliersengineering.com

Accelerating success.



R. Peruzzi Inc.
Electrical Engineering Consultant

Robert Peruzzi, PhD, PE
President

+1 610 462 3939
Peruzzi@RPeruzzi.com
www.RPeruzzi.com

719 Fourth Avenue
Bethlehem, PA 18018

Electronics Consultant, Expert Witness



**Jeffrey Johnson, P.E.,
FLSmith Inc.**

THE PIDCOCK COMPANY

CIVIL ENGINEERING
 LAND PLANNING
 ARCHITECTURE
 LAND SURVEYING

FOUNDED 1924

Oxford Drive at Fish Hatchery Road
 2451 Parkwood Drive
 Allentown, Pennsylvania
 18103-9608

TELEPHONE: 610-791-2252
 TELEFACSIMILE: 610-791-1256
 EMAIL: info@pidcockcompany.com
 WEBSITE: www.pidcockcompany.com



deilen
 DEVELOPMENT

"Achieve More"

Coaching, Training and Consulting

deilendev.com 484-893-0085

Dreyer Consulting

Paul L. Dreyer, P. E.
 Forensic Engineering

112 Elm Rd.
 Allentown, PA 18104

484-343-2559 cell

610-395-3816 fax

pldreyer@rcn.com



Design • Print • Copy • Posters • EDDM
 Mailing Services • Promo Products • Post Office

BLUEPRINTS
 New Service! **\$1.50**
 D Size Prints

ALLENTOWN
 1801 West Tighman Street
 Allentown, PA 18104
 484.223.3311
 M-F 8am-6pm Sat 8am-2pm

BETHLEHEM
 123 East Broad Street
 Bethlehem, PA 18018
 610.865.9946
 M-F 7:30am-5:30pm

EASTON
 661 South 25th Street
 Easton, PA 18045
 610.923.9266
 M-F 8am-6pm Sat 8am-2pm

DESALES UNIVERSITY
 2755 Station Ave
 Center Valley, PA 18034
 610.282.1100 x1201
 M-Th 9am-5pm Sat 9am-4pm

WWW.MMPLV.COM

UNITED STATES POSTAL SERVICE. FULL SERVICE CONTRACT UNITS
 NOW AT OUR ALLENTOWN & EASTON STORES

Dezubay Engineering Services

William Erdman, PE

Richard Dumbach

survey

grants

landscape architecture

environmental

610.398.0904

barryisett.com

engineering

code inspection & plan review

construction services

BARRY ISETT & ASSOCIATES
Multidiscipline Engineers & Consultants
BarryIsett.com • 610-398-0904

Computer icon

Excavator icon

Building icon

Congratulations to all the Scholarship Award recipients.

**You are about to enter a most noble profession,
Engineering.**

We are the past and the present, you are the future.

Thank you, for being you.

Alfred Gruenke, PE

H.T. LYONS

contractors | engineers

An ENGIE company

“We make your building a better place.”



CONGRATULATIONS SCHOLARSHIP RECIPIENTS!

ASCE

LEHIGH VALLEY SECTION



Celebrating One Hundred Years of Civil Engineering Excellence

1922



2022

COUPLING INNOVATION WITH CONFIDENCE



Since 1919, Victaulic has been the world's leading producer of pipe joining solutions. Our products are used in the most recognizable landmarks, from the Hoover Dam to Egypt's Alexandria Library, making bold designs possible.

Backed by 1,800+ patents, Victaulic is committed to our customers' needs, providing solutions for your design challenges. We draw it, train on it and certify the installation, all while utilizing best-in-class technology. From concept through construction, we ensure your project runs efficiently as possible.

Engineering Solutions:

- Construction Piping Services (CPS) helps reduce risk and increase reliability for a smoother project experience.
- BIM Software keeps communication and collaboration in sync.
- Proprietary truck loading software saves time and confusion on the job with phased product schematics.

victaulic.com



VICTAULIC IS A REGISTERED TRADEMARK OF VICTAULIC COMPANY.
© 2014 VICTAULIC COMPANY. ALL RIGHTS RESERVED.

Proud to Honor our Engineers in the Lehigh Valley & Around the Globe



Engineering is what we do at FLSmidth. As a world leader in providing equipment and services to the cement and minerals industries, our success begins with our engineers who plan and design the systems and equipment for which our customers rely.

2040 Avenue C · Bethlehem, PA 18017 · www.flsmidth.com

Internet Addresses

National Society of Professional Engineers

www.NSPE.org

Pennsylvania Society of Professional Engineers

www.PSPE.org

Lehigh Valley Chapter – PSPE

www.LVPSPE.org

2022 – 2023 State Officers

State officers

State Director – Michael Basta PE, F-NSPE

Directors@LVPSPE.org

Alt State Director – Angelika Forndran, PE

Directors@LVPSPE.org

VP Northeast

Marleen Troy, PE, PhD
570-408-4615

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; they are held via Zoom meetings in 2022 until further notice.

2022 – 2023 Chapter Officers

Chapter officers

President – Jeff Kutz, EIT

President@LVPSPE.org

215-325-1303

Vice President – Alexa Rooney, EIT

VicePresident@LVPSPE.org

610-774-6011

Treasurer – Ray Szczucki, PE

Treasurer@LVPSPE.org

610-614-1245

Secretary – Chris Williams, PE, LEED AP

Secretary@LVPSPE.org

610-398-0904

Past President – Al Dezubay, PE

PastPresident@LVPSPE.org

610-597-2007

Chapter Directors

Director – Mary Rooney, PE

Directors@LVPSPE.org

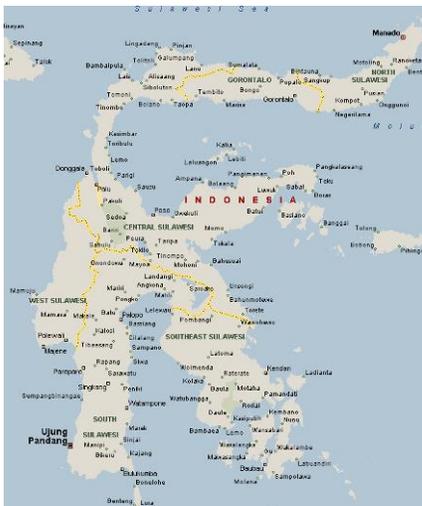
Director – Frank Walsh, PE

Directors@LVPSPE.org

Sulawesi, Indonesia

Indonesia encompasses over 17,000 islands stretching 3,200 miles from the island of Sumatra to the western half of the island of New Guinea and almost all of the island of Borneo. East of Borneo is the island of Sulawesi, shaped like the letter K. On my 1959 globe this island was called Celebes.

During the 1990s Indonesia was on a cement building spree with half a dozen super-size plants, with capacities between 6,000 to 9,000 MT per day. We were in Sulawesi to build a cement plant about twenty miles north of the capital of Ujung Pandang, now called Makassar, located in the south-western part of the island. The duty was okay, though frustrating at times. The assignment was for one year.



We stayed in a hotel in town. Even though the distance to the site was only twenty miles, the trip took around 45 minutes. The roads were bad, the traffic was bad, conditions in general were bad.

Most of the trip was through agricultural areas, with dairies being surprisingly prominent. Who knew?

We noted that the cows made a hollow drum-like sound as they walked. They wore cowbells around their necks remi-

niscant of cows with cowbells in Switzerland, though these bells were carved from bamboo. We asked our driver to buy some for us, but he ignored us. I suspect that he thought that we were going to make fun of them, and his country. Another driver, however, was more worldly and obtained some for us, at a buck apiece.



Indonesian cow bell

I brought back another souvenir from Sulawesi. Our secretary was from Irian Jaya but had connections in Bali, the source of really exotic kites. By exotic, I mean exotic! I bought kites shaped like a ship, a dragon, and a bird. I gave them to my grandchildren and flew a couple of them. Some, however, were more decorative than functional.

The food was a mixture of Indonesian and Chinese, hence very acceptable. The hotel was fine, people were friendly, living was easy. Also, Asahi, a Japanese beer in aluminum cans, was available. I would give the bellboy some money and that evening a case showed up in my room.

The only real issue I had was trying to find a pair of shoes my size. Apparently there are very few Indonesians that have size 12+ feet. I finally located a pair of sneakers in a sporting goods store. The date on the box was 1972, so they had been sitting waiting for me for a long time! So long, in fact, that the glue that held the soles had dried up, and the soles came off. I had to re-glue them with lino-

Continued on page 13

leum glue I procured from some workmen in the hotel. They held up until I came home, however.

About sixty miles north of Ujung Padang is Bantimurung waterfall, amazingly large for an island only sixty miles across. The falls are reminiscent of the waterfall on the Yellowstone River in Yellowstone Park, more cascading water than a waterfall. Lots of volume, not much height. The waterfall is situated in the valley of a limestone hill amidst fertile tropical vegetation. Surrounding the waterfall is a government protected natural reserve and is a popular tourist attraction.



That's a lot of water!

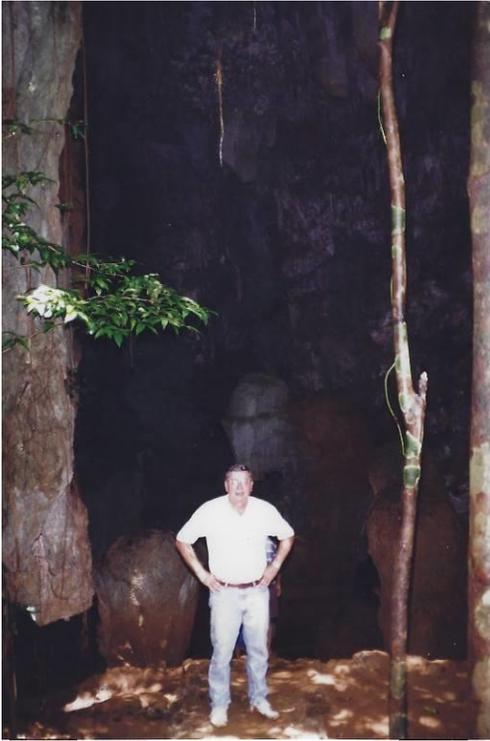


Another view of the waterfall



Center, Bassam Moussa from Hokendauqua, yours truly, and Chester Goodwin from England. Couple on the left are local tourists enjoying themselves.

Also in the area are a series of caves open to tourists. The tours are free, but since there is no lighting inside flashlights are required. Flashlights are available to rent for a nominal fee. Capitalism at its finest!



The entrance to the bowels of the earth

Continued on page 14



Stalagmites, or stalactites?

The network of underground passages and limestone formations were interesting and at times spectacular! But I'm spoiled. I've been to Carlsbad Caverns in New Mexico, and in my humble opinion compared to Carlsbad Caverns all other caves are merely holes in the ground. That includes Luray Caverns in Virginia and Rio Camuy caverns in Puerto Rico.

Waterfalls and water issues were not restricted to national parks. Coming back from work one day we passed over a little stream in one of the villages. Heavy rains had turned the little stream into a raging torrent. The boys in the village took advantage of the opportunity and offered to push cars through the water; for a fee, of course. We stayed in our vehicle until it stalled out and water flowed into the car. Our driver opened the hood and started fiddling. When he pulled off the distributor wiring we decided that the car's death bells had tolled and we'd better look for Option B. We flagged down a bus, jumped in, and rode to Ujung Pandang. A short taxi ride and we were back in our hotel. No harm done except for wet legs.

Amazingly, our driver managed to put everything back together and picked us up the next day. The engine only had four cylinders, but I was still impressed.

A couple of members of our group had to turn back and spent the night in a country inn. Not a pleasant stay.

It was a minor inconvenience to us, but the flood had major local consequences. Four people died.

Sulawesi was not the best overseas assignment I've been on, but it was far from the worst. My first tour in Egypt in the early 1980s still has that distinction. That is, until I worked from 7:00 PM to 7:00 AM, seven days a week, for weeks on end. I and a colleague from England were the electrical and mechanical repair department that kept the plant operating until the customer was willing to take over. That was no fun. We'd start our shift with "Twelve hours to go." Then, "Eleven hours to go" and so on. Total travel time around an hour and a half, sleep, eat, work, pretty much filled the 24 hours in the day. Fortunately, we had an internet connection at the site.

Sulawesi is hardly an exciting place. There are no historical sites, exotic temples, or awe-inspiring structures. Life was a bit slower, sometime frustratingly so. But you learn to go with the flow and put up with it. All-in-all, not too bad. I even learned some of the language! Of the languages in which I can say Thank You my favorite is in Indonesian, "Terima Kasi". It just sounds nice, and friendly.

 "I don't make jokes. I just watch the Government and report the facts!"
 -Will Rogers (1879- 1935)

 "The only reason they say, 'Women and children first' is to test the strength of the lifeboats."
 -Jean Kerr.