



# Valley Engineer Newsletter

June 2018

## UPCOMING PROGRAMS

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Tentative – August 2, 2018, Golf Outing, PE Day



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 OF  
 PROFESSIONAL ENGINEERS**

**LEHIGH VALLEY CHAPTER  
 (ORGANIZED 1935)**

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## **Scholarship Awards and Installation of Officers Banquet**

On May 9, 2018, members and guests of the Lehigh Valley Chapter, Pennsylvania Society of Professional Engineers gathered at DeSales University for our annual banquet. Our Chapter awarded five scholarships to high school graduates who are enrolled in an engineering curriculum, and installed the 2018 - 2019 slate of officers.

DeSales University has been the venue of choice for this event for a number of years. The excellent accommodations, the outstanding meal, a hospitable atmosphere, and an open bar are hard to reproduce elsewhere. Our thanks to DeSales and the LVPSPE officers for another successful event.

The “emcee” for the evening was Chapter Vice President Alex Dezubay, PE. Peter Staffeld PhD, PE, F.NSPE, gave the Invocation.

Alex first thanked our generous donors. Three representatives from our Graduate Level donors presented awards: Mark Blower, PE, of FL Smidth, Bob Aaron of Bridge Gap Engineering, and Kevin Campbell, PE, LEE AP, presenting for Victaulic since his wife, Michelle, could not attend the event.

This year we have five scholarship award winners of \$2,000.00 each. Al acknowledged Chairman Al Gruenke for his continuous efforts to contact donors and potential new donors.

We had 35 applicants. Three young women and two young men are recipients of this year’s awards, from five different schools: Liberty,

Continued on page 2

Parkland, Emmaus, Stroudsburg, and Freedom. The average SAT math scores was 716 and average verbal was 681. There were three math scores of 800. Two recipients are valedictorians, one #2 and one #3 in their graduating classes, and two more in the top 1%.

Alex congratulated the scholarship award winners and wished them well in their future.

Alex gave the five young people an inspirational message on what it means to be an engineer.

"Engineering is an honorable profession. We have a code of ethics. People rely on us for their daily safety in their cars, on bridges, when they turn on the lights and microwaves and computers in their homes. It is our responsibility to know how to do things and know when we need help. You are about to enter the first step on your trip to become Engineers. It is a lifetime of learning".



Mark Blower, PE, of FLSmidth giving award to Lucy Kitch-Peck

**Lucy Kitch-Peck**, the daughter of Anne Kitch and Jim Peck, will be graduating as valedictorian from Liberty High School. She is thrilled to have been accepted into the Massachusetts Institute of Technology, where she intends to major in Chemical Engineering and minor in Economics. She will also be playing varsity field hockey for the MIT Engineers (Go Tech!). At Liberty, Lucy was captain of the varsity field hockey team, president of the debate team, stage manager for Liberty Theatre, a member of the National Honors Society, and a competitor in Science Olympiad. This past summer, Lucy had the honor of attending the Pennsylvania Governor's School for the Sciences at Carnegie-Mellon University, where

she completed extensive lab work and an in-depth research paper on superconductors, along with courses in special relativity, organic chemistry, biochemistry, and computer science. Lucy is an AP Scholar with Distinction, a Lehigh University High School Scholar, a US Presidential Scholar nominee, and a National Merit Scholar. Outside of school, Lucy volunteers as a camp counselor, works as a barista, plays piano, and loves to read science fiction.



Bob Aaron of Bridge Gap Engineering giving award to Julia Roman

**Julia Roman** is graduating from Freedom High School and is the daughter of Jack and Donna Roman. She was selected as a First Team Academic All-American by Prep Volleyball (top eight volleyball student-athletes in the nation) and has been selected Academic All-State for the past two years by the PA Volleyball Coaches Association. Julia is First Team All-State in both softball and volleyball. She is the captain of Freedom's softball and volleyball teams and is the MVP of both teams. Julia was named Freedom's Eastern Pennsylvania Conference (EPC) Scholar Athlete for volleyball and was on the Under Armour All-American Watchlist. She is an active member of the National Honor Society. Julia is a Dual Enrollment, Project Lead the Way, and Academy of Applied Engineering student, and has maintained

Continued on page 3

straight A's through three years of high school. She participates in Scholastic Scrimmage, Engineering Club, Student Athletic Character Council, BASD Mini-THON, and "Every 15 Minutes." Julia is on Bethlehem Area School District's Superintendent Student Advisory Committee. She has volunteered her time through Freedom's Project Lead the Way Engineering Summer Camps, Bethlehem Sports Camps, and with VIA of the Lehigh Valley marathon. Julia will be attending Drexel University in the fall, majoring in Biomedical Engineering and playing Division I softball. Julia participated in MATHCOUNTS at East Hills Middle School.

dation, and the AP Scholar Award with Distinction. In addition, he has placed in a variety of programming, math, quiz bowl, engineering, and science competitions over the past four years. This year alone, he has qualified for ACSL's International All-Star Contest, the National Academic Quiz Bowl Tournament, and the National TEAMS Competition. This fall, Millan will be attending Johns Hopkins University to study biomedical engineering, computer science, and pre-medicine.



Kevin Campbell, PE, LEED AP, representing Victaulic giving award to Millan Patel

**Millan Patel** is graduating from Emmaus High School and is the son of Viraj and Niketu Patel. He is Captain of the Debate Team, President of Academic Team, Vice President of the American Computer Science League (ACSL) Club, Vice President of Science Olympiad, Secretary of the Pennsylvania Math League Club, Secretary of the Tests of Engineering Aptitude, Mathematics, and Science (TEAMS) club, a member of National Honor Society, and a member of No Place for Hate. He also plays the bass in the EHS chamber orchestra. He has been on the Principal's Honor Roll since freshman year, received the National Merit Scholarship Program Letter of Commem-



Alex Dezubay, PE, giving award to Angelica Byra

**Angelica Byra** will be graduating from Stroudsburg High School and is the daughter of Halina and Tadeusz Byra. Angelica is enrolled in the Honors Program and the five-year BS/MS program at Drexel University where she will be majoring in chemical engineering. Angelica is a member of the National Honors Society, Key Club, Interact Club, Peer Tutoring, Sports Club, Technology Student Association, Students Against Destructive Decisions (SADD), Student Council, and part of the school orchestra. She is also a board member for Key Club, Interact Club and is the first chair second violinist in her school orchestra. Angelica is the team captain of the Stroudsburg Varsity Girls Basketball Team. During the last two years, Angelica has helped

Continued on page 15

## **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 in any amount – please send your TAX DEDUCTIBLE donation to PA ENGINEERING FUND. Donations should be mailed to:

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Allentown, PA 18106

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](mailto:Scholarship@LVPSPE.org)

## **PSPE SCHOLARSHIPS**

The Pennsylvania Engineering Foundation currently administers the following scholarships for engineering students:

### **Undergraduate**

- \$1,000 PEF Grant: (2 awards)

### **Upperclassman**

- \$2,000 Pennsylvania Engineering Foundation Grant

Applications and guidelines are on-line now at <http://www.pspe.org/scholarships>

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### Pennsylvania Society of Professional Engineers

[www.PSPE.org](http://www.PSPE.org)

### Lehigh Valley Chapter – PSPE

[www.LVPSPE.org](http://www.LVPSPE.org)

## 2018 – 2019 State Officers

### State Director

Kevin Campbell, PE, LEED AP  
[StateDirector@LVPSPE.org](mailto:StateDirector@LVPSPE.org) 215-536-7075

### Alt. State Director

Angelicaka Fordran, PE  
[President@LVPSPE.org](mailto:President@LVPSPE.org) 610-997-6659

### VP Northeast:

Michael F. Basta, PE  
[StateVP@LVPSPE.org](mailto:StateVP@LVPSPE.org) 610-767-1617

## Board of Direction Meetings

The monthly Board of Direction meetings are 6:00 PM on the second (2<sup>nd</sup>) Monday of each month. Open to all members; they are held at the office of Liberty Property Trust, 74 W. Broad Street, Suite 240, Bethlehem, PA.

## 2018 – 2019 Chapter Officers

### President:

Brian Kutz, PE  
[President@LVPSPE.org](mailto:President@LVPSPE.org) 610-997-6659

### Vice President:

Alex Dezubay, PE  
[VicePresident@LVPSPE.org](mailto:VicePresident@LVPSPE.org) 610-597-2007

### Secretary:

Chris Williams, PE, LEED AP  
[Secretary@LVPSPE.org](mailto:Secretary@LVPSPE.org) 610-398-0904

### Treasurer:

Ray Szczucki, PE  
[Treasurer@LVPSPE.org](mailto:Treasurer@LVPSPE.org) 610-614-1245

### Immediate Past President:

Alfred Gruenke, PE  
[PastPresident@LVPSPE.org](mailto:PastPresident@LVPSPE.org) 610-395-6561

### Chapter Directors:

Alexa Rooney, EIT  
[Directors@LVPSPE.org](mailto:Directors@LVPSPE.org)

Mary Rooney, PE  
[Directors@LVPSPE.org](mailto:Directors@LVPSPE.org)

Frank Walsh, PE  
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## 2017 – 2018 LVPSPE SCHOLARSHIP DONORS

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her team bring home two consecutive Mountain Division Championships since 2000. She was recognized as the Bangor Hoops Classic All-Tournament Team, Blue Ridge Cable TV Female Athlete of the Week, Yasso-Rock Classic Player of the Game, a Via Senior All Star Selection, and an Honorable Mention All-Area by the Morning Call. Out of school, Angelica volunteers at the Pocono Medical Center and is the lead piano player at the Cancer Center. She has been playing the piano and violin since she was six years old and is now giving lessons to young kids. In her free time Angelica enjoys listening to music and playing different instruments.

**Habeeb Salau** (not present, due to other commitments) is graduating from Parkland High School and is the son of Bola and Tihamiyu Salau. He is a National Merit Scholar, Coca-Cola Scholar, and a National AP Scholar with Distinction. He is a member of the National Honor Society, French Honor Society, and Math Honor Society. He is a four-year varsity letter earner and the captain of the track team. He is the president of Parkland's Interact Club and a captain on the debate team which won the 2017 Eastern Pennsylvania Conference Championship. He has done research at Lehigh University to study the movement of embryonic fibroblasts in tissue regenerative scaffolds and received the Janssen Biomedical Research Award as well as a 1st place designation at the Delaware Valley Science Fair. Last summer, Habeeb interned at UBMe, an app startup in Bethlehem, where he helped develop a social media app that was used at Musikfest. Habeeb has worked on many community initiatives including a free weekly SAT preparatory class for disadvantaged students. In the fall, Habeeb plans to attend the Massachusetts Institute of Technology to major in Chemical Engineering and minor in behavioral economics. He

plans on doing research on battery storage solutions for renewable energy infrastructure in developing countries.

After the Scholarships were awarded, ex-State President Eric Tapper, PE, swore in the slate of officers who will guide the Chapter for 2018 - 2019.



From left to right: Chapter Directors Mary Rooney, PE; Alexa Rooney, EIT; Alt. State Director Angelica Forndran, PE; State Director Kevin Campbell, PE, LEED AP; Treasurer Raymond Szczucki, PE; Secretary Chris Williams, PE, LEED AP; Vice President Alex Dezubay, PE; President Brian Kutz, PE; and Eric Tapper, PE. Missing: Chapter Director Frank Walsh, PE.

President Brian Kutz presided over a very short meeting after the swearing-in ceremony.

## Planes and Ships and the Blackbird

Alfred Gruenke, PE

The ocean and ships have been immortalized in verse and song since time immemorial, from Psalm 107:23, "They that go down to the sea in ships, that do business in great waters", to Jimmy Buffet's "Mother mother ocean, I have heard your call/wanted to sail upon your waters/since I was three feet tall". Some of the greatest authors in history have ships and ocean travel as their main theme. Obviously, the romantic view of ships has been a mainstay of our lives and lore for millennia.

I don't like ships, I like airplanes. Maybe it's because as a young boy my first ocean trip was considerably less than tropical cruise quality. Furthermore, the scenery is monotonous. Trust me, dear reader, a wave of dark water in the North Sea doesn't look much different than a wave of dark water in the Mid-Atlantic and marginally different from a wave of black water in the Caribbean! When out of view of land everything looks pretty much the same.



My first ocean voyage, on the USS Blatchford. A Caribbean Princess she wasn't!

I have tried to read the supposedly greatest sea story ever written, "Moby Dick" by Herman Melville, without much success. The book was written in 1851. It was not recognized as a supposed great piece of literature until the 1870s. I suspect it took that long to wade through all that prose and follow up on all those metaphors! However, I must confess that I have enjoyed the works of Joseph Conrad.

I think a 747 and other planes of that type are the epitome of technological achievement. A smart phone is fine, but it doesn't transport you anywhere. The first time I flew to the Grand Canyon I looked out the window and imagined wagon trains slogging across the Great Plains, doing for months what I was now doing in mere hours. To me, ships are in the same category as the "prairie schooners" of the 19<sup>th</sup> Century.

Airplane travel has had its memorable moments to me. The first time I flew to the Middle East via Europe we flew over the Polar ice cap during a full moon. Now that was spectacular!

One of my aspirations since becoming a world traveler was to travel around the world, in one direction or the other.

A few years after that I had an assignment in Western Australia. My flight was from Newark to LAX, Sidney, and onto Perth, with a return ticket going back east. I tried my darndest (scheme) to continue west around the world but couldn't do it without incurring more costs. Then, ten days into my assignment and just about finished in Perth I received a phone call from my supervisor. He said that since I was "in the area" I should go to a customer in Malaysia for some equipment modifications. I purchased tickets to Singapore, Kuala Lumpur, and Ipo, in Malaysia. Voilá, now the ticket going West was cheaper than returning to Australia and LAX, easily justifiable to Accounting!

I finished my assignment in Ipo and bought a Lufthansa ticket in Singapore to Frankfurt and JFK. A driver picked me up at JFK and took me home, passing Newark Airport. I had traveled around the world in exactly three weeks, fifty hours in the air. Try duplicating that with a ship! Or an ox cart!

I have traveled around the world twice since then. Once I had tickets from JFK west to Manila and down to Indonesia, continuing home by going west through Europe and JFK. The third time was an emergency departure to escape serious rioting in Indonesia. Singapore Airlines had put extra planes in service to evacuate the objects of the rioting to Singapore, which we

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were able to board. Once in Singapore we hopped on the first plane heading home, which happened to be going east via Taiwan, LAX, Pittsburgh, and Allentown, completing another trip around the world.

I had left Jakarta in a hurry and didn't have an opportunity to call home until we were in Pittsburgh. My wife was genuinely surprised to hear from me, especially when I told her to pick me up at ABE airport in an hour!

However, the object of my true passion is the SR-71, the Blackbird! A Ferrari compared to a Chevy, a Harley compared to a Moped.



SR-71, Blackbird

A couple of years ago I was on assignment in Utah and had an opportunity to tour the Aerospace Museum at Hill Air Force Base and to actually see the object of my desires, the SR-71. I have lusted after this magnificent machine since I saw the above picture years ago. In the interest of propriety, I will spare the reader details of the depths of my passion. It could be embarrassing!

The SR-71 seems to float in the air, propelled by magic. The body is 85% titanium, loosely fitted at room temperatures. Heat from friction as it flies expands the frame by several inches, tightening the skin. The engine was most efficient around Mach 3.2. The plane was designed and built by Lockheed at its Skunk Works division in Palmdale, California. It replaced the U-2 which was famously shot down by the Russians in 1960. During its service life, no SR-71 was ever shot down.

As an aside, as an amateur radio operator I once communicated with a person who was stationed at a US Air Force base in Turkey and who had listened in on the radio conversations of the Soviet pilots as they shot down the U-2



The frontal view looks menacing, in a benevolent way. A cartoon super hero who fights for Truth, Justice, and the American Way.

The SR-71 was operational from 1964 to 1998. It had a simple mission: to fly over and spy on the Soviet Union. It had a crew of two pilots. Cruising at Mach 3+ speed made it virtually invincible; it was simply "faster than a speeding bullet." Speeds of Mach 3.5 have been reported. I scanned the overpriced books in the bookstore and I remember a passage. They were somewhere over the Soviet Union when they were being chased by a Soviet fighter. One pilot said to the other, "Let's leave a contrail, to let them know that we know they're there, and we don't care." Now that's chutzpah!

The Blackbird has numerous altitude and speed records. It flew from New York to London in 1 hour, 54 minutes, 56 seconds, for an average speed of 1,806.96 mph! That's 30.116 miles a minute, .5019 miles per second. Needless to say, the pilots had to be fully alert at all times. Less than two weeks later the same plane flew the 5,447 miles from London to Los Angeles in 3 hours, 47 minutes, 39 seconds, including in-air refueling.

A glorious machine, but more than a machine.

I never had the opportunity to fly in the Blackbird or any plane similar. My infatuation with the Blackbird is similar to my infatuation with Marilyn Monroe. Unobtainable, to be admired only from afar. It remains as one of the disappointments of my life, but I saw it, up close! That was worth something.