

January 2018 NEWSLETTER



Petroleum and Natural Gas Engineering

Saint Francis University

117 Evergreen Drive, Loretto, PA 15940

<https://www.Francis.edu/Petroleum-Natural-Gas-Engineering>

<https://www.facebook.com/PNGEatSFU/>

Dear Industry Advisory Council Member:

Greetings from the PNGE program at SFU.

The 2017 has been an important year for our program. In this newsletter, we would like to share with you the progress we have made and highlight some of the things that our students and faculty have achieved. The new year brings the new goals, ideas, and expectations. We believe it will be an exciting and challenging year for us too.

As always, we are grateful for your continued support and interest in our PNGE program. We appreciate your willingness to serve as an Industry Advisory Council member and truly value your insight and guidance for our program. Your input into our program has been immensely valuable and will continue to impact our students and the PNGE curriculum and program. Thank you for everything!

Best Regards,
The PNGE Program at Saint Francis University



Zach and Shannon were retrieving fresh water pre-frac samples from Ohio River

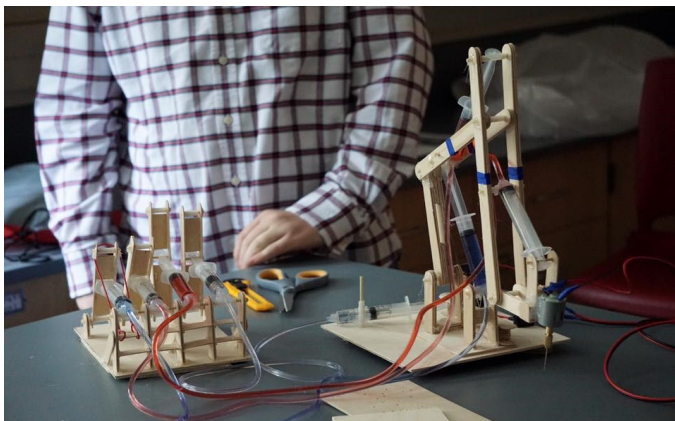
Student Summer Internship

Two of our students: Zachary Roland and Shannon Szymusiak had a summer internship at Silver Creek Services in 2017. They had the opportunity to work on data analysis of water sample testing results, and also enjoyed the field work time to get their hands dirty!

2017 PNGE Design Summer Academy

During the Summer, we had our first PNGE Design Summer Academy, which was funded by the EQT Foundation. This academy was a week-long program designed to provide an opportunity for talented high school students between their sophomore/junior and junior/senior years to experience different projects related with Petroleum Engineering. Students through a variety of hands on experiences developed an understanding of introductory concepts in the three main branches of petroleum engineering, which are reservoir engineering, drilling engineering, and production engineering.

Students were divided into teams and accomplished four projects: (i) reservoir properties evaluation, (ii) oil production: water flooding and carbon dioxide enhanced oil recovery (CO₂-EOR), (iii) hydraulic powered drilling system, and (iv) introduction to hydraulic fracturing. These projects cover several significant topics in oil and gas exploration and production.



Students constructed an hydraulic powered robotic drilling system using provided materials.



First PNGE Summer Academy Summer 2017



Students are measuring rock porosity, permeability and oil saturation in different samples



Students are presenting their project outcomes on the last day of summer academy

Fall Semester Welcome Party

We had a new student welcome party to introduce and welcome the PNGE class 2021 students Jared, Ian, Teresa, and Geno. Students had fun with barbecue, drinks, and sharing with each other.

Summer Research Poster Session

Three PNGE students: Guofang, Desmend, and JV conducted research with PNGE faculty during the summer 2017. At the beginning of semester they presented their work at the Summer Research Poster Session to the campus community. Guofang did a project related to drilling mud property measurement and optimization design; Desmend presented his work on phase behavior analysis of surfactants; and JV worked on shale reservoir data analysis.

Three Rivers Desk and Derrick Scholarship

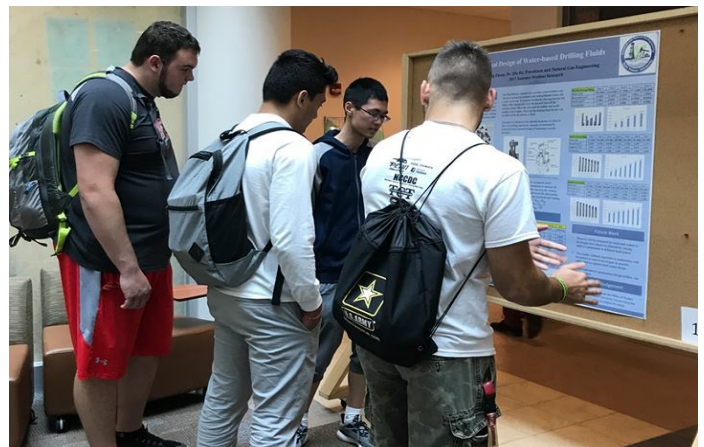
Three Rivers Desk and Derrick is a part of the Association of Desk and Derrick clubs, and is based in the Pittsburgh Pennsylvania area. Our Freshman student, Teresa Reid, has received a scholarship from this organization. She submitted an essay discussing “Energy Independence: What Does It Mean to You?”

SPE Student Chapter Activities

In order to attract greater SPE student membership and also do some fund raising, the SFU SPE Student Chapter registered a table at the Multicultural Festival at Saint Francis University.



2017 Spring Semester Welcome Party

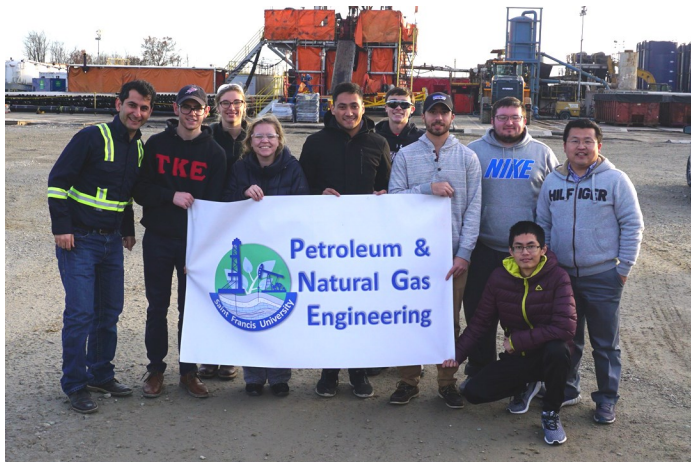


2017 Summer Research Poster Session

SFU PNGE Freshman Teresa Reid, Desk and Derrick Scholarship recipient. Right picture:



Left picture: SFU SPE Student Chapter is doing fundraising by selling homemade dumplings.



PNGE Student Field Trip

Drs. Guochang Wang and Ali Shahkarami took nine PNGE students to Carrollton, Ohio to visit drilling and completion well sites. Students had the chance to go on the drilling rig floor and receive the tour of completion and production facilities. The field trip was provided by Rex Energy.

Engineering Meet and Greet Event

The second annual SFU Engineering “Meet and Greet” – Undergraduate Networking Event was held on September 28th, 2017! PNGE students attended this event and talked with industry professionals, which helped them gain more understanding about our industry and thinking more about their own career paths.

SFU 24th Science Day Event

24th Annual Science Day was held at Saint Francis University. More than 530 high school students from 30 local schools celebrated science on Saint Francis University campus. “Petroleum and Natural Gas Engineering as a Career Choice” was presented by Dr. Qin He from the Petroleum and Natural Gas Engineering program.

Rex Energy Drilling and Completion Field Trip in Ohio



2017 Engineering Meet and Greet Event

Engineering Pumpkin Chunkin Competition

PNGE Freshman students participated in 2017 Pumpkin Chunkin competition. They designed and built their own Trebuchet. They received second place in the competition with their launch distance very close to the winning team. By doing this project, they learned about project management, teamwork and team leadership.



2017 Pumpkin Chunkin Competition

2017 SPE Eastern Regional Meeting

Drs. Ali Shahkarami and Qin He attended the 2017 Society of Petroleum Engineers Eastern Regional Meeting in Lexington, Kentucky Oct. 4-6, 2017. Both of them presented their research work and talked with many regional professionals.

SPE Annual Technical Conference and Exhibition

Drs. Ali Shahkarami, Qin He, and John Harris attended the 2017 Society of Petroleum Engineers Annual Technical Conference and Exhibition in San Antonio, Texas Oct. 9-11. Saint Francis University was given a table at the conference hall, where Drs. Shahkarami, He, and Harris talked to lots of professionals and scholars from worldwide universities and companies. Ali and John both attended the US. PNGE Department Heads annual meeting on October 8th.

AAPG, PAPG, and SPE Christmas party

Dr. Qin and Shannon participated in 2017 AAPG, PAPG, and SPE Christmas party held in Pittsburgh. They enjoyed an evening full of networking, great food, and they both even won door prizes.

ACS PRF Grant

Dr. Ali Shahkarami, assistant professor of Petroleum and Natural Gas Engineering, received a three-year grant from the American Chemical Society's Petroleum Research Fund, Undergraduate Research. The grant awards \$70,000 to conduct research titled "An experimental investigation of microemulsion phase behavior at high pressure and high temperature conditions." Dr. Shahkarami's research proposal aims to investigate the effect of the water/oil ratio, pressure, temperature, and oil composition on surfactant phase behavior. Surfactant flooding is an effective technique in enhancing oil recovery.



2017 Eastern Regional Meeting, Lexington, Kentucky



2017 ATCE Meeting, San Antonio, TX

