

# WEST VALLEY STEM CLUB

March 2022 NEWSLETTER

[www.engineersaz.com](http://www.engineersaz.com)

The Engineers Club is a social organization which meets monthly for lunch with a speaker on a topic of interest. Spouses and guests are invited and many attend regularly. Short field trips are occasionally scheduled. Membership is open to anyone who has worked in or has an interest in Engineering, Science or Technology. Meetings are held at 11:30am on the first Friday of each month (unless otherwise noted), October through June, at Briarwood Country Club, 135th and Meeker in Sun City West, AZ. Guests are always welcome. Contact Phil Main: [maintwin3@gmail.com](mailto:maintwin3@gmail.com), 623-826-0101 (cell).

## MARCH 4 PROGRAM

### The Science of Steel and Sacrifice: Delving Deeply into the Science of USS Arizona Dr. Donald Johnson and Dr. David Conlin

Dr. Johnson attended Colorado School of Mines after U.S. Navy service in 1945-46. He enrolled in ROTC at Mines and was later recalled to active duty in Korea as a second Lt in the Corp of Engineers, U.S. Army. After discharge and several years in industry, he returned to academics and received a PhD in Chemical and Materials Engineering at the University Nebraska-Lincoln (UNL) in 1968. After a career in teaching, research and consulting in the Department of Mechanical Engineering at UNL, he retired as Professor Emeritus and accepted a visiting professor of Materials Engineering at Tatung University in Taipei, Taiwan.

A new career emerged in 1997 when he helped organize corrosion studies through the formation of a partnership between the UNL and the National Park Service Submerged Cultural Resources Unit (SCRU). This partnership was incorporated into the USS Arizona Preservation Project involving long term interdisciplinary research including private and public institutions studying on site archaeology, corrosion, structural analysis, metallurgy, biology and oceanography. Under the assistance of Dr. Dave Conlin, Chief of SRC, Don has participated in over 10 field operations at Pearl Harbor. He is the author of a textbook in the area of metallurgical thermodynamics and over 50 publications and presentations, several of which include USS Arizona research.

Dr. Conlin: Dave received a master's degree from Oxford University in Aegean and underwater archeology and an M.A. and a Ph.D. in anthropology and archeology from Brown University. While at Brown Dave began working with the National Park Service's SCRU. Upon the completion of his Ph.D. Dave took a NPS underwater archeologist position on detail to the United States Navy. While with the Navy he helped plan and execute the recovery of the world's first successful combat submarine, the Confederate submersible H.L. Hunley-lost off Charleston South Carolina in 1864. Following the Hunley project Dave moved to Santa Fe to join the National Park Service's SRC and work on submerged cultural resources in our National Parks. Notable projects include the search for John Paul Jones' ship Bon Homme Richard, diving on the wreck of a B-29 Superfortress that crashed into Lake Mead, diving on the wreck of USS Arizona in Pearl Harbor, working with Ellis Island to document and preserve portions of the historic ferry Ellis Island, diving on WWII German U-boats lost off Cape Hatteras, and working with African colleagues to locate and document shipwrecks associated with the global slave trade. In March of 2009 the National Park Service SRC moved from Santa Fe New Mexico to Colorado and

Dave took over as Chief of the Center. Dave lives in Boulder Colorado with his wife Michelle who is a Doctor of Oriental Medicine, and dog Maya who is a Doctor of Chasing Balls.

**Abstract:** On December 7th, 1941 a sudden and catastrophic attack by the Japanese Navy on the American forces of Pearl Harbor Hawaii left a massive trail of destruction and pulled the United States into World War II. Among the casualties from that day was the First-Rate Battleship USS Arizona. While much of the American fleet was repaired and re-entered the fight with Japan, Arizona remains to this day as a memorial to service and sacrifice.

*(Continued on page 2)*

## PRESIDENT'S MESSAGE Jim Schlenvogt

Hello everyone! March is the month to start thinking about Spring Training baseball, (if there is a baseball season?), St. Patrick's Day, and March 4th is World Engineering Day. February and March are busy months for your Board of Directors. We had three Board Members and two prior Scholarship winners provide a panel discussion during Glendale Community College's, (GCC) STEM Week. We have received four GCC STEM scholarship applications. The Scholarship Committee will interview the four GCC students on February 24th and 25th.

On February 23rd, five of the Board members participated in a Field Trip to the City of Surprise's – Wastewater & Water Injection Site Tour. The field trip was limited to five maximum. If the field trip is successful we will propose to offer this field trip to the Club's membership. Thank you to Jim Burch of our Club for recommending this field trip.

We have a Venue Committee researching potential meeting location venues. We have several potential locations; however, due to Covid, they are limiting any new groups to meet there until at least the fall of 2022. If you can recommend a venue to reduce our cost for our monthly meetings or any speakers for future meeting programs, please contact me or any of the Club's Board Members.

Finally, we encourage any active Club members to attend the monthly Board of Director's meeting. The meeting is at 9:30 am, the third Monday of the month at the Briarwood CC. If you are interested in attending the next Board meeting, please contact me or a Board Member. In 2022, we will have interesting programs and other activities. Please feel free to bring a guest! THANK YOU!

# WEST VALLEY STEM March 2022

## 2022 OFFICERS

President	Jim Schlenvogt
Vice President	George Zieglgansberger
Secretary	Marilyn Dumond
Treasurer	Carol Mungas
Asst. Treas.	Dave Campbell

## COMMITTEE CHAIRPERSONS

Programs	Peter Rauen/Jim Schlenvogt
Membership	Philip Main
Reservations	Philip Main
Luncheons	Jim Schlenvogt
Scholarship	Jim Schlenvogt
Member at Large	Hal Lind
Newsletter / Website	Dave and Karen Campbell
Event Audio	Doug Totel
Event Computer	Paul Scherer
Publicity	Lance Berglund
Field Trips	George Zieglgansberger
Past President	Steve Sumner

Email the Board at: [board@engineersaz.com](mailto:board@engineersaz.com)

## TREASURER'S REPORT December 2021

General Fund Balance: \$ 7, 359.06

Membership Total: 72

February 50/50 was \$ 105.00 and won by Jim Schlenvogt who donated back to Scholarships.  
Thanks Jim!

## 2022 VEST MEETING DATES

March 4, April 1, May 6, June 3,  
October 7, November 4, December 2

(Continued from page 1)

For more than 20 years, University of Nebraska Metallurgical Engineer Dr. Donald Johnson and National Park Service Archaeologist Dr. David Conlin have been working with a huge team of highly skilled scientists, engineers, service members and divers to understand the processes of corrosion and preservation still at work on a 608-foot long battleship now resting on the seafloor of Pearl Harbor for more than 80-years. Please join us as we take a wide-ranging look at the science, technology and thought that has steered more than 2 decades of preservation and management for this remarkable touchstone of American and world history.

## 2022 MEMBERSHIP DUES

Dues for 2022 are \$25.00 of which half goes to the Scholarship Fund. **Please consider making an additional donation to the Scholarship Fund** (put scholarship in the memo line). Please mail your check(s), made out to West Valley STEM to: Philip Main, 17604 N Buntline Drive, Sun City West, AZ 85375-5148, [main-twin3@gmail.com](mailto:main-twin3@gmail.com), 623-748-8222 (Home), 623-826-0101 (Cell)

## APRIL 1 PROGRAM

### Cryptocurrency and Blockchain Technology

Dr. Rida Bazzi, Associate Professor,  
School of Computing and Augmented Intelligence, ASU



Prior to joining ASU in 1996, Dr. Bazzi served as an assistant professor at Florida International University in the 1995-1996 academic year and prior to that he was a senior consultant at I-Cube, a startup company in Cambridge, Massachusetts. His areas of expertise include distributed computing, fault tolerance and computer security. Dr. Bazzi hold a M.Sc. And Ph.D. in Computer Science from Georgia Institute of Technology in 1994, and a B.E. Computer and Communications Engineering, American University of Beirut, Lebanon 1989.

**Abstract:** What are cryptocurrencies like Bitcoin? Who owns the cryptocurrency "banks"? What is the Blockchain Technology that is the underpinning of cryptocurrencies? What uses does it have besides cryptocurrencies? These are all questions that will be addressed at the April presentation. Is it safe to invest in cryptocurrencies? What are the risks? Who are the cryptocurrency "miners" and why does it take so much energy to "mine" a Bitcoin?



## FEBRUARY 4 PROGRAM

APS Renewal Energy Plans, Electric Vehicles and  
the Power Grid  
Jason Smith and Randon Allen  
Arizona Public Service

Happy St. Patrick's Day