

# WEST VALLEY STEM CLUB

January 2023 NEWSLETTER

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

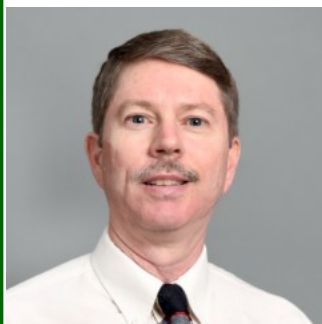
The Engineers Club is a social organization which meets monthly for lunch with a speaker on a topic of interest. Spouses and guests are invited and many attend regularly. Short field trips are occasionally scheduled. Membership is open to anyone who has worked in or has an interest in Engineering, Science 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).

## JANUARY 6 PROGRAM

### The Future of Nuclear Power Generation

Keith E. Holbert, Ph.D., P.E.

Director, Nuclear Power Generation Program  
Arizona State University



Keith Holbert is presently an Associate Professor in the School of Electrical, Computer and Energy Engineering of Arizona State University (ASU). He earned his Ph.D. in nuclear engineering from University of Tennessee in 1989. His research expertise is in the area of instrumentation and system diagnostics including

radiation effects on sensors. Keith has performed tests on safety-related systems in more than a dozen nuclear power plants in the U.S. Dr. Holbert is a registered professional (nuclear) engineer. Keith is Senior Member of IEEE, and a member of the American Nuclear Society. He has published more than 200 journal articles and conference papers, two textbooks, and holds two patents. Keith is the founding Director of the Nuclear Power Generation Program at ASU.

**Abstract:** Climate change due to anthropogenic CO<sub>2</sub> emissions is driving renewed interest in nuclear power — which can generate carbon-free electricity 24/7 whereas solar and wind cannot. While the U.S. has been stagnant in the construction of nuclear power plants for the past 30 years, China is on a building spree. Two third-generation power reactors are scheduled to come online in 2023 at Plant Vogtle in Georgia. Meanwhile, efforts are proceeding on the deployment of small modular reactors for commercial electricity production, and the U.S. military is pursuing microreactors for remote power generation. The promise of nuclear fusion, in contrast to today's use of fission, is experiencing progress on two fronts: (1) the internationally funded tokamak reactor (ITER) being built in France, and (2) several investor financed companies developing compact fusion approaches. Outer space being the final frontier, NASA (and China too) has plans to use a nuclear fission reactor to power a moon base as well as any human mission to Mars.

**NEWS FLASH!!** The West Valley STEM Club has a new meeting venue. Starting Friday, February 3, 2023, the West Valley STEM Club will be meeting at Grandview Terrace, in the fourth-floor ballroom, at 14515 W. Granite Valley Drive, Sun City West, AZ.

## PRESIDENT'S MESSAGE

Jim Schlenvogt

HAPPY NEW YEAR! I hope you had a great holiday season. The Board of Directors has been busy planning the new venue, the 2023 programs, and several field trips or community activities.

The new meeting venue will be the **Grandview Terrace Community** at 14515 W. Granite Valley Drive, Sun City West, AZ., for more information see:

[www.GrandviewTerrace@SunHealth.org](http://www.GrandviewTerrace@SunHealth.org). **Starting February 3, 2023**, we will have the meeting Check-in on First Floor near the Receptionist area, and then you will be directed to the elevators and to the Fourth Floor Ballroom.

The Board of Directors and the Scholarship Committee want to say **THANK YOU** to everyone who donated to the 2023 Scholarship Fund. A summary of the donations will be provided in February.

On December 10<sup>th</sup>, the Club had a booth and eight (8) volunteers at the Surprise SciTECH Festival. See page 2.

The Program Committee chaired by Peter Rauen has found speakers to discuss an outstanding list of topics, including:

- Nuclear Power Generation
- Everything You Need to Know About Electric Vehicles
- Taiwan Semiconductor (TSMC) Arizona Project
- The West Valley STEM Club's Scholarship Success Story
- The Engineering of the Lake Pleasant Dam (CAP)
- The Past and Future of Electric Vehicles

We are looking forward to providing more value for our members!

Finally, we have new Club Business Cards with our new monthly meeting location and related information. Please keep one new card and share the other cards with your friends, neighbors, or other people who are interested in attending our monthly meetings as a guest or who are interested in joining. A primary Club Goal in 2023 is to continue to grow the membership and the interest in the Club.

# WEST VALLEY STEM January 2023

## 2023 OFFICERS

President	Jim Schlenvogt
Vice President	George Zieglgansberger
Secretary	open
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	Hal Lind/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)

## Surprise SciTech Festival

On December 10th, the Club had a booth and eight (8) volunteers at the Surprise SciTECH Festival. We had many people stop by the booth and several people signed up to receive our meeting notices.



## Scholarship Donations

The West Valley STEM Club is conducting our Annual Scholarship Fund Donation Event at our December and January meetings.

## TREASURER'S REPORT OCTOBER 2022

**General Fund Balance: \$8,820.41**  
(\$1500 owed to Scholarship student)  
**Membership Total: 62**

## February 3 Program

**What You Need to Know about Electric Vehicles (EVs)**

**Jim Weichel**

**Program Outline:** History of EVs, EV Market Status Worldwide, Technology Adoption Curves & EVs, EV vs ICE Characteristics, EV Safety, EV Economics, Batteries and Charging, EV Driving Experience Locally and Long Distance, Myths Debunked

## DECEMBER 2 PROGRAM

### Water Supply from the Colorado River System

**Rachel Von Gnechten,**  
Water Resources Engineer  
Arizona Department of Water Resources



## 2023 WV STEM MEETING DATES

**January 6, February 3, March 3,**  
**April 7, May 5, June 2**

## 2023 MEMBERSHIP DUES

Dues for 2023 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, [maintwin3@gmail.com](mailto:maintwin3@gmail.com), 623-748-8222 (Home), 623-826-0101 (Cell)