



The WV STEM Club is a social organization which meets monthly for lunch with a speaker on a topic of interest. 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 Grandview Terrace, in the fourth-floor ballroom, at 14515 W. Granite Valley Drive, Sun City West, AZ. **Guests and visitors are always welcome.** Contact Phil Main: maintwin3@gmail.com, 623-826-0101 (cell).

### December 11 PROGRAM

#### Artificial Intelligence (AI) and You. A Brief History, How We Use It, and Examples of How it's Used Today

**Larry Laursen, Retired Technical Manager,  
Dow Chemical, Central Research and Development**



Larry Laursen is currently involved with the Grand Computer Club as an instructor and technical helper. He teaches Windows applications and Android smartphone classes. He has traveled extensively via an RV across the USA, visiting National Parks, historic sites, and other landmarks and gained an interest in photography and videography. This led to self-learning of computers and programs for editing, trip planning, and eventually to 3D printing. While employed, he was involved in fabrication research and development, engineering, and manufacturing of a wide range of plastic materials. The applications included products for: consumers, packaging, medical devices, industrial piping, optical fibers, adhesives, and aircraft composites. Prior to working at Dow, he was employed at the Aerospace Division of Westinghouse Electric. This has triggered his interest in a wide range of technologies and how individuals interact with them. He received his BS and MS in Mechanical Engineering from University of Michigan. He grew up in a small farming community where his father owned a garage/car dealership and farm.

#### Abstract:

Here are the key points from the presentation generated by Copilot AI.

**Definition and Applications:** AI refers to intelligence exhibited by machines, used in web search engines, recommendation systems, speech recognition, autonomous vehicles, and creative tools.

**History:** AI research began with Alan Turing in 1936 and became an academic discipline in 1956. The field experienced cycles of optimism and AI winters, with significant advances post-2012 due to deep learning and transformer architecture.

**Learning Algorithms:** The document explains supervised, unsupervised, and reinforcement learning algorithms, including decision trees, SVMs, neural networks, K-means clustering, genetic algorithms, Q-learning, and GANs.

**Top AI Tools:** Popular AI tools in 2024 include ChatGPT, Claude AI, Google Gemini, QuillBot, and MidJourney.

### PRESIDENT'S MESSAGE

#### Jim Schlenvogt

Hello Again Everyone! December and January are the time of year to "Pass it Forward" with the Club's Annual Scholarship Donation request. **Please consider donating to the Scholarship Fund**, so the Club can help several STEM students move on from their Sophomore year to their Junior year in a four-year STEM Program. In the last SIX years, the West Valley STEM (VEST) Club has awarded \$28,000 to THIRTEEN (13) Scholarships to STEM students.

On Saturday, November 16, 2024 the Club participated in this year's City of Surprise - SciTech Festival. The committee was led by Gary Graunke, George Zieglansberger, Phil Main and Paul Scherer.

The Club's Annual Election of Officers for the next Calendar Year was held at the November 7, 2024 meeting. The Club elected the following 2025 Candidates:

Open Position - President

Gary Graunke – Vice President;

Betty Goldberg – Secretary;

Carol Mungas – Treasurer.

As I announced several times, after three years as President of the West Valley STEM Club, Jim Schlenvogt will resign as President on December 31, 2024 and become a Past-President on the Board. In addition, Phil Main has requested the Club find a new Chairperson for the Membership Committee and for the Reservations Committee. Jim and Phil are willing to train and work with the new person(s) into the new year. The Board of Directors meet September to May, on the third Monday of the month, 9:30 am at the Grandview Terrace, in the first-floor meeting room. If you are an active Club member and wish to see the Club continue to grow and have interesting programs, please consider coming to our Board Meeting on December 16, 2024 or any future Board Meeting. The Board of Directors will continue to search for new candidates until the positions are filled. The Club has a GREAT

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### 2025 MEMBERSHIP DUES

Dues for 2024 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 , 623-748-8222 (Home), 623-826-0101 (Cell)

# WEST VALLEY STEM December 2024

## 2024 OFFICERS

|                |                        |
|----------------|------------------------|
| President      | Jim Schlenvogt         |
| Vice President | George Zieglgansberger |
| Secretary      | Darrell Armbruster     |
| Treasurer      | Carol Mungas           |
| Asst. Treas.   | Dave Campbell          |

## COMMITTEE CHAIRPERSONS

|                 |                          |
|-----------------|--------------------------|
| Programs        | Peter Rauen/Rick Cecil   |
| Membership      | Philip Main              |
| Reservations    | Philip Main              |
| Luncheons       | Jim Schlenvogt           |
| Scholarship     | Jim Schlenvogt           |
| Member at Large | Don Zoss/ Betty Goldberg |
| Newsletter      | Dave and Karen Campbell  |
| Website         | Gary Graunke             |
| Event Audio     | Doug Totel               |
| Event Computer  | Paul Scherer             |
| Publicity       | Lance Berglund           |
| Field Trips     | George Zieglgansberger   |
| Past President  | Steve Sumner             |

Email the Board at: [js3820@msn.com](mailto:js3820@msn.com)

## JANUARY 3 PROGRAM

### Sustainability of Arizona's Ground Water Supply using Satellite Tracking Data

Jay Famiglietti, Satellite Hydrologist, Chief Scientist of the Arizona Water Innovation Initiative, Global Futures Professor in the School of Sustainability, Arizona State University

Jay and his team use satellites to track changing freshwater availability and water risk across the globe. They developed the groundbreaking methods to detect groundwater depletion from space using the NASA GRACE mission.

## 2024 MEETING DATES

The Club's **REVISED** meeting dates for 2025:

- 01/03/2025 (First Friday of the Month)
- 02/06/2025 (Thursday)
- 03/07/2025 (First Friday of the Month)
- 04/04/2025 (First Friday of the Month)
- 05/09/2025 (SECOND Friday of the Month)
- 06/06/2025 (First Friday of the Month)

## TREASURER'S REPORT NOVEMBER 2024

|   |             |
|---|-------------|
| Gross General Fund Balance                      | \$10,607.61 |
| Net Fund Balance (after payment of obligations) | \$6,728.91  |
| Membership                                      | 119         |

The November 50/50 winner was David Campbell. David donated his \$90 winnings to the Scholarship Fund. Thank You for Your Support!

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TEAM on the Board of Directors and everyone complements each other very well. If you have an interest or need additional information, please contact Jim Schlenvogt, [js3820@msn.com](mailto:js3820@msn.com), 480-869-0548 or one of the other Club Board of Directors' members.

The Program Committee has found the following topics for future meetings:

- Satellite Tracking of Water in the Southwest
- Science of Preventing Alzheimer's Disease (TBD)
- Europa Clipper Spacecraft Mission to Jupiter
- Colorado River 2025 Water Forecast

In closing, I hope you have a safe and healthy holiday season, and we look forward to seeing you and your guest at the next meeting. We appreciate your support!

## November 7 PROGRAM

### Cyber Security for Seniors

Nancy Juarez, Community Engagement Coordinator  
Attorney General Kris Mayes Office  
Phoenix, AZ

