WEST VALLEY STEM CLUB

May 2022 NEWSLETTER

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, 623-826-0101 (cell).

MAY 6 PROGRAM

Isometric Projection of Video Signal Brightness Variations in Real Time and Discoveries

Peter Schumacher

Pete Schumacher became interested in electronics and pursued the hobby of Amateur Radio from age 14. He studied Electronics Engineering Technology at Central Technical Institute in Kansas City Missouri. He joined the U.S. Air Force in 1966, becoming an aircraft electrician and studied advanced electronics via correspondence with the University of Wisconsin, Madison.

In 1970s he was hired as production manager for Interpretation Systems, Inc. of Lawrence, Kansas where he was active in the development and installation of an image enhancing product known as the VP-8 Image Analyzer. This product led to the discovery of the 3-D properties of the Shroud of Turin image at Sandia Laboratories in Albuquerque and to his involvement in the most famous and largest scientific investigation ever to study a single artifact.

In 1978, he began his own company and was granted three hardware and firmware patents which were implemented in products used for image processing, remote sensing, raster-to-vector and vector-to-raster conversion, large format video data capture, and geographic information systems applications.

He retired from his electronics career in 2006. He is founder of the Shroud Exhibit and Museum in Alamogordo, New Mexico, and is now a deacon in the Diocese of Las Cruces.

Abstract: The analog circuitry is used to regenerate an optical image which can be rotated and tilted on a cathode ray tube (CRT) display. This is used to display an isometric projection of the real time brightness variations of an applied video signal.

Scientists ran an experiment in a lab at Sandia Laboratories. The circuits described produced a unique output for one image which does not occur with other images. This result has been investigated by many scientists since 1976. It prompted the launch of the largest scientific investigation ever to study a single artifact. It has been used to produce several 3-dimensional models of the contour of the body of the person viewed on the Shroud of Turin. It suggests a potential for proposed new methods of extracting data from video image formats for 3-D printing.

A method developed by a close associate of the author will be discussed in general terms. Examples of models he produced will be displayed. Other methods will be proposed by the author for possible future development.

PRESIDENT'S MESSAGE

Jim Schlenvogt

We are happy to announce the 2022-2023 West Valley STEM Club Scholarship winner. The Scholarship Committee is one of the long standing committees of the West Valley STEM Club with the goal to recruit qualified student(s) who are entering their Junior Year in a qualified four-year Engineering, Science or Technology University. The West Valley STEM Club Scholarship Committee includes the following members: Carol Mungas, Karen Campbell, George Zieglgansberger, and Jim Schlenvogt (Chairperson).

The GCC Scholarship West Valley STEM Club applications were due on February 11th, and the West Valley STEM Club Committee received four applications. The Committee reviewed the applications and scheduled in-person interviews. The Scholarship Committee recommendation to the West Valley STEM Club Board of Directors was approved and the $3,000 2022-2023 West Valley STEM Club Scholarship was awarded to Aliyah Mitchell. Aliyah is a Architectural Studies and Civil CADD Technology Major, May, 2022 GCC Graduate, to attend ASU in Fall, 2022. Scholarship Awarded: $1500 in August, 2022 and $1500 in January, 2023. Aliyah graduated from Maryvale High School. She and her mother attended the March West Valley STEM Club and thanked all of the Club members for their contribution to the scholarship.

Everyone at the West Valley STEM Club can be proud of their scholarship donations which will assist the future generation of STEM university graduates.

Remember, anyone who is an active member and wants to see how the business of the Club is processed, please attend the Board of Director's monthly meeting on the third Monday of the month at the Briarwood CC, at 9:30 am. We are looking for At-Large Board Members and future Club Officers. In 2022-2023, we will have interesting speakers and field trips. Please feel free to make meeting reservations for a guest. Thank You!

2022 WV STEM MEETING DATES

May 6, June 3,
October 7, November 4, December 2

WEST VALLEY STEM May 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	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

TREASURER'S REPORT March 2022

General Fund Balance: $ $7968.64

Membership Total: 83

March 50/50 was $ 47.00 - Congratulations to winner D. Armbruster

JUNE 3 PROGRAM

City of Surprise Water Resource Management Solar Thermal Biosolids Dryer, Efficiencies, and Five Year CIP Plans

Lee Lambert

Lee Lambert is the Director of the Water Resource Management Department for the City of Surprise. This Department overseas Water Treatment, Wastewater Treatment, Collections, Reclaim Water, Water Distribution, and Stormwater Divisions within the City of Surprise. He began working for the City of Surprise in 2005 as a Project Manager overseeing significant water infrastructure projects, then he switched over to an operation role as the Water Manager in 2013. Later he assumed the role of Assistant Director in 2019, and then Director in 2020.

Mr. Lambert is a native of Arizona, graduate of the University of Arizona with a Bachelor of Science Degree in Regional Development, and multiple certifications in water and wastewater treatment processes. He began his professional career working for the State of Arizona Department of Water Resources in 1995, and later worked for the Maricopa County Planning Department prior to working for City of Surprise. All total he has been actively working in the water field for over 27 years.

Abstract: An overview of the City of Surprise Water Resource Management Department's constant commitment to look for efficiencies, new technologies, and how that's helping to guide the future of our five year Capital Improvement Projects plan. The discussion will cover the constant need to look for efficiencies in an industry that is energy driven, a look at the recent construction of a Solar Thermal Biosolids Dryer to address better efficiency, and the future plans for water infrastructure in Surprise.

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, maintwin3@gmail.com,
623-748-8222 (Home), 623-826-0101 (Cell)

You Can Help Recruit New Members

- Hand out business cards to friends and family
- Leave business cards at local businesses that have a display area for them

If you need business cards, pick them up at the luncheon or contact Jim Schlenvogt at js3820@msn.com

APRIL 1 PROGRAM

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