

WEST VALLEY STEM CLUB

May 2021 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. Currently we are not meeting in person, but are continuing monthly programs by Zoom.

MAY 7 PROGRAM

Bioelectronic Devices in the Medical Field

Mark Porter

Sr. Engineering Manager

Technical Fellow at Medtronic

University of New Hampshire, BS Physics



An experienced engineer in semiconductor manufacturing and process integration, including wafer fab, assembly, and test. In the medical device field, Mark Porter has specialized in reliability statistics and data analysis, including risk assessment

and reliability prediction. He leads a combined group of reliability engineers and technicians working in the areas of experimental mechanics, finite element modeling, and product reliability demonstration. The team employs a wide range of techniques to evaluate and improve the reliability of electronic assemblies used in implantable medical devices.

Mark Porter has a solid background in statistical analysis, Design of Experiments, Statistical Process Control, and exploratory data analysis. He has developed a number of applications using Spotfire as the visualization framework, including wafer-mapping, test program regression analysis, and time-to-failure data analysis.

However, here we are with one more meeting on June 4 to be held virtually. Unfortunately, my wife and I will be on the road that day to Omaha where my wife and I will be watching our grandkids the following week. I can't say babysitting as the grandkids are no longer babies but still require watching while both parents are working.

We will (hopefully) be back to In-person meetings in October at a location still to be determined. We have been advised that our past venue will not have their prices for next season available until some time this summer. However, they have already advised us that prices will go up as a result of the increase in the minimum wage and the increase in food prices. Other venues have indicated the same issues with their prices.

I have been terribly disappointed in member participation in our ZOOM meetings. We have had some very interesting topics. Also we have had a drop in membership due to members not wanting to participate in the ZOOM meetings. We are down to approximately 50 members. If you enjoy the presentations and lunches, please talk up our club and entice new folks to join our club. The continued existence of our club depends on getting new members to join.

In the meantime, have a good summer and drive safely whether you are staying locally or travelling to other locations. We do have one more meeting on June 4, 2021. Unless something changes drastically with the pandemic, this will be our last meeting held virtually.

PRESIDENT'S MESSAGE

Steve Sumner

As we approach the end of the 2020-2021 Season for our Club, I have a comment I would like to share:

If anybody had told me back at the beginning of our season back in September, 2020 that at the end of the season we would still be meeting virtually, I would have been incredibly surprised.

2021 MEMBERSHIP DUES

Dues for 2021 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 VEST, to: Philip Main, 17604 N Buntline Drive, Sun City West, AZ 85375-5148, maintwin3@gmail.com, 623-748-8222 (Home), 623-826-0101 (Cell)

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2021 OFFICERS

President	Steve Sumner
Vice President	Jim Schlenvogt
Secretary	Marilyn Dumond
Treasurer	Carol Mungas
Asst. Treas.	Dave Campbell

COMMITTEE CHAIRPERSONS

Programs	Peter Rauen & Jim Schlenvogt
Membership	Philip Main
Reservations	Philip Main
Luncheons	Peter Rauen
Scholarship	Jim Schlenvogt
Member at Large	Peter Rauen
Member at Large	George Zieglsangberger
Newsletter / Website	Dave Campbell
Event Audio	Hal Lind/Doug Totel
Event Computer	Paul Scherer
Publicity	Lance Berglund
Field Trips	Open
Hospitality	Open

Email the Board at: board@engineersaz.com

TREASURER'S REPORT April 2021

General Fund Balance:	\$ 8192.87
Membership Total:	85

Don't forget to renew your membership for 2021.
Mail \$25 checks to Phil Main at 17604 N Buntline Dr
Sun City West, AZ 85375

2021 VEST MEETING DATES

May 7, June 4, October 1,
November 5, December 3

JUNE 4 PROGRAM

"Marine LIDAR Technologies and Applications"

Andrew Griffis Ph.D
Chief Executive Officer
The Sensor Group LLC



Andrew Griffis obtained his BS in Engineering from Milwaukee School of Engineering, his MS degree from Marquette University and his Ph.D from University of Massachusetts Amherst. Dr. Griffis has

been Chief Executive Officer of The Sensor Group LLC (TSG) since January, 2009.

The Sensor Group LLC (TSG) is an OEM imaging products company based in Tucson, Arizona. Their development team enjoys ready access to many electro-optical technologies and technologists in the Tucson area. TSG has in-house design and development facilities for custom camera cores, fiber faceplate bonding, multi-axis motion control, package design and production prototype testing. In addition, on site plastic and metal fabrication tools support rapid prototyping and testing.

Andrew Griffis Ph.D. has been growing businesses and developing sensing products for over 20 years. Products include microwave imaging for geoscience, non-contact thermographic devices for industrial IoT, airborne and underwater LIDAR systems, infrared 2D/3D imaging and monolithic flash LIDAR devices. He holds patents in thermographic condition-based maintenance, LIDAR, IR imaging/sensing, medical acoustics and mobile surveillance. Andy founded The Sensor Group in 2009 to serve production airborne LIDAR opportunities for the US Navy. Dr. Griffis has been working with such LIDAR systems for over 25 years.

Marine LIDAR is a subset of the rapidly expanding global market for commercial time of flight (TOF) 3D imaging devices. The most prominent exemplar is the navigation LIDAR used for autonomous vehicles that are driving the ADAS market. However, LIDAR is not new — it has been around for more than 40 years as a remote sensing tool. Only in the past 10 years has it become a significant commercial device, owing to the growth of robotics and vehicle automation. So it is timely to look at LIDAR technology and consider its utility for our companies and products.

This program will focus on that subset of the overall LIDAR market, Marine LIDAR, and discuss:

- Basics of imaging in water in terms of physics and associated challenges
- Geometries and technologies that are useful for producing LIDAR data in water
- Airborne Marine LIDAR systems in use today and data produced by those systems