

WEST VALLEY STEM CLUB

February 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.**

FEBRUARY 5 PROGRAM

Innovations in Mobility & Autonomous Vehicles

Matthew Junak, P.E.
Innovation Service Lead & Senior Project Manager,
HNTB Corporation



Mobility is transforming before our eyes, with technology innovating every facet of the transportation system. While we have many traditional tools to improve mobility, this presentation will focus on emerging trends in transportation technology and new tools such as Automation, Connectivity, Electrification, and Sharing. Join us to learn how these ACES are at the core of a new mobility ecosystem.

Matthew Junak is an industry service lead for HNTB's Innovation Council and a senior project manager for the firm's Intelligent Transportation and Emerging Mobility National Practice, supporting clients and projects such as intelligent transportation systems, connected and automated vehicles, transportation planning, traffic engineering and highway design. His projects span across the country, including hundreds of miles of freeway management, two international border crossings, fiber optic and wireless backbones, and implementation of statewide standards for ITS infrastructure and networking. Matthew received his BSCE & MS from Michigan State University and is a Registered Professional Engineer in Michigan

defined before symptoms appear and how it is being used to develop preventative therapies.

Malek-Ahmadi earned a BS from the University of Arizona, a MS from the University of South Florida, and a PhD from the University of Westminster. He has worked in the field of Alzheimer's disease research since 2003 and is an author on over 60 peer-reviewed journal articles in the areas of Alzheimer's disease, mild cognitive impairment, and normal aging. Dr. Malek-Ahmadi's current work at the Banner Alzheimer's Institute involves the analysis of clinical, neuroimaging, neuropsychological, and neuropathological data used toward identifying and characterizing pre-clinical Alzheimer's disease.

PRESIDENT'S MESSAGE

By Steve Sumner

There are a couple of items of which I would like to share with the Club's membership this month.

The first is the Board has voted to officially change the name of our Club to "West Valley S.T.E.M. Club". S.T.E.M. stands for Science, Technology, Engineering and Mathematics. The Board feels this more accurately reflects the nature of our club and is consistent with terminology now being used in education. Some schools are even adding STEM to the title of their school. In fact, my daughter-in-law teaches at the Sierra Verde STEM Academy in north Glendale.

The second is the Board is starting to investigate venues for the luncheon meetings for the 2021-2022 season. This includes negotiating with Briarwood. Our preliminary investigation is showing that prices, unfortunately, have increased as a result of the Minimum wage increases and food price increases. I am sure you are seeing this when you go to the grocery store. We will do our best to find the venue that offers us the "Best Bang for the Buck".

I would just like to point out that when we recently talked to Briarwood, we were advised that they are deciding on a month to month basis as whether or not to allow outside groups such as ours to use the Country Club's facilities due to the COVID-19 Pandemic. They are currently closed through February to outside groups. Any banquet for members of the Country Club is also limited to no more than 50. Therefore, we would not have been allowed to hold our luncheons at Briarwood even if we had wanted to do so.

We will keep you advised in the future as to what we determine.

MARCH 5 PROGRAM

Science of Preventing Alzheimer's Disease

Dr. Malek-Ahmadi
Banner Alzheimer's Institute



Can scientists find a way to stop Alzheimer's disease before it ever affects your memory and thinking? Research efforts to prevent the disease are now focused on individuals who may be at risk for Alzheimer's but do not show any symptoms. This fascinating presentation will provide an overview of how Alzheimer's disease is

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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	David & Susan Whitehouse
Newsletter / Website	Dave Campbell
Event Audio	Hal Lind
Event Computer	Paul Scherer
Publicity	Lance Berglund
Field Trips	Open
Hospitality	Doris Palmer

Email the Board at: board@engineersaz.com

TREASURER'S REPORT JAN 2021

General Fund Balance:	\$ 7,277.87
Membership Total:	89

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

February 5, March 5, April 2,
May 7, June 4, October 1,
November 5, December 3

APRIL 2 PROGRAM



TGen: Scientific divisions, Primary Research and Virtual Tour

Kristen Kaus
Manager, Education and Outreach
Translational Genomics Research Institute
(TGen)

Kristen Kaus will be providing us an overview of the different scientific divisions as well as the primary research that is happening within TGen. As well, Kristen will be providing a virtual tour of the labs located in downtown Phoenix at their headquarters. TGen, the Translational Genomics Research Institute, is an affiliate of City

of Hope. TGen is an Arizona-based, nonprofit medical research institute dedicated to conducting groundbreaking research with life-changing results. TGen works to unravel the genetic components of common and complex diseases, including cancer, neurological disorders, infectious disease, and rare childhood disorders. By identifying treatment options in this manner, TGen believes medicine becomes more rational, more precise, and, well, more personal.

Kristen Kaus serves as TGen's Manager of Education and Outreach. In this role, she is the institute lead for education and community outreach initiatives, she oversees TGen's internship and training programs, most notably its flagship summer program Helios Scholars at TGen. Alongside her education efforts, she also stewards TGen's emerging partnerships within the education community to increase the working knowledge of genomics and educate, train and inspire the next generation of researchers and physicians. In this role, she seeks and establishes productive partnerships with local academic institutions and businesses.

MAY 7 PROGRAM

Bioelectronic Devices in the Medical Field

Mark Porter

Sr. Engineering Manager, Technical Fellow at Medtronic
Education: 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.

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)