

VALLEY ENGINEERING, SCIENCE & TECHNOLOGY CLUB

www.engineersaz.com

June 2017 NEWSLETTER

Editor: Noelle Jobson

The Engineers Club is a social organization which meets regularly for lunch with a speaker on a technical topic. Spouses are invited and many attend regularly. Short field trips are occasionally scheduled. Membership is open to anyone who has worked in or related to the engineering or scientific fields. 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

Visitors are always welcome -- just call Reservations at (623)546-9112 to let us know you are coming.

June 2 PROGRAM

The Challenge of AI Applications in Design and Validation of Self-Driving Vehicle Technology

Noelle Jobson, IGM Consultants

Noelle is recognized as a forward-focused, discovery-driven technology and innovation leader with more than 18 years' experience in commercial and defense sectors propelling corporate value through innovation, design and development of new product capabilities, primarily in the highly automated and autonomous vehicle control systems domain.

Noelle continues to leverage experience in predictive analytics, computer science, integrated modular systems, human centered technologies, autonomous systems, and systems engineering to define and transform technical solutions to business cases designed to improve ROI, decrease cost, risk, & time to market, while increasing reliability, availability, and safety.

Prior to her career in the aerospace, defense, and space sectors, Noelle was the co-founder of a start-up in 1999, designing Bayesian Neural Network based "big data" solutions for online bidding sites. Noelle also served with the State Department in Paris, France during the 1990s.

Noelle holds a M.Sc. in Engineering Management from the Tufts Gordon Institute, and a B.Sc. in Physics and Astronomy (with computer science and mathematics minors) from the University of Arizona.



Editor's Notes - Noelle Jobson

I would love to hear from my fellow VEST members on all topics. I encourage you all to send comments and ideas to me at nojobson@gmail.com for publication in the upcoming newsletters. Looking forward to hearing from you all!

School's Out Everyone! Enjoy your summer in the cooler climes. Be safe and hope to see you all back in Octo-

Don Block Bio (cont'd) and Abstract:

Mr. Block has been an invited speaker and chairperson at a number of conferences. He is also the holder of 2 patents in the area of data compression and storage.

Mr. Block is a highly skilled problem solver with the ability to understand both the requirements of the market and the capabilities of equipment providers. Mr. Block has been actively involved in several start-up companies in a variety of industries from the sign making industry to the medical field. He is presently Director of Business Operations for The Neural-Tech Startup Connection. Mr. Block has been a prolific writer with over 25 articles published in trade magazines.

The Neural Tech Start Up Connection

A paradigm shift ... "sickness care band-aids" to real "health care". Two main pathways currently exist for treating bodily dysfunctions; injections of chemicals into the blood stream and oral ingestion of chemicals. In both cases the treatment is ORGAN CENTRIC.

In recent years, increased interest in self control of health care and improved technology have opened Neural Technology, i.e. controlling nerve signals (reading and writing) with nano scale minimally invasively installed implants, an exciting SYSTEMS CENTRIC alternative to the above duopoly.

The ultimate wearable, it holds promise of dealing with those dysfunctions not corrected by or inadequately corrected by pharmaceuticals, e.g. spinal deformation pain, cancer, obesity, sexual problems, incontinence, and various inflammation auto immune diseases, e.g. Rheumatoid Arthritis, IBD, Lupus. The Neural Tech Startup Connection is a professional entrepreneurial association of system engineers based in Silicon Valley.

October 6 PROGRAM

A New Paradigm in Medicine: Health Care Rather Than Sickness Care

Don Block

Mr. Block is a graduate of MIT with both BSEE and MSEE degrees. He was a coop student at Bell Laboratories and worked on the first electronic central office and the first direct long distance dialing system. He was also involved in early transistor development as a member of the Transistor Device Development Dept.

Mr. Block is President of D.E. Block & Associates, a Management Consultant Company. He has an extensive background in new business development, marketing, planning, product management and engineering for the utility industry with over 30 years experience in the areas of AMR, SCADA, Energy Management, Distribution Automation, and



FUTURE MEETINGS

November 3, 2017

Title: Good News in Parkinson's Disease

Speaker: Banner Sun
Health Research Institute

2017 OFFICERS

President	Tod Hamilton	623-910-2042
Vice President	Leif Christensen	480-718-5589
Secretary	Doris Palmer	623-815-8143
Treasurer	Dave Campbell	623-518-4871
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Hospitality	Lanny Barness	623-546-3364
Past President	Doris Palmer	623-815-8143
Past President	Jackie Rice	623-572-8089

TREASURER'S REPORT June 2017

General Fund Balance: \$5757.42
Scholarship Fund: \$1772.42
Membership Total: 140

LUNCHEON MENUS

June 2: #1 Pork Cordon Bleu or #2 Grilled Salmon. Both entrées come with Salad, Au Gratin Potatoes, Green Beans Almondine, & Ice Cream w/rolled cookie.

October 6: #1 Chicken Marsala or #2 Battered Cod. Both entrées come with Salad, Basmati Rice, Green Beans Almondine, and Apple Turnover w/Ice cream.

(Grilled Vegetable Plate or Fruit Plate also available).

RESERVATION POLICY

The cost of the monthly luncheon is \$20 cash or check.
 The reservation deadline is 6PM Monday before the meeting.
Late reservations cannot be guaranteed the regular meal.
 Call Dave Whitehouse to cancel your reservation.
 Note that the full cost of the luncheon will be charged for "no-shows" and cancellations after 5PM on Wednesday before the meeting.
 Please have cash or make out your check in advance.
RESERVATIONS Dave Whitehouse (623) 544-0942

Abstract (Continued from Page 1)

In June 2016, I presented the three most compelling systems engineering challenges and market growth constraints to safe, robust, reliable and cost-effective deployment of autonomous systems vehicles; lack of operator trust, the "big data" problem, and lack of regulatory standards and guidelines defining "safe" and certifiable large-scale deployment of stochastic, non-deterministic decision making systems in a seemingly unbound operational environment.

During today's talk, I will be focusing on the most challenging aspect of truly self-driving technologies – artificial intelligence. We all imagine a sci-fi type world where vehicles are zipping along airways, seamlessly passing, yielding, merging, etc., while the passengers enjoy carefree conversations as their robotic drivers take away all the worries of driving. Remote piloted and self-driving vehicle technology has been very advanced for decades, however, employing this technology on a large scale, particularly in a mixed equipage environment, is rife with safety and operational issues. Add on the advances in distributed cloud computing, wireless technologies, and smart sensors, and the average person can't help but wonder why we have yet to achieve even marginal safety of self-driving vehicles on our surface streets and highways.

Today, I will focus on potential techniques that can be employed to determine which data are required for operational, tactical, functional, and hazard prevention operations. We will then discuss how that reduced, refined data set can be used not only to operate a system of intelligent vehicles, but also used to build mission and safety critical regulations, guidelines, and standards for self-driving vehicles incorporating artificial intelligence applications.

NtSc Abstract (Continued from Page 1)

The new companies spawned by NtSC will implement control of the body's nerve system by reading signals from and writing signals to it. To that end, on behalf of its engineers, it is aggressively aggregating the necessary resources; tutorials to inform, licenses to implement important research findings, privileged positions with manufacturers in the development of prototype devices, funding, and more.

Neural Technology must evolve separately from the chemical approach ... it is not simply an extension of pharmaceuticals. *This issue is central to NtSC's mission.*



Good News In Alzheimer's Disease (May 2017)

Dr. Edward Zamrini (center)

For more information on our speakers, please visit our website at

www.e2ngineersaz.com