

VALLEY ENGINEERING, SCIENCE & TECHNOLOGY CLUB

www.engineersaz.com

APRIL 2016 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.

April 1 PROGRAM

Internet of Things: Innovations & Megatrends



Mark Goldstein, President
International Research Center

Mr. Goldstein will explore the next Internet wave, the Internet of Things (IoT), expected to connect tens of billions of new sensors and devices in the coming years. Waves of change will roll through home, business, government, industrial, medical, transportation, and other complex ecosystems. Join us as we examine how IoT will be implemented and monetized creating new business models from pervasive sensor deployments and data gathering, accompanied by new privacy and security risks. Come and explore IoT's roadblocks and operational challenges, emerging standards and protocols, gateway and wireless integration, and big data strategies and opportunities.

See Mark's bio in the March newsletter

NOTES FROM ...

President Jackie Rice

Why Many U.S. Biology Teachers are "Wishy-Washy"



When two political scientists asked a group of U.S. college students preparing to become biology teachers about their views on evolution, they were shocked by their answers.

Michael Berkman and Eric Plutzer from Penn State knew from a previous study that more than half of the country's high school biology teachers did a poor job in their classrooms with evolution.

Their new study suggests teachers avoid the controversial topic, and it offers a reason why: teachers lack the necessary knowledge, conviction, and role models to teach evolution properly.

Evolutionary biologist Leslie Risser recently surveyed 3000 Alabama students on what they think and know about evolution and found their religious faith trumps any book learning.

In their earlier 2007 study, Berkman and Plutzer surveyed a national sample of 926 high school biology teachers to better understand the teacher's role in the country's long-running battle over evolution. They found that 13% were openly sympathetic to creationism, 28% provided students with a thorough understanding of evolution. The rest spent as little time as possible teaching this most fundamental concept in modern biology.

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May 6 PROGRAM

Collaborative consumption. How Technology is Enabling the New Marketplace Economy

Joe Dunnigan, CEO Swappow



The oldest known civilized form of commerce appears to have been barter. Barter predates all other forms of commerce and currency. Barter was necessary for survival and basic human needs and it was based on basic economic principles of supply and demand.

Today, in an ever expanding and highly consumer driven society, we are facing the largest inventory of supply and, at the same time, the greatest demand in history. Billions more people means billions more products which leads to billions more consumers. This, of course, creates both a problem and an opportunity. The problem is that our resources are not infinite. The opportunity is to do more with what we already have.

The good news is that now, in ways that have never before been possible, technology is enabling a powerful solution. One which brings people together to do what we call "WE commerce".

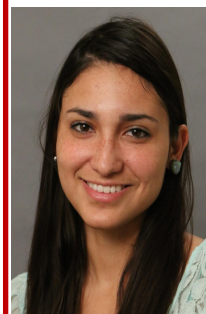
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FUTURE MEETINGS

June 3, 2016

Title: Enabling Autonomy: A New Approach to Mission & Safety-Critical Control Systems Engineering

Speaker: Noelle Jobson, CEO & Founder, IGM Consultants, LLC - *Engineering The Future*



Marissa Jiminez, one of 3 VEST 2016 Scholarship winners. Currently, Marissa holds an Associates in Science degree from Glendale Community College. VEST Scholarship helps enable Marissa to pursue her B.Sci. in Mechanical Engineering at the Fulton School of Matter Transport & Engineering. Congratulations, Marissa! We wish you all the best!

2016 OFFICERS

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TREASURER'S REPORT APRIL 2016

General Fund Balance: \$5313.96
Scholarship Fund Balance: \$3433.42

No Lottery March 2016

LUNCHEON MENUS

April 1: #1 Yankee Pot Roast w/Gravy or #2 Pan Fried Trout Almondine. Both Entrées come with Salad, Creamy mashed potatoes, Chef's Vegetable, & Ice cream & cookie.

May 6: #1 Chicken Pot Pie, or #2 Baked Cod. Both are served with Salad, Saffron Rice, Peas & Carrots, & Peppermint Ice Cream with Cookie.
(Grilled Vegetable Plate or Fruit Plate also available).

RESERVATION POLICY

The cost of the monthly luncheon is \$18.00 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



Nathan Freeman, another of VEST's 3 2016 Scholarship winners, and his lovely family. With the help of VEST, he is pursuing a B.Sci. in Civil Engineering at the Fulton School of Sustainable Engineering & Built Environment. We wish all the best to Nathan and his family!

President's Note Continued

In 2013 the researchers conducted focus groups with 35 teacher trainees at four Pennsylvania colleges— a large research university, a master's granting institution, a Catholic college, and a historically black university. What they learned deeply troubled them. These students are not the ones who were taking apart washing machines or launching rockets. They are not driven to become scientists.

Students at the Catholic college were more comfortable discussing the potential conflict between evolution and religion than were their peers at secular institutions. (The Catholic Church long ago stopped teaching creationism.) However, students at secular institutions are unlikely to have the opportunity to explore their religious views in a science or education class.

Although the sample size was small, they think the responses send up a red flag and these preservice teachers are already on a path that is likely to lead to evolution instruction that falls short of the expectations of leading scientific organizations.

Reversing direction will require breaking out of "a cycle of ignorance", the researchers believe. More trainees also need better hands-on grounding in what researchers call "the nature of scientific inquiry" such as working in a research lab.

Joe Dunnigan Cont'd

Today, everyone has the potential to be their own business and technology is allowing commerce to happen in a Peer-To-Peer manner versus what has historically required a variety of middlemen.

Our new marketplace economy is driven by trust, communication, mobility and emotion in a way that is strikingly similar to the olden days of barter.

In our presentation, we will explore current and emerging trends in what is the marketplace economy. We will discuss what is driving it, what is enabling it and discuss what implications it may have on our future – both socially, environmentally and economically.



March speaker Pankaj Sinha, Ph.D., CEO of MiClimate (center) with VEST President Jackie Rice and VEST Program Coordinator Rick Cecil.

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

www.engineersaz.com