

ENGINEERS CLUB OF THE WEST VALLEY

NOVEMBER 2011 NEWSLETTER

www.engineersaz.com

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 had close ties to the engineering or scientific fields. Meetings are held at 11:30am on the first Friday of each month, October through June, at Briarwood Country Club, 135th and Meeker in Sun City West, Arizona.

Visitors are always welcome -- Reservations are required -- Just call (623)544-0942 to let us know you are coming.

NOVEMBER 4 PROGRAM

Aid in Africa that is Sustainable Rather than Short Term

Dr. Jan D. Snyder, ASU



Sixty years of western aid to Africa has (to a great extent) created a socially pathological sense of entitlement amongst the general African population. Exceptions exist but they are not plentiful and most well-intentioned efforts start out with a recipe for failure even before personnel arrive. These plans for support are based on an inflexible, overly-defined plan for what will be done to alleviate a problem as they see it.

Jan and his wife, Clarice, have traveled in Africa since the 1960's and have spent much time there in an effort to learn from those who are most affected by extreme poverty. For the past six years, they have been involved under the auspices of their nonprofit corporation, Sustainable Resources, Ltd., and have worked to provide a form of aid to the people of Malawi, and now Kenya, that has resulted in long-lasting and sustainable effects.

With the collaboration of students and staff in the ASU Fulton Schools of Engineering, they have gradually provided forms of assistance that have resulted in long-term, positive outcomes. Dr. Snyder will review and discuss some of these issues in his presentation.

DECEMBER 2 PROGRAM

Shifting to improved self diagnostic testing at home

Dr. Jeffrey T. LaBelle, ASU.



Dr. LaBelle is a biomedical engineer whose research interests include the development of medical devices such as biosensors for personalized medicine and clinical disease diagnosis. Health care technologies have improved dramatically in recent years, but, as we have seen, many technologies are not deliverable to patients at home, or in rural developing countries or do not take into account the patient requirements.

As more and more tests become higher tech, the cost of health care skyrockets drastically. However, a transformative shift can be made in delivering more technologies to the patient in the comfort of their own home. One example of this shift is the self monitoring of blood glucose. Dr. LaBelle will describe many of the technologies now being developed at his lab to answer this personalized need.

The objective is to provide faster, more comfortable, simple to use and easy to understand diagnostic tests. All of these projects are being used to teach undergraduate and graduate students the importance of innovation, as well as impact and serve as a reminder on how to keep the patient in mind while designing medical devices.

NOTES FROM...

President Don Block



I was looking at the Technology Review last week and there was an article about Norbert Wiener. It brought back memories. I remember Dr. Wiener walking the halls of MIT – short and stocky, his glasses on the end of his nose, looking somewhat ruffled and his belly sticking out. He was known as the absent minded professor and there are many stories about his absentmindedness, like the time he reported the theft of his car only to discover he had driven it to Providence for a meeting and had taken the train back. Or the time he concluded a conversation in the hallway by asking which way he was headed when he stopped to chat, greeting the answer with “Good! That means I already had lunch.”

Born in Missouri in 1894, he was home schooled by his father who was a professor at Harvard. When Wiener went to school at the age of nine, it was as a high-school sophomore. He claims to have specialized in math because he was lazy and it would take less work than any other subject. He earned his BA from Tufts at the age of 14 and his PhD from Harvard at 18. He arrived at MIT in 1919, where he would stay for the next 45 years. In the early 1920s Wiener devised the first mathematical description that allowed Brownian motion to be quantified probabilistically. Known as the wiener measure it has been used to characterize electromagnetic noise that corrupts radio signals, the behavior of quantum particles, and even fluctuations in the stock market. Wiener's 1948 book “Cybernetics” was a public sensation.

Wiener died in 1964, two months after he and MIT's Vannevar Bush, went to the White House to receive two of the first National Medals of Science ever awarded.

MEMBERSHIP DUES

Dues of \$20 for 2012 are now being accepted at the membership table before meetings or by mail to the Membership Chairman

**Bob Kessler
18005 N 129th Drive
Sun City West AZ 85375**

JANUARY 6

**To be announced
later**

FEBRUARY 3

**Nanotechnology
David K. Ferry, PhD**

2011 OFFICERS

President	Don Block	546-0557
Vice President		
Secretary	Jodie Lawrosky	238-5256
Treasurer	Bob Latvalla	546-7801

COMMITTEE CHAIRPERSONS

Programs	Daryl Lund	271-7337
Membership	Bob Kessler	910-7054
Reservations	Dave Whitehouse	544-0942
Luncheons	Tom Watkins	584-5811
Scholarship	Don Porter	556-1754
Scholarship	Don Johnson	975-1657
Scholarship	Gerry Montag	546-7963
Member at Large	Les Sherry	975-9081
Newsletter	Bill Harrison	546-4943
Event Support	Ralph Palmer	815-8143
Web Site	David Campbell	518-4871
Publicity	Maurice Hoyt	533-4213
Field Trips	Fred Scheske	556-2892
Past President	Hal Clemett	546-4941

BOARD EMAIL ADDRESS: board@engineersaz.com

TREASURER'S REPORT 9-30-2011

General Fund Balance:	\$6,520.63
Scholarship Fund Balance:	\$2,469.61

LUNCHEON MENUS

November 4: Turkey Medallions with Cranberry Sauce, Served with Apple Walnut Stuffing, Green Beans Almondine and Apple Turnover with Vanilla Ice Cream (Entrée Option: Fruit Plate)

December 2: Yankee Pot Roast with Natural Gravy, Broiled Red Potatoes, Chef's Vegetable and Peppermint Ice Cream. (Entrée Option: Fruit Plate)

RESERVATION POLICY

The cost of the monthly luncheon is \$17.00 per person.
The reservation deadline is 6PM Monday before the meeting.
Late reservations cannot be guaranteed the regular meal.
Call Dave Whitehouse if you cannot keep your reservation.
The full luncheon cost is due for "no-shows" and cancellations after 6PM on the Wednesday before the meeting.

RESERVATIONS Dave Whitehouse (623)544-0942

RAFFLE RESULTS AND DONATIONS

The winner of the raffle at the October luncheon was Carole Barner who received \$85.00 and an additional \$85.00 was added to the Scholarship Fund.

WELCOME NEW MEMBER

Norman A. Murphey

Club Membership is 147

GO GREEN!

by Dr. Geraldine Montag

In May, 2001, I decided to go solar and take advantage of Arizona's annual 300-plus days of lovely sunshine. I estimate that my payback is 12 years for a solar powered system that consists of 22 Sharp 224 watt photovoltaic (PV) modules located on the southern exposure of my roof and a SMA grid-tied utility interactive inverter. The PV panels contain sunlight-absorbing conductors that convert sunlight into electrons; the electrons flow as direct current (DC) to the inverter which converts it to alternating current (AC) power. The power is delivered first to local loads (appliances, lights, etc.) with excess power fed to the utility company grid crediting my account. Because my home remains connected to the utility company, I have electricity at night and on cloudy days (and rainy days if ever).

Two outside meters were installed. One reports production which totaled 9,300 kWh last year. Production is slightly higher in the Spring than in the Fall due to the tilt of the earth (so they tell me). The other meter is the property of APS and consists of 13 fields – three of which I track daily. I find that these data tally perfectly with the monthly billing. Necessary to track? No – I just like to do it.

The cost of my kWh usage is zero; taxes are approximately \$9 per month. In January of each year, APS gives a credit in dollars for surplus kWh which takes care of taxes for five or six months. Even after this hot summer, my September billing shows that I enter Fall with a surplus of 550 kWh. In fact, when the outside temperature is between 70 and 100 degrees, I consistently run a surplus.

Buyer beware! Unreliable foreign-made panels are flooding the solar market. If you are planning on going solar, I would suggest that you look for "Made in the USA."

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Gerry has been a member of the Engineers Club since 1997. She has served on the Board for the past 12 years; initially as secretary for 4 years and then as a member of the Scholarship Committee for the past 8 years.



Dr. Gary Dirks, Professor at ASU, receives a certificate of appreciation from Don Block for his presentation on various alternatives to crude oil for production of hydrocarbon fuels.