

# ENGINEERS CLUB OF THE WEST VALLEY

FEBRUARY 2013 NEWSLETTER

[www.engineersaz.com](http://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.

## FEBRUARY 1 PROGRAM

### Engineers, Microorganisms, and Global Climate Change

Bruce E. Rittmann, PhD  
Arizona State University



Dr. Bruce Rittmann, is the director of the Swette Center for Environmental Biotechnology at the Biodesign Institute at Arizona State University and Regents' Professor in the school of Sustainable Engineering and Built Environment. He joined ASU in January 2005. Prior to his time at ASU, he was a John Evans Professor of Environmental Engineering at Northwestern University and a professor in the Department of Civil Engineering at the University of Illinois at Urbana-Champaign. Bruce began his career as an environmental engineer at Sverdrup and Parcell and Associates.

As an international leader in managing microbial communities, his work is leading to new ways to clean pollution, treat water and wastewater, capture renewable energy, as well as improve human health. For example, the membrane biofilm reactor (MBfR), a technology that he invented, uses naturally occurring microorganisms to remove contaminants such as nitrate, perchlorate and trichlorethene (TCE) from water. He holds five patents on the technology, which is being commercialized by APTwater, Inc.

In his presentation, Bruce will review the driving force behind climate change and how engineers and microorganisms can create an effective partnership that will help minimize and ultimately reverse the forces of climate change.

## MARCH 1 PROGRAM

### PaleoBio Origins of Multicellular Life

Mark Zamoyski  
Arizona State University



Mark Zamoyski received both his BS and MBA from Cornell University. By profession, Mark explores new technologies and methods of treating diseases. He has been awarded 15 US patents that include new and different approaches to the treatment of cancer and certain migraines and seizures.

Mark has also had a scientific curiosity in the history of life on earth that started several decades ago from fossils prevalent on some of the family properties in Arizona. His presentation will cover the origins of multicellular life that are brought to life by 33 never before seen fossils from 250 million years ago. From that beginning, the reassortment of cells went on to become and include the forerunners of worms, fish, reptiles, dinosaurs and mammals.

## NOTES FROM...

### President Don Block



In 1933, a beautiful young Austrian woman (Hedwig Kiesler) took off her clothes for a movie director. She ran through the woods and swam in a lake ---naked. Her beauty made her rich (the movie was Ecstasy) but her greatest achievement resulted from her intellect. Her invention continues to shape the world we live in today.

This young Austrian starlet would take one of the most valuable technologies ever developed right from under Hitler's nose. After fleeing to America she not only became a major Hollywood star, her name is on one of the most important patents ever granted by the U.S. Patent Office.

Kiesler's husband, Friedrich Mandl was Austria's leading arms maker. One of Mandl's favorite topics at important business meetings, which included dinners with Hitler and Mussolini was the technology surrounding radio-controlled missiles and torpedoes.

As a Jew, Kiesler hated the Nazis and abhorred her husband's business ambitions. In 1937 she escaped to London and then to the U.S. In 1942 she developed a new kind of communications system, optimized for sending coded messages that couldn't be "jammed". Kiesler's key innovation was to "change the channel". It encoded a message across a broad area of the wireless spectrum. If one part of the spectrum was jammed the message would still get through -- spread spectrum.

The problem of how to synchronize the frequency changes on both the receiver and transmitter was solved by an acquaintance, George Antheil who had synchronized twelve player pianos. On August 11, 1942 U.S. Patent No. 2,292,387 was granted to Antheil, and Hedy Kiesler. You may not have heard of Hedwig Kiesler but it's a fair bet that most of you will remember the name Hedy Lamarr, one of the great pioneers of wireless communications.

## RAFFLE RESULTS AND DONATIONS

The winner of the January raffle was Mary Fietz who received \$108 with an equal amount added to the Scholarship Fund.

## APRIL 5 PROGRAM

### Neural Control of the Human Hand

Marco Santello, PhD  
Arizona State University

*If flying is so safe, why do they call the airport the terminal?*

**2013 OFFICERS**

President	Don Block	623-546-0557
Vice President	Dave Campbell	623-518-4871
Secretary	Lee Roach	623-810-7413
Treasurer	Bob Latvalla	623-546-7801

**COMMITTEE CHAIRPERSONS**

Programs	Daryl Lund	608-250-0659
Programs	Bob Farrell	623-810-5095
Membership	Bob Kessler	623-910-7054
Reservations	Dave Whitehouse	623-544-0942
Luncheons	Doug Keeler	541-480-8476
Luncheons	Tom Watkins	623-584-5811
Scholarship	Len Cohen	623-546-3741
Scholarship	Don Johnson	623-975-1657
Scholarship	Gerry Montag	623-546-7963
Member at Large	Fred Scheske	623-556-2892
Newsletter	Bill Harrison	623-546-4943
Event Support	Dick Stout	623-815-0985
Web Site	Dave Campbell	623-518-4871
Publicity	Maurice Hoyt	623-533-4213
Field Trips	Keith Morrow	623-546-3080
Past President	Les Sherry	623-975-9081

**BOARD EMAIL ADDRESS: [board@engineersaz.com](mailto:board@engineersaz.com)**



**Engineers Club members and guests in front of Dillon Precision Products, Inc.**

On January 25<sup>th</sup>, members and guests of the Engineers Club toured Dillon Precision Products Inc in Scottsdale. Dillon's manufactures bullet reloaders and their market is primarily that of private gun owners. Product demonstrations of the various reloaders were given and a short walking tour of their facility was also included. Ample opportunity was provided to ask questions which often resulted in comprehensive but interesting answers and explanations.

**TREASURER'S REPORT 1/21/2013**

General Fund Balance:	\$4,822.20
Scholarship Fund Balance:	\$2,367.10

**MEMBERSHIP DUES**

**Dues of \$20 for 2013 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**

**February 1 is the deadline to be included in the new Membership Directory.**

**LUNCHEON MENUS**

**February 1 Entrée #1: Grilled Chicken Cordon Bleu. Entrée #2: Baked Cod.** Both include Salad, Balsamic Rice, Corn O'Brien, and a Fudge Nut Brownie with Whipped cream  
(Entrée Option: Fruit Plate or Grilled Vegetable Plate)

**March 1 Entrée #1: Salisbury Steak. Entrée #2: Orange Roughy.** Both include Salad, Lyonnaise Potatoes, Green Beans Almandine and an Apple Turnover with Ice Cream.  
(Entrée Option: Fruit Plate or Grilled Vegetable Plate)

**RESERVATION POLICY**

**The cost of the monthly luncheon is \$18.00 per person.** The reservation deadline is 5 PM 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 5PM on the Wednesday before the meeting.**

**RESERVATIONS Dave Whitehouse (623)544-0942**

**WELCOME NEW MEMBERS**

John Austgen, Rick Scott  
and James Sherman

**Club Membership is 162**



Dr.Charles Arntzen receives a show of appreciation from Don Block and Daryl Lund for his presentation on Genetically Modified Food during the January luncheon meeting.