

VALLEY ENGINEERING, SCIENCE & TECHNOLOGY CLUB

JANUARY 2018 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 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.

JANUARY 5 PROGRAM

Chasing Gravitational Waves

Nat Butler PhD, ASU

Nat Butler, assistant professor of School of Earth and Space Exploration at Arizona State University studies astrophysical transients. He observes the optical, IR, X-ray, and Gamma-ray emission from Gamma-ray Bursts (GRBs) and their afterglows in order to study the physics of jetting, the afterglow emission mechanisms, the nature of the progenitors, and potentially to use GRBs as cosmology probes. He is also an experimentalist focusing on robotic telescopes, data mining, and novel technologies for transient detection and follow-up.

The recent discovery of gravitational waves by Advanced LIGO and Virgo has vindicated a centuries-old prediction of general relativity, resulting in this year's Nobel prize for physics. Most importantly, the detection of simultaneous electromagnetic radiation, first in gamma-rays and then as a fading x-ray/optical/infrared/radio afterglow, establishes that these events are real and associated with astrophysical phenomenon already somewhat well-studied. The combined detection and follow-up effort establishes a new window into the Universe and a new way of studying astrophysical objects. I will discuss our efforts to chase gravitational wave triggers using ground-based, mostly robotic telescopes. I will also discuss the event from August 2017, which reached us from a nearby galaxy 140 million light years away. Studies of the August 2017 event constrain fundamental physics and teach us about the Universe's brightest explosions (gamma-ray bursts), about the merging and exploding of neutron stars, and about the origin of precious metals in the Universe. Our community is well-equipped to chase and study future gravitational wave events, presuming more occur on a regular basis.

MEAL COST INCREASING

Due to increased food costs to the Club the Board has decided to raise the luncheon meal for 2018 to \$22.00 starting with the January 5, 2018 meal.

Congratulations to Aiden Bramer

Congratulations to Aiden Bramer as he has recently graduated with honors from Embry-Riddle University with a degree in Aerospace Engineering. Our Club helped support Aiden financially. Well done Aiden and thank you VEST members!

Listed below are the 2018 dates of the VEST luncheon meetings:

January 5, February 2, March 2, April 6, May 4, June 1, October 5, November 2, and December 7

FEBRUARY 2 PROGRAM

Building the Future of Airpower: Whatever the load, the F-35 can carry it.

Maj David Clementi, Luke Air Force



Maj David Clementi is the executive officer to the commander of the 56th Fighter Wing and an instructor pilot in the 62nd Fighter Squadron at Luke AFB, AZ. As an instructor pilot he teaches basic and advanced air-to-air and air-to-ground tactics in the F-35A to initial qualification, transition, and instructor-upgrade student pilots. He is a senior pilot with more almost 2000 hours

flying fighter aircraft including over 800 hours flying the A-10C. He flew the A-10C on 81 combat missions in support of OPERATION ENDURING FREEDOM. Maj Clementi is a graduate of Florida State University and received his commission from Reserve Officer Training Corps.

Abstract: Luke AFB, AZ is building the future of airpower, and is the foundation for training F-35 fighter

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2018 OFFICERS

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Vice President	Open	
Secretary	Doris Palmer	623-815-8143
Treasurer	Carol Mungas	763-639-3922
Asst. Treas.	Don Block	623-546-0557

COMMITTEE CHAIRPERSONS

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Membership	Philip Main	623-748-8222
Reservations	Dave Whitehouse	623-544-0942
Luncheons	Susan Whitehouse	623-544-0942
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Past President	Jackie Rice	623-572-8089

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pilots from the U.S. Air Force and our allies. The supersonic, multi-role F-35 represents a quantum leap in air dominance capability with enhanced lethality, survivability, and sustainability in hostile, anti-access airspace environments.

The F-35 combines 5th Generation fighter aircraft characteristics — advanced stealth, integrated avionics, sensor fusion and superior logistics support — with the most powerful and comprehensive integrated sensor package of any fighter aircraft in history. The F-35's advanced stealth allows pilots to penetrate areas without being detected by radars that legacy fighters cannot evade.

The F-35 is designed with the entire battle space in mind, bringing new flexibility and capability to the United States and its allies. Reliance on any single capability — electronic attack, stealth, etc. — is not sufficient for success and survivability in the future. Missions traditionally performed by specialized aircraft — air-to-air combat, air-to-ground strikes, electronic attack, intelligence, surveillance and reconnaissance — can now be executed by a squadron of F-35s.

TREASURER'S REPORT December 2017

General Fund Balance:	\$7620.25
Scholarship Fund:	\$2505.42
Membership Total:	136
2018 Membership dues are now due—\$20.00	

LUNCHEON MENUS

January 5: #1 Roasted Pork Loin, or #2 Red Snapper. Both entrées come with Salad, Creamy mashed potatoes, Corn O'Brien, & Ice cream brownie sundae. *(Grilled Vegetable Plate or Fruit Plate also available)*

February 2: #1 London Broil or #2 Almond Crusted Chicken. Both entrées come with salad, Green Beans Almandine, Herb Roasted Potatoes and Carrot Cake. *(Grilled Vegetable Plate or Fruit Plate also available)*

RESERVATION POLICY

The cost of the monthly luncheon beginning in Jan 2018 will increase to **\$22.00 cash or check**. The reservation deadline is 6 PM 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 5 PM on Wednesday before the meeting.

Please have cash or make out your check in advance.

FUTURE MEETINGS

March: 2

Title: The Terawatt Challenge for Photovoltaics

Speaker: Stephen M Goodnick, Professor and Senior Sustainability Scientist, Julie Ann Wrigley Global Institute of Sustainability, Arizona State University



Shooting the Moving Target in Cancer Combat
Speaker Dr Li Liu, ASU

For more information on our speakers, please visit our website at www.engineersaz.com