



Newsletter

**Volume 15
Number 5
April 2001**

Calendar of Events 2000-01

- o 12 APRIL 2001 -- Joint meeting with Student Branch. See video of UA entry to Design/Build/Fly Contest and guest lecture from UA professor. AME S212 @ 6:30pm.
- o 27 APRIL 2001 -- Field trip to the Barry Goldwater Gunnery Range to watch A-10 and F-16 target practice. Details below.
- o 3 & 4 MAY 2001 -- University-Industry Forum (UA campus). There are still some slots open for the forum for you to show your research capabilities and form new collaborations. See below for details.
- o 3 MAY 2001 -- Tucson Section Dinner meeting in coordination with the University/Industry Forum. See below for details.
- o 4 May 2001 -- BMDO Director and University Tours
- o 15 May 2001 -- SRE/ASQ/AIAA joint dinner meeting

Hello, Tucson AIAA!

by Kevin Kremeyer

We have some very exciting things slated for business development and university interaction, as well as plain old fun! (Read on and see.)

The A-10 presentation we held at a Student Branch meeting a few weeks ago has resulted in an upcoming "field trip" on April 27 to go see some actual target practice in the field. We've selected the date to coincide with Raytheon's Friday off, to make it easy for our missile-making members to come see their products in action.

The next joint meeting with our Student Branch will be Thursday evening, April 12th. This night corresponds with the international celebration of "Yuri's night," which commemorates the anniversary of the first man in space, as well as that of the first space shuttle flight.

At the meeting we'll give the students a nice send-off to the AIAA Design/Build/Fly Competition that is being held

the following week. We'll also see footage of their exquisite entry -- the Aircat2001. And we'll hear from Professor Dimitri Kececioglu on careers and opportunities in quality and reliability engineering, and (as always) relive those college pizza-party days.

Next Meeting

Joint Meeting with UA AIAA Student Branch

Date: 12 April 2001 (Thursday)

Time: 6:30 PM

Place: University of Arizona
Aero Building
Room S212

See video of UA entry to AIAA Design/Build/Fly Competition

Hear presentation by UA Prof. Dimitri Kececioglu on careers in quality and reliability engineering

Our current business thrust will be focused on May 3rd and 4th. This R&D Forum (described below) is open for anyone to visit, free of charge. Refreshments will be provided, and it is an excellent opportunity to meet R&D groups, researchers, and executives from Arizona businesses and the University of Arizona.

It is also a great chance to find employment or contracts, as most of the companies will be looking for researchers and engineers that day. The actual Forum will be open from 10AM to 5PM on Thursday, May 3, in the Arizona Ballroom of the Student Union. At the top of each hour, we will be addressed by executives on their groups' major thrusts over the next few years.

In this spirit, Mayor Bob Walkup has invited the General Manager of Motorola's Communication Systems Group to give the lunchtime presentation. He will feel at home with several Motorola R&D representatives attending booths at the Forum. A large number of Raytheon groups will form a very strong presence, and even our

Tucson-newcomer, Texas Instruments, will be in attendance. Several student groups will also show their projects, as requested by local industry (in search of University talent).

Our keynote speaker for the following day will be the Director of Tests and Evaluation for the Ballistic Missile Defense Organization. She will speak at 8:30AM on Friday, May 4 in the auditorium of the Kuiper Space Sciences Building (the Lunar and Planetary Laboratory on the University Campus, just West of the traffic light at Campbell and Third Street).

She will be able to tell us about the new Administration's proposed Defense and National Missile Defense programs/budget. This talk is open to everyone, and will kick off a day of tours for the industry participants of the R&D Forum. They will tour University user-facilities, laboratories, and facilities of general interest. AIAA members who did not have booths at the Forum, are also very welcome to join the tours on a space-available basis.

The AIAA year-end awards dinner meeting will coincide with this R&D Forum. It will take place Thursday, May 3rd at 6:30PM (social hour starting at 5:30PM), in the Rincon Room of the University of Arizona Student Union.

Our speaker is the Director of Strategic Planning for the former Hughes Space and Communications (currently owned by Boeing). His presentation will be on the future of commercial communications satellites, which currently represent the international satellite industry's fastest growing market.

Dinner for two is included in the price of a booth at the R&D Forum, and for non-participants, the prices are:

Non-members: \$30
AIAA members: \$20
Guests of AIAA members: \$20
AIAA student members: \$10

To register for dinner, please send a check with your contact information to our Treasurer at:

Kelly Sinnock
7663 S. Meadow Spring Way
Tucson, AZ 85747

Please ensure that we have you on our list by Friday, April 27th, and please be sure to specify your selection of Grilled Salmon or New York Steak (a non-meat preference can also be accommodated). Both are full meals, including dessert and coffee.

In addition to our above May 3 dinner meeting, we are all invited to a dinner meeting on Tuesday, May 15, which is jointly sponsored by the Society of Reliability

Engineers, the American Society of Quality, and the AIAA.

The speaker will discuss "An Efficient Way of Improving a Product's Reliability by Accelerated Reliability Growth Testing". To sign up for this meeting, please contact Professor Dimitri Kececioglu at (520)621-6120 or 621-2495.

As an ending comment, I wanted to briefly mention the University's newly-instituted "Engineering Design Program". This program offers another very practical avenue for businesses to interact with the University. A company simply has to present a problem it would like to see solved, and the Program will assemble an interdisciplinary team of the best engineering students to work on the project during the academic year.

The business and educational advantages are many, and I am certain that we will be bringing you more on the Program in our upcoming issues. For more direct information, please contact Dr. Meredith Aronson at (520)626-3774 or 626-3557.

Tucson Section Officer Roster 2000-2001

Chair: Kevin Kremeyer
Secretary/Treasurer: Kelly Sinnock
Membership: Rina Fulcher
Webmaster: Robert Wagoner
UA Faculty Advisor: Larry Scott
Education Chair: Rajka Corder
Military Liaison: Ed Palanek
Newsletter Editor: Frank Manning

Web site: <http://www.aiaa.org/sections/ts/>

Microcontroller Donation

by Frank Manning

NetMedia, Inc. and I have jointly donated a set of 10 BasicX Development Stations to the AIAA Tucson Section for educational outreach. Each development station includes an easy-to-program BX-24 microcontroller, which is ideal for high school and college-level robotics projects. For more information, check out www.basicx.com.

The development station has various input/output devices built in, which can be sensed or controlled by the microcontroller. Devices include potentiometer, thermistor, LEDs and piezoelectric speaker. Interfaces are also included for servos and X-10 devices, which are used in home automation systems.

AIAA UNIVERSITY-INDUSTRY R & D FORUM

HIGHLIGHTS

- o May 3, 4: University-Industry R & D Forum, on UA campus
- o Industry and University R&D groups from ALL TECHNICAL DISCIPLINES
- o Booths arranged to optimize collaboration and networking
- o Public address by large-company VP's and government funding agencies
- o Tours of University Departments and User Facilities
- o University groups: FREE; Industry groups: cost subsidized by UA/AIAA;
- o Meals, parking, tables, display boards, maps, and itineraries provided
- o Great recruitment opportunity!

AIAA University-Industry R & D Forum

by Kevin Kremeyer

On May 3 and 4 the American Institute of Aeronautics and Astronautics (AIAA) is holding a University-Industry Research and Development Forum on the University of Arizona Campus. The purpose of this event is to foster collaboration among R&D groups, which come from within Arizona Industry and the University of Arizona.

Optics, Bio-tech, Modelling and Simulation, Materials, Communication, Aerospace, Quality/Reliability, ME, ECE, and most all technical disciplines will be represented at this forum. Our key-note speakers are Directors from the Ballistic Missile Defense Organization, Motorola Communications, and from Boeing/Hughes Space and Communications.

R&D groups from both Industry and the University of Arizona will have booths, presenting their strengths and needs, in search of new collaborations, partners, and products. There will also be brief addresses on current imperatives, visions, and needs by Executives from Motorola, Raytheon, and other large entities at the top of each hour.

Participation by University groups has been paid for in advance by President Likins and the Vice President for Research, and the cost for industry participation is \$100 per booth (subsidized by the Dean of Engineering).

The booth price includes: lunch and dinner for 2 people on Thursday, May 3; parking for one vehicle for both days; display tables and backboards; facility tours on Friday, May 4; and refreshments. (If your company would like to send 4 people, the cost will be \$200, and will entitle you to two booths.) Please let us know of any extra needs, and specify your preference of steak or salmon dinners by Friday, April 27th.

To register and secure a booth, please send a check made out to AIAA along with your return address (please, also include a description of your R&D interests and expertise to help us advantageously place your booth) to:

Kelly Sinnock
7663 S. Meadow Spring Way
Tucson, AZ 85747

If you would like to see any specific Industry or University R&D groups attend, please contact them directly or contact Dr. Kevin Kremeyer at 520-882-7349 (kremeyer@physics-math.com) with details. Please also indicate any University facilities you would like to tour.

Many companies are capitalizing on this event as a recruitment opportunity, because of the large number of students and highly-trained researchers/engineers that will attend. If you would like us to notify any specific student groups or majors, please provide us with this information as well.

Gunnery Range Visit

See A-10s and F-16s in Action!!!

by Ed Palanek

RESCHEDULED TO FRIDAY, APRIL 27:

Join us for an exciting visit to the Barry Goldwater Gunnery Range for a tour and bombing/gunnery observation, where we'll get to see Air Force A-10s and F-16s in action.

The tour has been rescheduled from Friday, 13 April to Friday, 27 April, 2001. We will be taking private autos (car pools), meeting in the parking lot of Tucson Electric Park (on Ajo Way, east of I-10) at 7 am. Carpools will be arranged at that time and we will depart at 7:15 AM via the Ajo-Tucson Highway (Route 86) for Ajo.

We will be met in Ajo (in the Pizza Hut parking lot) at 9:30 AM by Luke AFB personnel who will conduct the tour. Tour duration will be approximately 3-4 hours and we will return to the Pizza Hut parking lot by approximately 1:30pm. We plan on a quick stop for lunch in Ajo with an estimated arrival in Tucson by 4:00 - 4:30pm

We will be restricted to 25 people and will sign up individuals on a first-come, first-served basis. If you wish

to make the trip, please send us e-mail to the following address: tucson_aiaa@yahoo.com or contact Ed Palanek at 299-4568. For those wishing to drive alone, or set up own their own carpool, please let us know and meet us at the Ajo Pizza Hut parking lot by 9:30am.

Everyone should bring a bottle of water, a hat, and sun screen. If you have any questions, please, call Ed at 299-4568. It should be a very enjoyable tour with some great air-to-ground fireworks! See you there!!!

A-10 Capabilities Presentation by Desert Storm Veteran

by Ed Palanek

On 15 February 2001, Lt. Col. John L. Sokolsky,
Commander of the 355th Operations Support Squadron

at Davis-Monthan AFB, gave a great talk on the A-10, its combat capabilities and the role of the aircraft in the Desert Storm conflict. He also compared the role of airpower in the Balkans war with the differences in terrain, weather and target sets.

Col. Sokolsky also discussed the role of the A-10 in the tactical planning of the Air Force and how it fits into the new Composite Wings the Air Force has developed for rapid response capabilities.

He also brought with him, for display purposes, examples of the A-10's Gatling Gun ordnance -- dummy rounds of course! It was a lively, informative presentation with many questions, particularly from the U of A students!



American Institute of Aeronautics and Astronautics

Tucson Section

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