



## From the Chair...

Kevin Burns, Section Chair

The San Diego Section is off to a great start. We have had participation in a number of meetings sponsored by organizations with similar purpose and objectives. Two of the meetings this year were with ITEA and one was with PESO. We will continue to inform our members of these events as they are known to us. So far we have sponsored a bus trip to JPL in Pasadena, and sponsored an AIAA booth at the Miramar Air Show. There is more information on these events inside. I apologize to those members that were turned away for the trip to JPL, but we have to comply with their rules. We have to give them the names of those attending one month in advance, and we have to limit those taking the tour to 40. Therefore, even though 80 people tried to sign-up, we couldn't just go out and rent another bus. Because of the large response, we are looking to offer the same trip again this spring. We have a number of new faces serving on the council, and there is always room for a few more. If you want to volunteer to help the section in its goals, but don't want to serve on the council, there are a number of committee people who could use some help. As a section, this year I would like to increase our pre-college outreach, and also provide speakers to schools and community groups. I would like to see us used as a resource to teachers in science and math classrooms. If you have time to volunteer, even just a couple of hours a year, we would like to hear from

you. In early spring, we will also be looking for judges for the Greater San Diego Science and Engineering Fair.

The section is continuing on the award winning path that was started last year. We won four national awards for section activities, and the awards came with a total of \$800.00 in prize money to the section. Also, Professor Alan Plotkin of the Aerospace Engineering Department at San Diego State University was selected to receive the 2005 John Leland Atwood Award. The award is co-sponsored by the Aerospace Division of ASEE and the AIAA and is given to a leader who has made lasting and significant contributions to aerospace engineering education.

We are expanding in other areas also. We have started a rocket project committee within the professional section to promote the study of propulsion. This committee will be chaired by Dr. Harrington and assisted by Carl Tedasco who is also our new chairperson of Field Trips.

For November, we have our Section meeting and lecture on November 3<sup>rd</sup>, the Council meeting on November 9<sup>th</sup>, and the Young Professional's Financial Workshop meeting on November 15<sup>th</sup>. Another activity of note is the Aerospace Testing Exposition in Long Beach November 8-10. The call for papers is out for the 2006 Space Conference, which will be held at San Jose in September. It is also not too soon to contemplate subject matter for papers

to be presented at the 2007 Aerospace Sciences Meeting in January 2007. If any students are interested in presenting a technical paper at any AIAA professional technical conference; or if any professional members are interested in mentoring a student through the process of submitting an abstract, writing the paper, and making the presentation; please contact the section chairperson.

### **Lean Manufacturing, Six Sigma, and the Theory of Constraints - - Principles and Practice**

Chris Root, Vice Chair- Technical

The San Diego Section is departing from its traditional one-day technical symposium to bring its members a comprehensive technical lecture series; four or five 2 hour sessions spread over consecutive weeks this coming January and February. This year's topic,

#### ***“Lean Manufacturing, Six Sigma, and the Theory of Constraints - - Principles and Practice,”***

will provide attendees with an understanding of these important tools used to improve efficiency, productivity, and quality in the San Diego Aerospace Industry. As currently envisioned, the first two lectures will be “classroom style” in order to explore the concepts. The remaining lectures will be devoted to presentations and a panel discussion from practitioners in San Diego's Aerospace Industry - - each in various phases of Lean Transformation. The San Diego Section is currently in the process of identifying potential lecturers from NAVAIR, Goodrich Aerospace, Solar Turbines, Northrop Grumman, and others.

If you or someone you know would like to be considered as a speaker and highlight your company's successes, please contact our Vice Chair- Technical, Mr. Chris Root, (619) 545-0626 or [chris.root@navy.mil](mailto:chris.root@navy.mil)

### **Financial Investment Workshop**

Kevin Scanlon, Young Professionals

It is never too early to start saving for the future and there are so many reasons to do so. If you are looking at saving up for home ownership or retirement this workshop is here to help get you on the right track to achieving your goals. The event will be held on Tuesday, November 15<sup>th</sup> at Wyle Labs and is open to all members\non-members free of charge. There will be a social from 5:30-6:00pm with free pizza and soda, the presentation is from 6-7pm and followed by a Q&A session. To all the young professional members who may be just starting out in the investing world this is a great opportunity to get information and start investing early.

Primerica Financial Services will be onsite to conduct the presentation to cover many topics such as: types of investments and which are right for you, saving up to buy a home or put kids through college, how to get to your retirement goals, and ways to manage your portfolio and stay on track.

If you wish to attend, Wyle Labs is located at 1550 Hotel Circle North, Suite 245, San Diego, CA 92108. Please RSVP by November 14<sup>th</sup> so that arrangements can be made to have enough food and drinks available. To RSVP contact Kevin Scanlon at [kevin.scanlon@goodrich.com](mailto:kevin.scanlon@goodrich.com) or call (619)-691-6612.

### **FIELD TRIP TO JPL**

Doug Armstrong, Field Trips Chair

The section field trip to Jet Propulsion Laboratories in Pasadena on October 3<sup>rd</sup> was a smashing success. All who attended were very pleased with the facilities.

The tour took us to the presentation center where the mission was explained and several full scale models of spacecraft including the original Voyager were kept. The museum

portion was the most interesting with hands-on displays. Next we visited the deep space vehicle control room where the Mars rovers are currently being maneuvered and data is being received from all active spacecraft. The deep space network operates three stations globally from Australia, Spain and Goldstone station in California. Our last stop was at the Mars rover simulation laboratory where problems experienced on Mars are simulated and resolved. When the rover was stuck in the sand, the lab bought several types of sand and made a mixture similar to that on Mars, and finally got them both unstuck. The all day trip was time well spent.



## San Diego Section EA Participate in Education Alley 2006

Phil Smith, Public Policy Representative

The excited elementary through high school children entered the glass doors to the Long Beach Convention Center two at a time. Each was wearing a bright t-shirt with the name of

their school proudly printed on it. It was August 30 through September 1 and these students were about to embark on a wonderful adventure called Education Alley in Long Beach, California. The classroom teachers divided the busload of children into class groups and went over to check in. Each child was provided with a bag already filled with treasures. As they peered in to discover the contents their eyes lit up. They had each been given a calculator. One young boy asked if it was really for him to keep. The bags also had "cool" folders with the solar system printed on them. The children were asked to remove the brightly colored "Special Guest" pass that was also included in the bag and pin it on. This was their ticket into Education Alley. Teacher/Volunteers escorted the groups of children down the escalators to the Exhibit Hall. Before entering the Hall they were told a little about the wonders that would await them. Basketball legend Bill Russell would be a special guest speaker. Mad Science would be putting on an amazing demonstration and they would be able to participate in a whopper of a long distance phone call when they would videoconference with the South Pole! When they entered the Exhibit Hall they were escorted to seats to participate in the first of many interesting presentations. When the speaker was finished it was on to explore the many tantalizing science and math booths that made up Education Alley. They could "Ask an Engineer" a question and then receive a space poster.



They could talk with the rocket guys from Cal State, Long Beach about building and launching rockets. When they stopped by the NASA booths they could touch the famous Space Shuttle tiles, foam, and insulation. A scientist would demonstrate the wonders of liquid nitrogen when it comes in contact with a flower. The children who were given flowers clutched them in their hands for the remainder of the day. Most of the booths had something hands-on for the children to do and many had “cool” give-aways like posters, magnets, and foam “rockets.” The bags quickly filled up with goodies. Wednesday and Thursday the children were given the opportunity to take an escorted tour of the Large Exhibit Hall. The Teacher/Volunteers guided the children through the hall stopping by the many booths to talk with the vendors about the interesting things they had on display. Again the children were frequently treated to “cool” treasures to take home. When they returned to the hall they again had the opportunity to listen to more presenters and further explore the exciting activities the booths provided.



These fourth grade girls are discovering how craters are made in this hands-on demonstration at Education Alley 2005. The activity used flour to simulate the creation of craters by dropping tubes of dry flour and dry tempera paint onto a container of dry flour.



## San Diego State University AIAA Student Section Events Summary

Nils Sedano, SDSU AIAA Student Member

The San Diego State University AIAA student section held a booth at the Miramar Air Show this past weekend of October 14 to the 16th. The Air Show presented a great opportunity to exhibit what the students have accomplished, and what they are striving for. Both the SDSU Rocket Project and the SDSU DBF (Design, Build, Fly) team had their vehicles to show at hangar 3, and both attracted much attention. It was great having the DBF plane and the SDSU Rocket among all the fabulous and historic aircraft.





The Rocket Project and the DBF are student projects which involve the application of classroom lessons and the acquisition of further out-of classroom experience in real hands-on projects.

One of the goals of these university projects is to attract the future engineers and scientists by showing them what can be possible. As well as bringing attention to the Aerospace Engineering program and the AIAA presence in San Diego.

Another event that took place at San Diego State was the interview by Rod Luck of the Rocket Project and DBF team members for the KUSI morning news show. The interview took place in the SDSU Aerospace Engineering wind tunnel lab, and team members were interviewed first hand, and had a great time being on television.

### **SDSU Rocket Project**

Steve Harrington, SDSU Rocket Project Faculty Advisor

The SDSU Rocket Project has begun fabrication of a pressure-fed, liquid fueled bi-propellant rocket. They have built and flown a number of these rockets over the past few years. These rockets are based on technology developed at Flometrics, a local company composed of SDSU & UCSD alumni. The goal of the current project is for the students to develop hands-on experience in the field of rocketry and space propulsion. They will learn such areas as controls, high-pressure pneumatics, structures, aerodynamics, ground support systems, test & flight operations, telemetry/data collection, safety, etc. The rocket motor they are using is a 1000 lb. thrust Vernier engine from the Atlas rocket made here in San Diego.

The students also are working on a high altitude pump-fed rocket. The students will design and fabricate the tanks, airframe, plumbing and avionics, while Flometrics will donate their latest Pistonless Pump technology and help with pump integration, control and technical assistance. The goal of this project is to build a rocket that can achieve an altitude of over 100 miles, helping San Diego showcase our aerospace expertise. Other plans include making their own rocket motor, organizing a college rocket competition, flying student payloads for other universities, and collaborating with other universities on a multi-stage rocket.



Carl Tedesco and Steve Harrington are the faculty advisors to the project. They have been helping the students build and launch rockets for a few years and the students have been able to turn their rocket experiences into good job opportunities. Dr. Steve Harrington also teaches rocket propulsion at SDSU. The project consists of undergraduate students ranging from freshmen to seniors. Victor Sanchez is the student project manager.

The SDSU Rocket Project is currently looking for local support. They need fittings, hardware, valves, regulators, tanks and altimeters. Also, if anyone who used to work for Convair/ GD can donate an old vernier, they would be thrilled. The students have some matching funds, so if you sponsor the SDSU rocket project, your funds will be matched 100% up to \$15,000. This would be a good opportunity for aerospace companies to insure that they will be able to hire experienced rocket propulsion engineers right out of college, saving considerable time and expense in training and funding the creation of a cadre of engineers who are not scared to move beyond PowerPoint engineering and blow stuff up. Considering that it will cost about \$50-\$100K to

train a new aerospace engineer, and sponsors will have access to the future engineers, this is a recruiting bargain.

If you would like to help the students contact Victor Sanchez ([rocketsanchez@gmail.com](mailto:rocketsanchez@gmail.com)) or Carl Tedesco ([ctedesco@flometrics.com](mailto:ctedesco@flometrics.com)). For more information and for updates visit: [www.sdsurocket.org](http://www.sdsurocket.org).



## SDSU DBF

Donald Myers, SDSU DBF Project Manager

San Diego State University engineering students will participate in the 2005/2006 AIAA Cessna/Office of Naval Research Design Build Fly (DBF) competition which is scheduled to be held in Wichita, KS in April 2006. The SDSU DBF team is sponsored by Northrop Grumman Integrated Systems. The team is in the process of designing an aircraft capable of completing the predefined missions as prescribed by the official DBF rules. The missions entail carrying payloads consisting of a minimum of forty eight tennis balls, an eight pound box of given dimensions, and a minimum of two 2-liter bottles of water. The team is bouncing back from a disappointing finish in last season's contest and is very excited about the prospect of a winning season. General information about the DBF competition and information about specific mission requirements can be found on the DBF contest's official website at <http://www.ae.uiuc.edu/aiaadbff/>. For specific information regarding SDSU's DBF team contact: Donald Myers  
[donmyers1@sbcglobal.net](mailto:donmyers1@sbcglobal.net)

## Membership News

Jim Peterson, Membership Chair

Section membership stands at 442 as of October 1st. We would like to welcome the following new AIAA professional members to the San Diego Section:

### June

Peter Lekfarites	Solar Turbines
Brian Stemm	Honeywell
Jacob Rideout	
Michael Sheek	
John Swihart	

### July

Chris Grainger	SpaceDev
Jeremy Hanna	UCSD
Robert Kuharski	SAIC
Frank Macklin	SpaceDev

Scott Mccourt	Northrop Grumman
Jonathan Yu	UCSD
Daniel Wickersham	US Navy

### August

John Canepa	Northrop Grumman
Purvi Dave	
Ellen Meeks	Reaction Design
Carrie Nishimura	UCSD
Steven Ogg	
Richard Borden	
Daniel Fink	
John Kohut	Raytheon
James Lang	Aerospace Research & Engineering

### September

Robert Ford	Lockheed Martin
Clint Guy	Maxim Systems
Charles Hardin	Power of the Dream Ventures LLC
	Boeing
Dianne Wiley	Aerospace Corp
Po-Hao Huang	
Miguel Ortega-Morales	
Colin Rodgers	
William Walker	Northrop Grumman

### Octoberber

Robert Morrison	
Cyndi Wegerbauer	CW Consulting
James Gerard	Northrop Grumman
Rodney Harris	
James Li	UCSD
Jeffrey McQuillan	Civil Engineer Corps

If you have any questions about membership or advancing your membership grade, please contact Jim Peterson at (858) 279-1940, or E-mail to: [jdpete@pacbell.net](mailto:jdpete@pacbell.net).

## Calendar

Nov 3	Dinner Meeting
Nov 9	Council Meeting
Nov 15	YP Financial Workshop
Nov 8-10	LB Testing Exposition

<b>Position</b>	<b>Name/Company</b>	<b>Work Phone/Fax</b>	<b>Email Address</b>
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Vice Chair – Long Range Planning	Greg Marien, Northrop Grumman	(858) 618-5207 (858) 618-7139	gregmarien@yahoo.com greg.marien@NgC.com
Vice Chair – Technical	Chris Root, NAVAIR, North Island	(619) 545-0626 (619) 545-0887	chris.root@navy.mil aeroroot@cox.net
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Field Trips	Carl Tedesco, Flometrics	(858) 720-9226 (858) 720-9224	ctedesco@flometrics.com
Flyers	Dan Wickersham, NAS North Island	715-572-1045	dtw1981@yahoo.com
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RAC VI Delegate	Nigel Barker, Goodrich Aerostructures	(619) 691-2568	Nigel.barker@goodrich.com
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Honors & Awards, and Career Enhancement	Keith Glassman, NAVAIR North Island	(619) 545-3736	Keith.Glassman@navy.mil
Student Activities	Nils Sedano, SDSU	(619) 961-5568	Nilssedano@hotmail.com
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Pre-College Outreach	Quentin Goss, USAF – Retired	(858)451-6213	qjgoss@att.net
Young Professionals	Kevin Scalon	(619)667-1166	Krscanlon@hotmail.com
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SDSU Student Chair	Nick Grela, SDSU	(858)354-9135	Toaster35@cox.net
UCSD Faculty Advisor	Dr. Kieko Nomura, UCSD,	(858)-534-5520	knomura@ucsd.edu
UCSD Student Chair	Matthew Napoli, UCSD	(909)702-6678	mnapoli@ucsd.edu
Educator Associate	Amelia Chapman, SD Aerospace Museum	(619)234-8291	achapman@sdasm.org



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