

CAL POLY  
AERONAUTICAL ENGINEERING  
ALUMNI NEWSLETTER

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Aeronautical Engineering Department  
California Polytechnic State University  
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MESSAGE FROM THE DEPARTMENT CHAIRMAN

I could easily look to the future with pessimism--the aerospace industry is in a prolonged downturn and the state budget problems have severely hampered our efforts to provide students with a quality education. But I am not pessimistic . . . on the contrary, I am very optimistic. Let me share with you the reasons for my optimism.

First of all, in spite of the difficulties which the aerospace industry has been undergoing, industry and government recruiters are still coming to Cal Poly and hiring our graduates. Granted, not all of our students are able to find employment, but our rate for student employment coupled with the students who have gone on to graduate school is nearly 90% of the graduating seniors! This is due in part to the great reputation which our graduates enjoy in the marketplace. Over the course of the past year I have heard from many company representatives who tell me that they want more people like their current Cal Poly employees. Our students are bright, hard working, and have a practical approach to solving engineering problems, all by-products of the Cal Poly "learn by doing" tradition.

As many of you are aware, the State of California has been experiencing severe budget problems, and a full recovery is several years away. These budget problems have had drastic effects on the amount of funds which Cal Poly and the Aeronautical Engineering Department receive from the state. The combined effect over the past four years of budget reductions is that our department's budget has been reduced by nearly 35%! Why should that cause me to be optimistic? It doesn't, but the response to that bad news from industry, alumni, and friends of the department has been fantastic. Our Industrial Advisory Board continues to give our department sound advice and financial support. Companies like Northrop, Lockheed, Rockwell, and Boeing have made donations of money, equipment, and support for our programs. Alumni have donated an increased amount to the department, often doubling or tripling their gifts with corporate matching funds. And friends and family of students have offered to buy computers or purchase other equipment for the department. Gifts like these make it possible for our department to continue to support our students at high quality levels.

In addition, the department has received increased space allocations. As our facilities have evolved and changed over the years, we have found ourselves strapped for space (as an example, our 3X4 wind tunnel takes up over 1000 sq. ft. of floor space). We have converted two former engineering technology laboratories into facilities for our department: an Aerospace Controls Laboratory and an Aerospace Structures and Composites Laboratory. These facilities will allow our students to learn about new technology in controls systems and composite materials.

So while things may look bleak to some, they look bright to me. Our students are bright and energetic and ready to learn. A recent industry visitor to the department remarked that he expected to find the students down and depressed, but they were eager and looking forward to their careers in aerospace. And I share their enthusiasm. With your support and help the Aeronautical Engineering Department will continue to grow and flourish in the coming years!

Russell M. Cummings  
Chairman

## FACULTY UPDATE

Dan Biezad was recently elected an Associate Fellow of the AIAA, as well as a Senior Member of the IEEE. Dan has been working on various research projects in his area of expertise, flight controls and flight simulation, and has also co-authored several technical papers over the past year on rotorcraft-aircrew systems, longitudinal control of hypersonic aircraft, and throttles-only flight control.

Russell Cummings was also elected an Associate Fellow of the AIAA. Russ works in the area of applied aerodynamics and computational fluid dynamics, and has several research projects in applying new aerodynamic control systems such as forebody flow control, Gurney flaps, and cove tabs for high-lift systems. Russ also serves as the faculty advisor for the student branch of AIAA.

Jon Hoffmann has continued his research on the influence of freestream turbulence on boundary layers. A summary of this work was published in *NASA Tech Briefs* last year.

Faysal Kolkailah has been busy working on uses for composite materials in aerospace structures. He has presented his work this past year at two international conferences, one in Australia and one in Japan. Faysal is active in SAMPE, and serves as the faculty advisor for the student chapter of that organization.

Ruben Rojas-Oviedo attended a professional study series on concurrent engineering and has been working on establishing a relationship between Cal Poly and a technical university in Mexico.

Jin Tso presented papers on his work in lift augmentation using vortex trapping and subsonic jets in a crossflow. Jin has also been active as the faculty advisor for the Cal Poly chapter of Sigma Gamma Tau, the national aerospace engineering honor society.

Robert van't Riet will be taking the Senior Aircraft Design Class to visit the manufacturing and fabrication facilities at Boeing in January 1994. The class has also recently visited various industry and government laboratories at Edwards Air Force Base and in Palmdale.

## "OPEN HOUSE"

As many of you know, the university suspended Poly Royal, Cal Poly's annual open house, a number of years ago. Since then a number of school-wide open houses have developed, but none of them were as successful as Poly Royal. The reaction from alumni, students, and the community has been to strongly favor returning to a university-wide open house. President Baker has announced that the university will have an Open House on April 23rd, with the understanding that the event be a return to the original Poly Royal concept--an educational exhibit of the Cal Poly hands-on experience. The students of the department are planning a display of various projects and laboratories, so I hope that many of you will consider returning to campus this spring and see what we are doing.

## HONORED ALUMNI

James R. Phillips was recently honored as the Cal Poly College of Engineering Honored Alumni for 1993. Jim graduated from the department in 1968 and has been working ever since at McDonnell-Douglas Corporation's Douglas Aircraft Co. in Long Beach. Jim is currently the vice president and general manager for Product Support, where he is responsible for after-sales support of 2,800 commercial jet airliners (DC-8s, DC-9s, DC-10s, MD-80s, and MD-11s). Jim attended the Honored Alumni activities at this year's Homecoming and took time to spend an afternoon with our senior class; Jim is also a member of the department's Industrial Advisory Board. Congratulations Jim!

## ALUMNI NEWS

We have received information about quite a few of you since we sent out our first newsletter last Fall. It is good to hear that so many of you are having successful and worthwhile careers; we are very proud of your accomplishments! If you would like to be included in future newsletters, mail your name, graduation year, and noteworthy information to AERO Alumni Newsletter, c/o Russell M. Cummings, Aeronautical Engineering Department, Cal Poly, San Luis Obispo, CA 93407.

### THE THIRTIES

Baldwin Reinhold, Jr. (B.S. 1936) is retired after spending the majority of his career working at Varco International in Los Angeles. Reinhold and his wife, Mary, currently live in Corona Del Mar, CA.

Louis Barr (B.S. 1939) is a retired Flight Engineer for Trans World Airlines. He is enjoying his retirement in Nevada.

### THE FORTIES

Darrol G. Davison (B.S. 1948) is a retired Vice President and Management Consultant for American Airlines. He spent many years flying a variety of commercial aircraft and now lives in Salinas, CA.

### THE FIFTIES

Dominic A. Pugliese (B.S. 1951) retired in 1991 after spending 35 years working at General Dynamic's Pomona Division as an Engineering Specialist. He is currently studying for an A.A. degree in Automotive Technology.

George F. Ruge (B.S. 1951) began and ended his career with Convair, with stops in between at TRW, Keystone Engineering, Atlantic Research, and SAIC. He spent most of his career testing rocket and satellite systems. He is now happily retired, and is spending his time writing a computer book and visiting his five grandchildren.

John W. Money (B.S. 1959) is a Senior Project Engineer at McClellan Air Force Base in Sacramento, CA. He is working on a lightweight engine/generator for supplying power to Air Force communications systems. He has fond memories of taking aircraft design from Cliff Price in the summer of 1958 and having a class picnic instead of a final exam!

Donald Walker (B.S. 1959) is the Program Manager for small ICBM's at the Aerojet Propulsion Company. He has been awarded the AIAA's Solid Rocket Recognition Award for his contributions to the field of solid propellant systems over the past 32 years.

### THE SIXTIES

Dennis Riddle (B.S. 1962) is the Assistant Chief of the Fixed Wing Aerodynamics Branch at NASA Ames Research Center and is the father of Todd Riddle, a recent graduate of the Aeronautical Engineering Department at Cal Poly.

Dean Borgman (B.S. 1963) is the President of McDonnell-Douglas Helicopters near Phoenix, AZ, and serves on the Dean's Industrial Advisory Board for the College of Engineering at Cal Poly.

Robert E. Wulf (B.S. 1963) is the Vice President for Flight Systems at Northrop Corporation, where he was the Chief Engineer for the development of the B2 Bomber. He has received an M.S. in Aerospace Engineering from U.S.C. in 1966 and attended the Harvard Business School in 1987. Bob is also a member of the Aeronautical Engineering Department's Industrial Advisory Board, where he has been instrumental in obtaining industry donations for the department.

James Phillips (B.S. 1968) is the General Vice President for Product Support at McDonnell-Douglas in Long Beach. Jim has been chosen as the 1993 Honored Alumni from the College of Engineering at Cal Poly.

Everett Ratzlaff (B.S. 1968) is a Senior Engineer working for G.E. Motors where he designed and produced emergency propulsion systems for Seawolf Submarines and motors for minesweepers.

Robert "Hoot" Gibson (B.S. 1969) has recently been named the Chief Astronaut for NASA. He has served as an Astronaut for many years, completing a variety of Space Shuttle missions as pilot and commander.

#### THE SEVENTIES

Michael Burz (B.S. 1974) is working at Nissan Performance Technologies where he is the program manager for Nissan's Group C Le Mans race car.

Russell Cummings (B.S. 1977, M.S. 1985) is now a professor in the Aeronautical Engineering Department at Cal Poly. He received his Ph.D. in Aerospace Engineering from U.S.C. in 1988 and worked for eight years at the Missile Systems Group of Hughes Aircraft Company as a missile aerodynamicist.

H. Michele Dedic (B.S. 1977) is a maintenance operations engineer with United Airlines in San Francisco, CA.

Osamu Yamamoto (B.S. 1977, M.S. 1979) received a Ph.D. in Aerospace Engineering from Iowa State University and is currently a researcher at NASA Lewis Research Center in Cleveland, OH.

Neal Chaderjian (B.S. 1978) is a Research Scientist at NASA Ames Research Center where he works in the Computational Aerosciences Branch. Neal graduated with a Ph.D. from Stanford University in 1985, and is now married with one daughter and another child on the way.

Mark Montgomery (B.S. 1978) is a pilot with Northwest Airlines flying Boeing 747's to the Orient. He lives in Bellevue, WA.

#### THE EIGHTIES

Rob Raffaelli (B.S. 1985) is a First Officer flying Boeing 727's for Trans World Airlines. He had previously flown commuter airliners for American Eagle in San Luis Obispo.

Claudia (Burns) Steuart (B.S. 1986) is at the Boeing Company where she is assigned to work on the next generation Boeing 737. She was recently married to David Steuart, a 1987 Cal Poly Architecture graduate.

Max A. Amaya, Jr. (B.S. 1987) is an Aerospace Engineer in the Applied Aerodynamics Branch at NASA Ames Research Center and is also pursuing a Ph.D. in Mechanical Engineering at Stanford University.

Charles E. Canright (B.S. 1987) is a Lead Engineer in the Flight Systems Laboratory at the Boeing Commercial Airplane Group in Seattle, WA. He was recently named "Boeing Employee of the Month" for his work in the lab.

Michael Dancy (B.S. 1987) is a Staff Manager at McDonnell-Douglas and has recently received his M.S. degree in Systems Management from U.S.C.

Jennifer (Johnson) Ebert (B.S. 1987) is a Member of the Technical Staff working on the Space Shuttle Main Engine flight support team at Rocketdyne. She was recently married in San Luis Obispo.

Charles Bockholt (B.S. 1988) is an aircraft configuration designer currently working on the 777 at Boeing in Seattle, WA.

Trong Bui (B.S. 1988, M.S. 1990) is a researcher at NASA Lewis Research Center in Cleveland, OH and is currently working on a Ph.D. in Aerospace Engineering at Stanford University.

Teana S. Chandler (B.S. 1988) is now a Sales Administrator for the Ziatech Corporation in San Luis Obispo.

Ken Gee (B.S. 1988, M.S. 1990) is a researcher with the MCAT Institute at NASA Ames Research Center working on applied computational fluid dynamics projects and attending graduate school at Stanford University. Ken was married last year in Sacramento.

Jon E. Martin (B.S. 1988) has worked at Lockheed Missiles and Space Company and is now enrolled in the M.Div. program at Princeton Theological Seminary. Jon plans to go into full time ministry with the Presbyterian Church upon graduation from Princeton.

Kyle Shepard (B.S. 1988) is an Engineer/Division Technologist at General Dynamic's Space Systems Division. He has been working on electric propulsion systems for the Mars cargo missions.

David Spalding (B.S. 1988) is a pilot and Captain in the U.S. Air Force, where he flies OA-10 forward air control aircraft.

Stephanie Los (B.S. 1989) is working as a consultant with the firm of Arthur Andersen Consulting in Los Angeles.

#### THE NINETIES

Heidi Hendrickson (B.S. 1991) has recently been elected Secretary of the Los Angeles Chapter of the Society of Flight Test Engineers.

Kipp E. Howard (M.S. 1991) is an Aeronautical Engineer at the Boeing Company working in the Flight Simulation Lab for the Boeing 777.

Amanda Hendrix (B.S. 1992) is pursuing a graduate degree in the Aerospace Engineering Department at Colorado University, and recently served as a summer intern at the Jet Propulsion Lab in Pasadena, CA.

Pamela Stublaski (B.S. 1992) is a Focal Engineer working in new product development for the Propulsion Systems Division of the Boeing Commercial Airplane Group in Seattle, WA.

#### IN MEMORIAM

George E. Blackshaw, a graduate from the class of 1957, died of cancer in September 1993. George's career included working for Hughes, Marquardt, the Naval Weapons Center, the U.S. Air Force Armament Laboratory, Convair, and United Technologies, where he was Vice President and General Manager of the Advanced Systems Division. In addition, he had served as the Director of Tactical Missiles and as the Director of Air Warfare for the Undersecretary of Defense. During the last four years George was the President of Blackshaw Enterprises, a engineering consulting firm specializing in the aerospace marketplace. George is survived by his wife, Tanya, and five children.

Timothy Young, a 1985 graduate of the department, was killed in an airplane crash on October 9, 1992 in Alaska. Tim was a 2nd Lt. in the Air Force, having completed basic flight training before becoming a reservist in Alaska. He was flying his Aeronca Champ when he crashed. Tim's father, Clarence Young of Templeton, has started the Tim Young Memorial Fund for the Aeronautical Engineering Department in memory of his son. Anyone interested in memorials for Tim should send donations to the Tim Young Memorial Fund, Fund # 8191, Gift Planning Office, Cal Poly, San Luis Obispo, CA 93407.

Terri L. Wolthers, a graduate from the class of 1990, died in July 1992. Terri had been commissioned as an Ensign in the U.S. Navy and was in training to be a jet fighter pilot. She was undergoing flight exercises when her plane crashed.

## ALUMNI JOB SEARCH HELP

In these difficult economic times within the aerospace industry many engineers find themselves facing the prospect of hunting for a new position. From time to time the department receives requests from companies for résumés of both recent graduates and experienced engineers. If you would like the department to make your name available to anyone requesting information, please forward your résumé to the address given on the first page of the newsletter. We will do what we can to help our graduates obtain jobs. And don't forget that the assistance of the Career Services Office is available to all Cal Poly alumni. Feel free to contact them at (805) 756-2501 for more information. Also, if you are working for a company which is looking for qualified engineers, either with experience or newly graduated from Cal Poly, feel free to contact the Aeronautical Engineering Department for information.

## ADDRESS LIST CORRECTIONS

Since putting together the first Alumni Newsletter last year, it has come to our attention that the alumni mailing list which the university maintains is out of date and incomplete. Many of you have called and written with new addresses, and many of you were not on our mailing list. Please let us know if you have classmates/friends who have not been receiving either the Newsletter, the College of Engineering Newsletter, or the university alumni newspaper, *Cal Poly Today*. We will add your names to the mailing list, or make your address corrections, so everyone can keep in touch with Cal Poly.

## SPECIAL DONATIONS

We are greatly appreciative whenever someone makes a donation to the Aeronautical Engineering Department; your donations of whatever size are vital to our continued ability to offer a quality education in these times of financial uncertainty.

Special recognition is due to Baldwin Reinhold, Jr., a graduate from the Class of 1936. Mr. Reinhold spent the majority of his engineering career working at Varco International in Los Angeles, where he worked in manufacturing. After retiring from the company he donated 15,560 shares of stock in Varco to the department as a gesture of his appreciation. The stock, valued at \$76,000 has been put into the department's fund for establishing a new Aeronautical Engineering Building. Thank you Mr. Reinhold, your support will help to mold the future of the department for generations to come!

The department has also recently received a donation of a large water tunnel from Nielsen Engineering and Research (NEAR, Inc.) in Mountain View, CA. The water tunnel will be used for both teaching and research, and funds from industry donations are being used to make the tunnel operational. The tunnel will be named the Jack Nielsen Memorial Water Tunnel in memory of the founder of NEAR, Inc.