



Highflight

UNIVERSITY OF WASHINGTON
COLLEGE of ENGINEERING
A Community of Innovators

In this issue

Message From the Chair	2
Centers of Excellence	3
Guggenheim Remodel	4
New Staff	5
Composites Certificate	5
Senior Design Projects	8
Student Awards	9
Distinguished Alumni	10
Alumni Updates	11
In Memoriam	13
Donor Recognition	14



Professor D. Scott Eberhardt reviews the A&A Department history.

Aeronautics & Astronautics 75th Anniversary Celebration

Seventy-five years ago, there was no astronautics. Human flight was in its early stages, and space flight was a distant dream. Because of the foresight and ingenuity of Bill Boeing and the dedication of a few engineers, notably the entrepreneurial Fred Kirsten, and the first chairman, Everett O. Eastwood, the Department of Aeronautical Engineering was born.

On October 8 and 9, 2004, the Department of Aeronautics and Astronautics celebrated its history with a 75th Anniversary event, marked by activities attended by an enthusiastic group of alumni, faculty, students, staff, and friends. Guests were welcomed by then College of Engineering Dean Denton, and presentations by our alumni and faculty told the audience about our past, present, and future. Speakers included alumni Dale Myers (BS 43), Joseph Sutter (BS 43), George Jeffs (BS 45, MS 48), Harlow Ahlstrom (BS 57, MS 59), and Jon Lee (BS 02, MS 04), as well as Department Chair Adam

Bruckner and Professors Eberhardt, Jarboe, Livne, and Vaughan.

The first day's activities were followed by a wine and cheese reception and then tours of Guggenheim Hall (a "homecoming" for many of our alums), and finally by a banquet at the UW Club. Special presentations were made by Professor Kuen Lin (co-director of the new AMTAS FAA Center at the UW), and by Don Brubeck, one of the architects involved in the upcoming renovation of Guggenheim Hall. The highlight of the evening was the recognition of our 2004 Distinguished Alumnus, Gérard Brachet (MS 68).

The following day, participants gathered for a morning of reminiscences. Students, former students, and faculty assembled in small groups



Alumni reminisce about A&A in the 1960s.

**Save the
 Date
 A&A Spring
 Banquet
 Friday
 May 12,
 2006**

(continued on p. 6)

Message from the Chair



Professor Adam Bruckner

Greetings alumni and friends, I hope your new year has been off to a good start! This newsletter is our first in more than two years. The

adoption of a new look for College of Engineering publications, the preparations for the renovation of Guggenheim Hall, and other factors prevented us from publishing *Highflight* in 2004 and 2005. We have tried to be as up-to-date as possible with the alumni news, but if some of the information in that section is a bit out of date, please bear with us, and send us your updated information for the next issue. We look forward to resuming our annual publication schedule from now on.

There have been many changes and developments since our last newsletter, including the arrival of new faculty and staff, the departure of others, and sadly, the passing of some of the members of our extended community.

Among notable events were the 75th Anniversary Celebration and the establishment of three new centers of excellence (see p. 3). Research conducted by faculty, staff, and students continues to thrive and increase; in FY 2005 we received a total of \$6.3M in external research funding, a new record. In addition, student enrollment continues at high levels; undergraduate enrollments in the junior and senior years have each been in the 45 – 60 range and graduate student enrollment is currently 130, the highest in nearly 15 years. Clearly, what we have to offer is in great demand!

The issue that has most occupied

our attention during the past two-and-a-half years has been the planning of the renovation of our home, Guggenheim Hall (see p. 4). The week of March 20 we will move out of Guggenheim and into Condon Hall, the old site of the Law School, where we will stay until the end of August 2007. A beautifully restored Guggenheim Hall will welcome us in early September of that year, just in time for the start of the academic year.

I hope you will enjoy this issue of *Highflight*. As always, we would very much like to hear from you and have you visit us. For those of you who are interested in the history of our department and/or would like to participate in our history listserve, please see www.aa.washington.edu/about/history and its links.

Until our next newsletter, I wish you all the very best!

Professor Paolo Feraboli Joins A&A

Paolo Feraboli joined the Aeronautics and Astronautics faculty in July 2005. After obtaining his BS and MS in mechanical engineering at the University of Bologna, Italy, in 2002, Paolo worked for Automobili Lamborghini SpA and spearheaded the development of the all-carbon composite door for crash safety certification. He also contributed to the development of numerous composite structures for the body and chassis of the Murciélago Roadster. Paolo received his PhD from the University of California at Santa Barbara in 2005, during which time he spent six months as a visiting researcher in the Mechanics and Durability branch at the NASA Langley Research Center.

Early in his career, Paolo became known and regarded for his

publications in his field of composite structures design, damage resistance and tolerance, and vehicle safety certification.

He received The American Society

for Composites 2004 award for “Outstanding PhD Research in the field of Composite Materials” for his investigations of delamination mechanisms of carbon/epoxy composites resulting from low-velocity impact events. Paolo is the chairman of the MIL-HDBK-17 Working Group on Crashworthiness, a member of the AIAA Technical



Assistant Professor
Paolo Feraboli

Committee on Materials, and an active member of SAMPE and ASC.

Paolo is excited to have joined our department, which he says stands out among others for the cohesion among its members, and has shown very positive growth trends in recent years. He is also particularly happy to have moved to Seattle because of the proximity to the Boeing Company and the FAA Certification Office. Lastly, the beauty of the city and its people were not unknown to him; his wife was born and raised here and received her undergraduate and graduate degrees at the UW.

We're very pleased to have Paolo join our department, and look forward to his contributions in teaching, developing directed research programs, and maintaining strong industry ties.

FAA Center at UW



(l-r) A&A Chair Adam Bruckner; Senator Maria Cantwell, Center Co-founders Professors Kuen Lin and Eli Livne

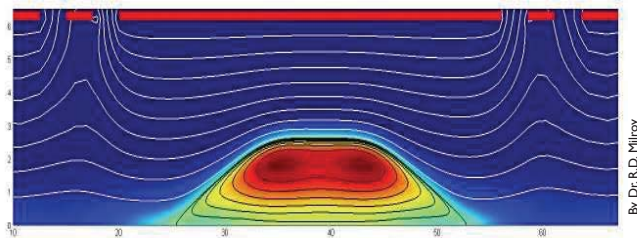
The founding of the FAA Center for Excellence in Advanced Materials at the UW was announced in December 2003. The center, which received funding from the Federal Aviation Administration, the UW and private industry, was proposed by A&A Professors Kuen Lin and Eli Livne, and by Professor Mark Tuttle chair of Mechanical Engineering, who is serving as director. Senator Maria Cantwell (D-Wash), an early champion of the center's creation, came to Guggenhiem Hall for a special dedication ceremony.

Research performed by Professors Lin, Livne, Dr. Andrey Styuart, and others will focus on advanced composite materials that will have many industrial applications, such as the construction of Boeing's new 787. The center also will conduct research in nanotechnology; its range of scientific inquiry will extend from the atomic level to the macro structural level of a completed airplane. In addition, the center's mission includes education for the industry work force and the next generation of engineers and machinists. Industry experts and staff from the UW, Washington State University, Oregon State University, and Edmonds Community College are participating in education and research at the center.

Plasma Science Center Established

The Universities of Washington and Wisconsin and Utah State University have formed a Plasma Science and Innovation Center (PSI-Center) to provide theoretical and numerical support for innovative confinement concepts. The PSI-Center is a Department of Energy-approved project based at the University of Washington. It places special emphasis on the smaller emerging concept experiments (concepts with no proof of principle experiments). A principal product of the PSI-Center

will be the refinement of overlapping computational tools with sufficient physics, boundary conditions, and geometry to be calibrated with experiments and achieve predictive capabilities. The UW PSI-Center is directed by Professor Thomas R. Jarboe and Deputy Director Dr. Richard Milroy, and includes a team of UW faculty (Professors Uri Shumlak from A&A and Brian Nelson from EE), and several research scientists and consultants.



Moqui (2D) simulation of the translated FRX-

Space Systems Center Coming

Space, the final frontier, will become more accessible to A&A students with the establishment of a new Space Systems Center. Thanks to generous contributions from Aerojet's GenCorp Foundation and the Dean's Office, the A&A Department will be able to increase its focus on space systems by creating a practical center for emerging research and teaching in space systems engineering. This new center will allow our students to experience the full range of the design-build-test-fly process, thus enriching their experience and creating the next generation of engineering leaders in this exciting field.



l-r: Roger Myers, Robert Peha, and David King (Aerojet), Eve Riskin (UW COE Associate Dean for Organizational Infrastructure), A&A Chair Adam Bruckner, and Affiliate Professor Charlie Vaughan (Aerojet) at the funding presentation ceremony November 15, 2005.

Guggenheim Hall To Be Remodeled

A home away from home. That's what Guggenheim Hall has been for more than 2,500 students since 1929. The prior year, the Daniel Guggenheim Fund for the Promotion of Aeronautics gave \$290,000 to the UW for an aeronautics building. Since then, the A&A graduates trained here have helped design and build virtually every Boeing aircraft, and they have worked for Lockheed Martin and other manufacturers on nearly every type of commercial and military airplane and spacecraft.



They include academic researchers, innovators and educators, as well as airline pilots, astronauts, and NASA engineers sending rovers to Mars and space probes through the solar system and beyond.

While engineering tools and technology have advanced beyond the imagination of the earliest graduates, Guggenheim has remained the same. Its outmoded laboratories and building infrastructure are inadequate for the high-tech equipment essential for cutting-edge research. But that's about to change.

Renovation of Guggenheim Hall will begin in April. The Gothic exterior of the building will remain untouched; however, the interior will be completely remodeled. This will include improvements such as:

- Creating multi-focused instructional labs to support team-based projects
- Upgrading classrooms to incorporate the latest in learning technologies
- Adding disability/mobility access, including an elevator
- Building reinforcement for earthquake protection.

This restoration is a public-private partnership. The State Legislature has provided 85% of the cost. The University is seeking the remainder (\$5M) from private funding. Alumni George Jeffs (BS 45, MS 48) and Joe Sutter (BS 43) are the fundraising campaign co-chairs. Jeffs, who led the design and engineering teams for the Apollo spacecraft, remembers Guggenheim fondly. "Guggenheim symbolizes aerospace accomplishment," says Jeffs. "As students we faced formidable courses and tough professors, challenges that laid the foundation for our careers."

The renovation will be completed by September 2007. A&A will be housed in Condon Hall during that time. "Our department has trained a host of outstanding aerospace leaders," says A&A chair Adam Bruckner. "Our great incubator, Guggenheim Hall, will produce even more legendary engineers when we bring the educational and research spaces into the 21st Century."

We ask you to play a part in preserving the history of Guggenheim Hall. Please contact Paul Julin in the College of Engineering at 206.685.1927, or by e-mail: julin@engr.washington.edu.

Accolades

Professor **Mehran Mesbahi** received the prestigious 2005 UW Distinguished Teaching Award. In addition, he was recognized for his contribution to the National Space Program and the mission of JPL, receiving a NASA Space Act Board Award for his report, "Formation Flying Control of Multiple Spacecraft via Graphs, Matrix Inequalities, and Switching."

Professor **Kuen Lin** was presented the 2005 Technical Excellence Award by the National Association of Asian American Professionals for his outstanding achievements in the area of composite materials research and education.

A&A Staff received College of Engineering Recognition Awards two years in a row. In 2004, **Steve Desjardins**, fiscal specialist supervisor, and in 2005, **John Rogers**, lead engineering technician, were selected as "Outstanding Staff" for their commitment to excellence and exemplary performance. Steve was recently invited to participate in a campus-wide Financial Desktop User Task Group to develop on-line finance tools.

Professor **James Hermanson** received the Best Paper Award for the AIAA 19th Microgravity Science and Space Processing Symposium for his paper, "Thermal Characteristics and Structure of Fully-Modulated Turbulent Diffusion Flames in Microgravity."

Professor **Keith Holsapple** was invited to spend a recent sabbatical working on asteroid collisions at the Universität Bern in Switzerland, at the Observatoire de la Cote d'Azur in Nice, France, and as a visiting professor at the Japan Aerospace Exploration Agency.

Professor Emeritus **Juris Vagners**, alum **Quinn Smithwick (MS 92, PhD 02)**, and ME Professors Per Reinhall and Eric Seibel, received the 2004 Journal of Dynamic Systems, Measurement and Control Best Paper Award from the American Society of Mechanical Engineers for their paper, "A Nonlinear State Space Model of a Resonating Single Fiber Scanner for Tracking Control: Theory and Experiment." Professor Vagners also received the best paper award, along with Affiliate Professor **Tad McGeer**, at the March 2005 SAE Aerospace Control and Guidance meeting, for their paper, "Transatlantic Autonomous Flight of Aerosonde Laima."

New A&A Staff Members

The last several years have been a time of transition and growth in A&A. We welcome the following new staff members to our department:

At the Kirsten Wind Tunnel (UWAL), long-time employees Brian Geppert and Will de Jong accepted positions outside the UW. Though they were hard to replace (both worked at UWAL as undergraduate students and then as full-time employees for many years), we were fortunate to find two outstanding new employees to fill their shoes. Jack Ross joined A&A in 2003, and holds the position of business manager. Jack, who has a BS in electrical engineering, worked in medical device manufacturing prior to coming to A&A.



*Jack Ross, UWAL
Business Manager*



*Steve Isley, UWAL
Operations Manager*

Steve Isley was an undergraduate in our department, working at the Wind Tunnel as crew chief. After graduation in 2005, he was a natural to step in to a full-time position as operations manager. UWAL had several exciting tests in the past two years, including one by seven-time Tour de France winner, Lance Armstrong, and the testing of several WWI airplanes (see p. 7).

The new Plasma Science Center (see p. 3) is up and running, thanks in great part to the efforts of research scientist Simon Woodruff; research associates Charlson Kim, Angus McNab, and Srinath Vadlamani; research consultants Andrew Cassidy and Susan Griffiths; and administrative assistant Luisa Pareja-Klemisch.

In addition to graduate student Sam Andreason (BS 01, MS 04) and post-doctoral researchers Hiroshi Gota and George Votroubek (MS 00, PhD 05), Professor John Slough recently hired two engineering technicians to work on his Pulsed High-Density FRC experiment — Rorm Arestun, and Christopher Pihl.

Finally, the A&A Administrative Office has two new faces. Lynn Catlett joined the department in January 2005 as administrator, replacing Darlene Feikema (who accepted the position of director in the Office of the Vice President for Student Affairs). Lynn, who worked for many years in Forest Resources before joining A&A, has many varied interests including weaving, costuming, and early Chinese history. Her strong organizational ability and management skills will serve the department well in the coming move to Condon Hall (see p. 4).



*Lynn Catlett,
Administrator*

We're also pleased to introduce our newest staff member, MaLora Ann Bate. MaLora received her BA in English from Western Washington University and worked in Human Resources at the UW prior to joining A&A in December as a secretary senior.



*MaLora Ann Bate,
Secretary Senior*

Welcome to all of the new A&A staff members!

Composites Certificate Program

In fall 2005, 35 dedicated students from Boeing were the first graduates of the new UW A&A Composites Certificate Program developed by A&A Professor Kuen Lin and The Boeing

Company Learning Training and Development Engineering group. The program has rigorous academic standards for

the courses in aircraft composite structural analysis and design, with content tailored to be relevant to the development of the Boeing 787 and future programs. Students complete three courses totaling 100 hours, in addition to another 300 hours for homework and studying for exams.

The graduates were honored at a ceremony held at the new Everett Future of Flight Aviation Center, where they received certificates and congratulations from program director Professor Kuen Lin; A&A chair Adam Bruckner; director of UW EPP Bill Rogers; and director of EDGE Michael Campion. Boeing representatives were: director of 787 technology integration Dr. Alan Miller; VP of structural technology Julie-Ellen Acosta; co-director Sophia Zervas-Berg; Initiative/SPEEA-Boeing Partnership Ed Wells; LTD program manager Michael Richey; and FAA chief scientific advisor Dr. Larry Ilciewicz. Learn more about the program at: <http://www.engr.washington.edu/epp/acsad/>.



*Professor and Program
Director Kuen Lin*

Department Founder Visits A&A

At 102, Fred Eastman is one of few people who can genuinely say they remember the “good ‘old’ days” in the Department of Aeronautics and Astronautics. Professor Eastman was one of the department’s four faculty founders in 1929, and later served as its chair. He visited us in May of last year (with his 75-year-old son, Jim) and took a tour of Guggenheim Hall and the Kirsten Wind Tunnel. When the Wind Tunnel was built in 1936, it incorporated an ingenious electromagnetic force balance that was invented by Fred. This “Eastman Balance” became a model for many other wind tunnels,



(l-r) Jim Eastman, Professor Emeritus Fred Eastman, Paul Robertson (BS 74, MS 79) of Aeronautical Testing Service, and A&A Chair Adam Bruckner

but Fred refused to patent it, feeling that its use should be widely encouraged. He was thrilled to see “his” wind tunnel run while he was here.

Fred was also honored at the department’s annual spring banquet at the Museum of Flight, where many of our alumni and faculty paid homage to him. For further details of Fred’s visit see: www.engr.washington.edu:8080/enews/2005-10/19.html.

Fred, who lives in a retirement home in Medford, Oregon, celebrated his 102nd birthday on February 10, 2006. We wish him a happy birthday, and many more!

75th Anniversary *(continued from p. 1)*

organized by the decade in which they graduated (beginning with the ’40s). Each group discussed their experiences in the department and in the wider world. After the group meetings, a representative from each decade joined a panel to talk about the defining events of their time. The morning concluded with a brunch and presentation by Suzanna Darcy-Hennemann (BS 81), 1999 Distinguished Alumna.

The day ended at the UW vs. San Jose State football game in Husky Stadium, resulting in the only Husky

victory of the season. No doubt the presence of A&A alumni, faculty, and staff influenced the positive outcome of the game!



Suzanna Darcy-Hennemann describes the “View From the Flight Deck.”

Over the two days of celebration, nearly 150 alumni, students, faculty, and friends helped us to recognize our achievements. Thanks to all who participated and all who have contributed to the Department of Aeronautics and Astronautics during the last 75 years. We look

forward to many more years of growth and success, and hope to see you in 2029 at the 100th Anniversary celebration!

Marine UAVs

Autonomous vehicles are useful for a variety of applications which to humans would be dull, dirty, or dangerous. The University of Washington Autonomous Flight Systems Laboratory (AFSL) has partnered with Northwind Marine Inc., to help develop SeaFox, an autonomous marine surface vehicle for use in military and civilian applications. Professors Juris Vagners and Rolf Rysdyk, along with Dr. Anawat Pongpunwattana and graduate student James Colito, will be adapting unmanned aerial vehicle (UAV) algorithms to the SeaFox. In addition, the AFSL will collaborate on SeaFox with the ScanEagle UAV of Insitu Group and Boeing to enhance “situational awareness” in a variety of marine environments.



Please visit the AFSL website for more information: www.aa.washington.edu/research/afsl/.

Astronaut Lands at UW



Front Row l-r: Christine Roark, Mathieu Fregeau, Richard Searfoss, Chad Lloyd, Nathan Jordan, Mark Phariss, Amirreza Rahmani. Back Row l-r: Tyler Downey, Bjorn Hansen, Graylan Vincent, and A&A Chair Adam Bruckner

Early last year A&A students were treated to a special seminar by former NASA Astronaut Richard A. Searfoss, who spoke about his experiences during the three Shuttle flights in which he participated. It was an exciting event for our students to be able to meet someone they not only admire, but hope to emulate. Searfoss has logged more than 39 days in space. He served as pilot on STS-58 (October 18 to November 1, 1993) and STS-76 (March 22-31, 1996), and was the mission commander on STS-90 (April 17 to May 3, 1998). He retired from the Air Force and left NASA in 1998. For the next few years he worked in private industry and, more recently, was a research test pilot at NASA's Dryden Flight Research Center. Searfoss left Dryden in February 2003 to pursue private business interests.

UWAL Goes Back in Time

The only thing missing was Snoopy, with his leather cap and goggles, flying in the Sopwith Camel that was tested in the Kirsten Wind Tunnel last June. The Sopwith, along with a Fokker Eindecker E.III, and a Fokker D.VII from the First World War, were part of a PBS special on the history of fighter aircraft. Granada Media, a British TV production company, produced a four-part series on the history of fighter technology and met with A&A Professor Scott Eberhardt, a consultant for the Museum of Flight's Personal Courage Wing. Several



Professor Scott Eberhardt

Students Win AIAA Awards

Under the guidance of Professor Kristi Morgansen, AIAA faculty advisor, students continued the department's history of excellence at the 2004 and 2005 Region VI AIAA Student Conferences. In 2004, we had 10 students travel to UCLA to present eight papers: Richard Golob, Stuart Jackson, Emmett Lalish, Robert Lilly, Sonca Nguyen, Peter Norgaard, Ted Shreve, Jason Smith, George Sutphin, and Kris Yirak. In the undergraduate category, George Sutphin and Jason Smith received second place, and Peter Norgaard received first place. Stuart Jackson received a special award for best presentation. Seven students participated in 2005: Colin Adams, Paul Carter, Takashi Maruo, Derek Schmuland, Ted Shreve, Jeffrey Boulware, and Sanjoy Som. Derek Schmuland received second place in the undergraduate competition, and Sanjoy Som received first place in the graduate competition. Congratulations to all.

Preparing for this year's Conference are undergrads Jacob Eschbach, Riana Evalle Ignacio, Elishka Jackson, David Kane, Garrett Klov Dahl and Bethany Martin. They worked with Professor Scott Eberhardt to build models and conduct wind tunnel tests on a Sopwith Camel, a Fokker Eindecker E.III, and a Fokker D.VII – all WWI aircraft (see article below). They have been documenting their results and will submit a paper for this year's Region VI competition in April to be held in Irvine, California.



Seniors Alishka Jackson (l) and Bethany Martin with the Fokker D. VII.

Photo by Barry Latter

of our undergraduate students (see above), along with Professor Eberhardt, created aerodynamically exact models and conducted the tests to determine how the planes performed. You can see test results and pictures at: www.aa.washington.edu/faculty/eberhardt/WW1/.

The Wind Tunnel has seen some other interesting activities. It served as the inspiration for a tuba concerto (replicating sounds in the tunnel) by Samuel Jones, who was commissioned to write the piece by the wife of James Crowder, a former Boeing Engineer and tuba player, as a tribute to his memory. UWAL also assisted Tour de France winning cyclist Lance Armstrong test the aerodynamics of clothing and bicycle equipment — perhaps contributing to his seventh consecutive win!

Accolades

PhD student **Yuko Hatano** was the recipient of the 2005 – 2006 Zonta International Amelia Earhart Fellowship.

Last summer, Yuko was an intern at the Japan Aerospace Exploration Agency where she worked on a micro-satellite project and learned technologies for micro/nano satellite development.

Grad student **Adi Salehuddin** received the 2004 Elizabeth Gould Award for International Understanding and the National Bureau of Asian Research Jane T. Russell Award for Leadership and Service.

Several of **Professor Dana Dabiri's** students received Mary Gates Scholarships for their research with him: Last year's seniors were: **Colin Adams** for "Preliminary Research on the Ionic Wind Effect," **Noel Pelland** for "Large-Scale Three-Dimensional Digital Particle Image Thermometry and Velocimetry Camera Design," **Toru Yamasaki** for "3D Digital Flow Visualization of Convection Cells," and senior **Amanda Horike** for "Ionic Wind Lifter."

Seniors **Nathan Hicks**, **Natalia MacDonald**, and **Mary Williams** were selected to receive National Science Foundation/Computer Science, Engineering and Mathematics Fellowships for 2005 – 2006.

Student Capstone Design Projects

The seniors in last year's **airplane design class** aimed to build a low-cost dynamically scaled UAV for low-speed handling characteristics and flight mechanics research of possible supersonic business jet configurations. The



A dynamically scaled flying model of a supersonic business jet configuration

students designed the modifications and built the modular UAV. A week of wind tunnel tests at UWAL with a dedicated multi-configuration model was completed in April. The work also covered weight and balance, structures, and systems integration. Fifteen seniors worked on the project over a two-quarter period. A first flight attempt failed on take-off. Damage was minor and the vehicle was repaired quickly, but then an engine problem was discovered, which prevented a second flight attempt. Even though the course is over, and most of the students involved are gone, the vehicle is now being readied for flight which is likely to occur in the next few months.

This capstone design course was led by Professor Eli Livne, Chet Nelson from Boeing Commercial in Everett, and Paul Robertson (BS 74, MS 79) from Aeronautical Testing Service, Arlington. We're grateful to ATS, Inc. and Boeing for their support in making this valuable experience possible for our students.

Is there ice on the Moon? Last year's **space design class** developed a mission to return samples from the Moon's South Pole. The Clementine and Lunar Prospector missions flown in the 1990s provided tantalizing evidence that large deposits of water ice may exist in craters near the Moon's poles, where there is permanent darkness and temperatures can reach -300 degrees Fahrenheit.

The presence of ice would be a great help for future manned lunar bases since this life-sustaining commodity wouldn't have to be transported there from Earth; spacecraft propellant could also be manufactured from the ice (water). The student design incorporated a "hopper" that maneuvered to three sample sites by ballistic hops, rather than using a more conventional wheeled rover. Major challenges included autonomous site selection and landing "in the dark," keeping equipment warm enough to work and getting the sample back to earth while still cold. The highlight of the design experience was a trip to Cocoa Beach, Florida, where five of the students presented their work at the annual RASC-AL conference sponsored by the Universities Space Research Association and NASA. Attendees included team leader Ted Shreve, Steve Isley, Matt Bartone, John Moore, and Paul Carter, along with Professor Tom Mattick. After the conference the students participated in a tour of the Kennedy Space Center.



Space design students (from l) Matt Bartone, Steve Isley, Paul Carter, Ted Shreve, and John Moore at the Kennedy Space Center.

Student Awards

2004

SENIOR AWARDS

A&A Aerospace Design Award

Bill Sutherland and Kakani Young

Dale and Marjorie Myers Scholarship

Steven Isley

Lance Erik Fogde Endowed Scholarship

Miguel Rodriguez

George E. Solomon Prize for Exceptional Performance

Peter Norgaard

Robert J. Helberg Memorial Award

Garrett Teahan

Robert Max Reynolds Endowed Scholarship

David Peterson and Lawrence Stewart

Rudolph H. Reichel Memorial Award

Sonca Nguyen

Dr. Walter F. Hiltner Award

Melissa Kagele

JUNIOR AWARDS

Bishop-Fleet Foundation Scholarship

Kevin Kajitani

Clyde L. and Ursula A. Crawford Scholarship

Jason Buller and Greg DeVore

Dale and Marjorie Myers Scholarship

Steve Nielson

Louis and Katherine Marsh Memorial Scholarship

Susanna Yuen

Roy E. and Irene C. Grossman Scholarship

Emmett Lalish and Noel Pelland

GRADUATE AWARDS

Achievement Rewards for College Scientists

LaTasha Taylor and Richard Wise

Aeronautics and Astronautics Alum Fellowship

Aliyah Ali

Andris Vagners Memorial Fellowship

Kudah Mushambi

Astronaut Scholarship Foundation Award

Louis Giersch

The Boeing Company Fellowship

Jeremy Kimball

George and Anita Snyder Fellowship

LaTasha Taylor

Gordon C. Oates Memorial Endowed Fellowship

Nathan Jordan

Graduate School Top Scholars Award

Bhuvana Srinivasan

Hertzberg Research Award

Benjamin Triplett

Osberg Family Trust Fellowship

Justin Hatcher

Percy Halpert Memorial Fellowship

Nathan Jordan

2005

SENIOR AWARDS

A&A Aerospace Design Award

Jason Buller and Anna Vogler

George E. Solomon Prize for Exceptional Performance

Toru Yamasaki

Robert J. Helberg Memorial Award

Nathan Anding

Robert Max Reynolds Scholarship

Colin Adams and Chi-Ho Eric Cheung

Rudolph H. Reichel Memorial Award

Ted Shreve

Dr. Walter F. Hiltner Award

Steven Isley

JUNIOR AWARDS

Bishop-Fleet Foundation Scholarship

Kevin Kajitani

Clyde L. and Ursula A. Crawford Scholarship

Kelly Allen

Dale and Marjorie Myers Scholarship

Derek Schmuland and Anish Taylor

Donald C. Whitworth Scholarship

Mario Manuel

Hershel D. Graves Scholarship

Jonathan Tu

Lance Erik Fogde Endowed Scholarship

Annamarie Askren

Louis and Katherine Marsh Memorial Scholarship

Natalia MacDonald

Roy E. and Irene C. Grossman Scholarship

Amanda Horike, Randall Svac, and Mary Williams

GRADUATE AWARDS

Achievement Rewards for College Scientists

Eric Meier

Andris Vagners Memorial Fellowship

James Colito

George Dragseth Endowed Fund

Adam Zeleske

George and Anita Snyder Fellowship

Crystal Simon

Gordon C. Oates Memorial Endowed Fellowship

Travis Bryce

Graduate School Top Scholars Award

Kunihiko Kosuge

Henry L. Gray Memorial Fellowship

Colin Adams

Louis and Katherine Marsh Fellowship

David Schmitt

Osberg Family Trust Fellowship

Christopher Lum

William and Marilyn Conner Fellowship

Sean Knecht

Distinguished Alumni

Gérard Brachet 2004

The 2004 Distinguished Alumnus, Gérard Brachet, was honored at the department's 75th Anniversary banquet. Gérard received his undergraduate engineering degree from the Ecole Nationale Supérieure d'Aéronautique (1967) and his MS in Aeronautics and Astronautics from the UW (1968).

He began his professional career at the Centre National d'Etudes Spatiales (CNES) in France, and from 1972 to 1982 was successively head of the Orbit Determination and Spacecraft Dynamics Department, the Scientific Programs Division, and the Application Programs Division. Gérard was directly involved in defining and developing the French SPOT satellite program in 1978 and was principally responsible for setting up the SPOT IMAGE company to

market its earth observation images, serving as chairman and chief executive officer until 1994. He was also an advisor on space matters to the European Commission, and in 1991 – 92 he helped formulate space policy for the European Union.

Gérard returned to CNES in 1994, and became the director for programs, planning and industrial policy; then scientific director; and finally director general. He was also chairman of the "International Committee on Earth Observation Satellites," which gathers together 20 space agencies and seven international organizations to coordinate Earth observation satellite programs. Since January 2004 he has been an aerospace consultant.

From 1981 to 1989 Gérard was president of the French Society for

Photogrammetry and Remote Sensing. In 1992 he received the Brock Gold Medal Award from the International Society for



Gérard Brachet

Photogrammetry and Remote Sensing. He is the only French person to have been honored in this way. In 1994, he received the Remote Sensing Society Award.

Gérard is a member of the International Astronautics Academy and the National Air and Space Academy. He is an Officier de l'Ordre National du Mérite (1997) and a Chevalier de la Légion d'Honneur (1986).

Edward Bock 2005

Ed Bock retired in early 2000 after more than 39 years devoted mostly to the Atlas space launch vehicle. Ed, who graduated from the UW with a BSAE in 1961, started work as an associate engineer on the Atlas F ICBM silo missile lift system with General Dynamics Convair. He also designed support equipment for Atlas missions with experimental lifting body reentry vehicles. He next worked in Launch Vehicle Fluid Systems, designing and testing components for the Centaur LH2 propellant system. During this period, Ed attended San Diego State University to obtain his MSME. He then spent 12 years in Launch Vehicle Predesign. In 1980, Ed led the structural/mechanical design for a runway attack derivative of the Tomahawk cruise missile. He next joined the Shuttle/Centaur Program Office as a vehicle manager

in early 1983. The first Centaur G was undergoing cryogenic cold flow testing at Cape Canaveral when the Challenger accident occurred, which terminated the program. Ed was immediately assigned to lead GD's Medium Launch Vehicle I (MLV I) proposal for the USAF. McDonnell Douglas' Delta II was selected, but the USAF was so enamored with the Atlas/Centaur capability that they



Edward Bock

released a new RFP for an MLV II. GD won this competition, which led to development of the Atlas II vehicle. Ed was promoted to director of systems engineering for GD's Space Systems Division. A year later he led the proposal team for the Advanced

Launch System (ALS) development. GD was awarded one of the USAF contracts, and Ed became the program's deputy director.

In 1989 Ed joined the Atlas Program Office as deputy director and led a proposal to convert Space Launch Complex 3E to accommodate the new Atlas IIAS. He became program director, and construction was well under way when GD's Space Systems Division was acquired by Lockheed Martin in 1994. Ed became VP of Atlas Programs in November 1994 and was involved with its move from San Diego to Denver. The program thrived there, steadily reducing costs and improving reliability. At the time of Ed's retirement in February 2000, the Atlas II had 48 consecutive successful missions; the success string currently stands at 75, including seven first flight configurations.

Alumni Updates

James Hogg (BS 41), has written a book titled, "If Man Were Meant To Fly."

Pat Duvall (BS 65) retired from Flight Structures, Inc. in Washington in Oct. 2003. He is tutoring So. Seattle Community College students in calculus, and enjoying his two grandchildren.

Roger Nicholson (MS 78, PhD 86) is an associate technical fellow in airplane safety at Boeing Commercial Airplanes, working on 747-400 flight management and central maintenance, 767 autopilot; 777 navigation and guidance; air traffic management; Free Flight Task Force; service engineering, and 787 airplane safety. He's also a certified ski/snowboard instructor!

Suzanna Darcy-Hennemann (BS 81) and 1999 A&A Distinguished Alumna, chief test pilot of the Boeing 777-200LR, set a new long-distance flight record for a commercial aircraft, which flew non-stop from Hong-Kong to London last December.

Several alums completed flight testing to evaluate ground effect on a Piper Comanche owned

jointly by **Richard Colgren (BS 82)** and **Nell Justice (BS 82)**.

Others participating in the testing included **Frank Brown (MS 79)**, **Ron Hart (BSME 62)**, **Clen**

Hendrickson (BS 60), and **Wayne Olson (BS 67, MS 68)**.

The results are documented in AIAA paper 2003-5316, "Ground Effect Determination on a Piper Comanche," by Wayne Olson and Richard Colgren.

Artemio G (Tim) Cacanindin (BS 84, MS 85) writes that he is still enjoying life as a USAF civilian at Edwards AFB, after 18+ years working on various F-16, B-2, and F-15 test programs, and also on the F-35 Joint Strike Fighter. Tim is responsible for mission systems (avionics, armament, and other electronic systems). He and his wife, Connie, have four children.

Craig Hosking (BS 84, MS 91) is the program manager of INFANIA Corporation's Space Radiosotope Generator Program. Prior to joining INFANIA in 2004, Craig held lead engineer positions at both Pratt & Whitney and Boeing.

Matthew Jessick (MS 84) is director of game development at Speedco Shooting Sports, Inc. in Texas.

Dave Krismer (BS 88) is a project engineering specialist at Aerojet, working on the development of high-performance bipropellant rocket engines for in-space propulsion.

Drew Magill (BS 88) is the director of market analysis with Boeing Commercial Airplanes.

Jesse Vickers (BS 88) is a command aerospace engineer at the Air Mobility Command Headquarters in Illinois.

Jeff Barager (BS 89) is a senior associate with Point B. Solutions Group, LLP in Seattle, providing project leadership to businesses that are changing and enhancing their processes and technologies. He's also a drummer in the band, Rosie's Boyfriend!

John Doney (BS 89) is a commander and submarine officer with the US Navy's Fleet Anti-Submarine Warfare Command Division.

Christopher McLean (BS 89, MS 91) is a senior propulsion engineer and team lead for multiple satellite

programs at Ball Aerospace and Technology Corp. in Colorado.

Neil Phelps (BS 89, MS 95) is a flight operations engineer at Boeing, producing and maintaining airplane performance manuals for the 737 airplanes, and supporting flight operations.

Kamal Desai (BS 90, MSA 91, MEng 93) is a senior technical trainer at WindRiver Systems in California with responsibility for customer education curricula for real-time aerospace and defense products.

Michael Moen (BS 90) is an engineering manager in the Technology Manufacturing Group at Intel in Washington analyzing assembled circuit boards and thermal-mechanical solutions, CPU socket development, solder joint reliability, and lead-free solder transition for the electronics industry.

Aline Cotel (MS 92, PhD 95), a professor at the University of Michigan, received the 2005-06 CEE Departmental Award for "exceptional contributions to the Civil and Environmental Engineering Department at the University of Michigan."

Damon Flenbaugh (BS 92, MS Ind Engr 00) is manager/manufacturing engineer for the Intel - Portland Technology Development Division.

Steve Hamling (BS 92, MS 94) is a lead structural analyst on the F/A-22 fighter program at Boeing. Steve and his wife, Eileen, have two children, Melissa and Riley.

Natasha (Hanks) Miller (BS 92) worked for Motorola and Intel for three years each, then took on the most challenging position imagined. She's the full-time mom of three boys (all 18 months apart) and says it's the best and most rewarding job she'll ever hold.

Quinn Smithwick (MS 92, PhD 02) was selected for the 2004 Best Paper Award of the ASME Journal (see p. 4). Quinn is currently at The Schepens Eye Research Institute at The Harvard Medical School.

Bill Fishburn (BS 93) celebrated his 8th anniversary with Intel last June and became eligible for a sabbatical, which included a trip to Panama to see family, and visit with another A&A alum, **Juan Carlos Varela (BS 93)**. In addition, Bill and his wife and children were looking forward to moving into the new house they were building.

Hung Tang (BS 93) is a project engineer at The Aerospace Corporation, supporting the development of next-generation warning satellite systems. He is also in the US Air Force Reserve with the 7th Space Operations Squadron at Schriever AFB, CO.

James Dutton (MS 94) was selected by NASA as an astronaut candidate.

Jared Kipp (BS 94) is an avionics engineer at Honeywell Defense Avionics Systems Division in Albuquerque, New Mexico, where he designs and flight tests FMS Performance Systems for airplanes, such as the C-5, C-130J, and KC-10.

Karen (Mark) Sokol (BS 95, MSME 96) wrote to congratulate us on our 75th Anniversary and share memories of her time here. Congratulations are also in order for Karen, who was married in July 2004. Her



Alumni Updates

husband, Daniel, is also an aeronautical engineer!

Jerome Curlier (MS 96) is a senior architect designing eBusiness solutions at Ascendant Technology in Vancouver, BC.

Denise K. Yamagata (MS 96) is manager, Components Liaison & Industrial/Manufacturing Engineering at Erickson Air-Crane, Inc., in Oregon.

Scott Carpenter (MS 97) and his wife welcomed a beautiful baby girl, last March. Scott was featured in *Columns*, the UW alumni magazine, in June 04 for his work at JPL on the Mars Exploration Rover Project. He is now at Northrop Grumman Space Technology.

Jim Grossnickle (MS 97, PhD 01) and his wife Michelle had a baby boy, Jacques Alexander, in August 2004. Jim is a research associate at the UW Redmond Plasma Physics Lab.

Jon Rue (MS 97) and his wife, Darcy, welcomed their first child, Audrey Elizabeth, in August. After several years working for KEAS, Inc., in Bristol, England, Jon returned to Seattle and is working for a scientific computing company.

Peter Vitt (MS 97) is a major in the US Air Force, and a student at the USAF Test Pilot School, Edwards AFB, California. It's a year-long course preparing pilots, navigators, and engineers for work in the flight test world.

Laila Elias (BS 98) and her husband Dave welcomed baby "Mak" in September 2004. Laila is working at JPL in California.



Rob Grover (MS 98) was an entry, descent, and landing (EDL) engineer at NASA/JPL on the history-making team of the Spirit and Opportunity Mars Exploration Rover missions. He is lead

EDL systems engineer on the upcoming 2007 Phoenix Mars Lander mission.

Sutthiphong "Spot" Srigrarom (MS 98, PhD 01) is an Assistant Professor in Thermal and Fluids Engineering at Nanyang Technological University in Singapore.

Shahin Afshari (BS 99) and his wife Nazzie had a baby girl, Avah, in November 2004 (who joins big sister, Neda). Shahin works in the Loads and Dynamics group at Boeing. He also runs Dara Aviation, a small aerospace company manufacturing UAVs.

Brian Covey (BS 99) was an instructor pilot in the US Air Force. He taught fighter and bomber students the basics of formation, instrumentation, and low-level flying, and was looking forward to flying the F-16 beginning in 2005.

Ben Davenport (BS 99) is captain of the "Purple Foxes," a Marine Helicopter Squadron stationed in Iraq, which performs casualty evacuation missions. These Marines volunteer for this deployment, which has them flying in the face of danger to extract the wounded. We wish them a safe return.

Joon Ho Lee (BS 99) is a test development engineer, living in San Francisco, California.

Kirsten (Carpenter) Thompson (BS 99) brought her new husband, Blair, to the A&A 75th Anniversary celebration. Kirsten works in the Cargo Integration and Operations Division at NASA where she has been involved in the Japanese

Experiment Module (JEM) systems.

Laki Vlachos (BS 99) and his wife had a baby boy, Vasili Phanivong Vlachos, in July 2004, at the same time that Laki was finishing his MSEE from USC.

Amy Canfield (BS 00) is at NASA Kennedy Space Center, in what she describes as a "dream job" as quality engineer for Shuttle Processing. She is pursuing her MS in Space Systems at Florida Institute of Technology.

Matt Crow (BS 00, MS 02) is working at Edwards Air Force Base in California. Matt enjoys his job (working on a new airborne laser), but prefers the rain in Seattle to the desert!

Kyu Hwang (BS 01) is at DARPA/CENTRA Technology working in the Falcon program office to help manage SLV concepts of SpaceX, AirLaunch, Lockheed Martin, and Microcosm.

Valerie Izzo (MS 01, PhD 04) was awarded a DOE Fusion Postdoctoral Fellowship and is working at MIT.

Tiffany Lapp (BS 01) and **Ryan Pettit (BS 01)** were married in December 2004. After leaving the UW, they went to MIT to pursue graduate degrees in aeronautics, and are now at Boeing in Seattle.



After working at JPL on the Mars Rovers and other projects, **David Meller (MS 01)** and his wife Mairah moved from Los Angeles to Phoenix, where he is completing his PhD in Bioengineering at Arizona State University.

Doug Browning (BS 02) worked for Aerojet in Redmond for several years, then decided to pursue a master of engineering in space systems at the University of Michigan.

Lorenz Eber (MS 02) and his wife and two daughters bicycled more than 9,000 miles and visited 25 countries around the world to raise money and awareness for Asthma. You can read more about their trip at: www.bikeforbreath.org.

Derek Inaba (BS 02) wrote from the Kennedy Space Center with news and photos of the August 2005 launch of the Mars Reconnaissance Orbiter. He's now working on the 2007 Phoenix Mars Lander, with alums **Rob Grover (MS 98)**, **Ed Odell (BS 96)** who received a public service medal for his work on the MER, and **Richard Warwick (BS 94, MS 96)**.

Takahiro Ishige (MS 02) wrote to let us know that he and his wife had a beautiful baby girl in 2004. Takahiro works for Nissan in Yokosuka Bay, Japan.

Chris Keeler (MS 02) and his wife, Joelle, are expecting a baby in July. Chris is a propulsion engineer at General Dynamics in Arizona.

After working at Lockheed Martin in Sunnyvale, for several years, **Joshua Leingang (BS 02)** and his wife returned to the Northwest, where Josh now works at Boeing.

Jonathan Gunther (BS 03) is a pilot with the Air Force in Minot, North Dakota where in one week in October, it was 87° on a Saturday and snowing by Wednesday!

(continued on back cover)

In Memoriam

Paul Arthur Carlstedt (BS 52) passed away on April 11, 2005. After graduation from the UW, Paul worked for Honeywell and Boeing, and later in his career at Tall's Camera Shop. Paul enjoyed inventing industrial machinery, and was an A-1 pilot who flew his own plane all over the country. Paul was a long-time donor to the UW, and through his will he has established a substantial endowment that will support students in the A&A department.

Mark Nelson (MS 85) passed away on January 13, 2006. Mark, who was a field service representative for Connexion by Boeing, was on assignment in Japan at the time of his death. Mark was a member of the Connexion One Flight Test team and took part in many historic flight tests. A Boeing colleague said, "Mark made us all look good throughout the test program. He was a friend to everyone on the team, a kind and good man." Those who knew him here will remember him in the same regard.

Willa O'Connor, longtime friend of the department, passed away last October. Willa was married to Boeing engineer Walter Hiltner. After he died unexpectedly in 1966, the Dr. Walter F. Hiltner Award was established in his honor. The award is given annually to an undergraduate in recognition of scholastic achievement, creative thinking, and leadership in student affairs. Willa always attended our spring banquet, and enjoyed meeting the scholarship recipients and presenting them their awards.



Raymond B. Oliver (BS 43, MS 48) passed away two years ago, and his wife, Rebecca, donated a four-volume, autographed set of the collected works of Theodore von Karman to the department in Ray's memory.

Richard Outsen (BS 33) died July 30, 2004. He worked at The Boeing Company.

UW A&A 1984 Distinguished Alumnus **Dr. George Solomon (BS 49)** passed away in April 2005. George's education was interrupted when during WWII he volunteered for the infantry, and fought in the Battle of the Bulge. He was given the Purple Heart and Bronze Star for his heroism. After the war, he earned his PhD in physics and aeronautical engineering at Caltech. The culmination of George's distinguished engineering career was becoming one of three executive vice presidents of the Defense and Electronic Sector of TRW, Inc. During his career he contributed to the Pioneer, Viking, TDRSS, and Apollo programs.



We were saddened to hear that **Warren Swanson (BS 43)** passed away. He worked as a chief engineer for North American Aviation, (which became Rockwell), and later worked at NASA. Warren was an expert in stability and control, among other technologies.

Everyone in A&A who knew **Patrick Myrick (BS 77)** was touched by his warmth, intelligence, and bright spirit. Lieutenant Myrick died August 10, 2004 when his S-3B Viking surveillance aircraft crashed on the island of Kita Iwo Jima, Japan, during operations from the aircraft carrier USS John C. Stennis.

After receiving his degree here, Patrick worked as a statistical analyst at the Rand Corporation before earning his officer commission in the United States Navy. He received his Naval aviation wings in 2001, and subsequently flew the S-3B Viking as a Naval Aviator aboard the USS Abraham Lincoln and

USS John C. Stennis. Patrick achieved 300 carrier landings during his career and flew combat missions during Operation Iraqi Freedom in 2003, for which he was awarded the Air Medal.



He was the recipient of other personal awards and medals, as well as campaign and other decorations. Patrick was interred with full military honors at the Arlington National Cemetery.

Our thoughts are with his wife, Alli, their young daughter, Julia, and with Patrick's family and many close friends. They have chosen to honor his memory by establishing a scholarship in his name, which will provide support for outstanding undergraduate students in the Department of Aeronautics and Astronautics. Contributions to the Patrick Myrick Scholarship may be made online at the A&A Web page: www.aa.washington.edu/ or via the enclosed envelope.

CAMPAIGN UW: CREATING FUTURES

Gifts, cash, and in-kind contributions were received from the following alumni and other friends between 1/1/03 - 12/31/05. We thank our alumni, corporate donors, and friends for their support. All gifts count toward A&A's share of the Campaign UW Initiative.

Charles & Susan Adams	William & Cora Davis	Phillip Johnson	Dennis Muilenburg
Daniel Addink	Kamal Desai	Jeffrey Joyce	Earl Murman
Harlow & Radha Ahlstrom	Kurt & Tracie DeVoe	Ken Kajitani	Dale & Marjorie Myers
Jaihong Ahn	Rollo & Donna Devore	Timothy Kangas	Allison Myrick
Steven & Lorene Allmaras	Eleanor Dickson	William Kaseburg	Matthew Naimi
Jere Anderson	Jules Dods	Michael & Nancy Spencer	Robert & Ann Neal
Joseph Anderson	Emmanuel Domingo	Kirk	Timothy & Debra Nelson
Dana & Anne Andrews	Pete & Betty Drummond	Elliot & Judy Klosterman	Leland & Carolyn Nicolai
Jason Andrews & Marian Joh	Luke Dubord	Carl Knowlen	Donald Oates
Anonymous	Michael Dunn	Takahisa Kobayashi	Joan Oates
Ramses Antoun	Henry Duvall	Shuichi Kosuge	Kenneth & Enid Oates
Luella Armstrong	Robert & Gretchen Dwinell	Jean & Roy Kraft	Thomas O'Brien
Eugene & Mary Arnold	Fred Eastman	Donald & Julia Krick	Willa & John O'Connor
Russell Ashleman	D. Scott Eberhardt	Kazuo Kumasaka	Edwin Odell
Thomas & Linda Avery	Laila Elias	Mitsuru Kurosaka	Lynn & Marcella Olason
David Babcock	Brandon Elieff	Alan & Sue Lampson	Wayne Oliver
Frederick Bachmann	Joshua Elvander	James Lancaster	Wayne Olson
Ronald & Evelyn Bang	John Fair	Janine Larsen	A.K. Oppenheim
Joseph Barton	Robert & Mary Farmer	Robert Larson	Terry & Florence Oswald
Paulyne Batchelor	Alan & Susan Faye	The Larson Family Trust	Richard Outsen
Pascal Bauer	Darlene Feikema	Russell Lautzenhiser	Bruce Palmer
Joseph & Gerri Beasley	Michael Filbin	John & Sharen LaVillette	Reid Parmerter
Emilio Beltran	Damon Flennaugh	Ruth Leabman	Donald Patterson
Peter Benda	Jenna Flynt	Melanie Ledbetter	Carl Pearson
Norman Bercoon	Eric Forbes	James Lee	Lawrence Pearson
Russell & Christine Berkheimer	Clifford & Beverly Forester	Diane Leigh	Dennis & Kathleen Peterson
Luidel & Brian Bernitt	David Frafjord	Gary Lent	George Phelps
Mark Betzina	Frederick & Joyce Frank	Kevin Leslie	Roy & Jeanne Phillips
James Blackaby	Larry Fransson	Lawrence Lewin	Zbigniew & Maria Pietrzyk
Joel Bloomer & Elaine Collins	Daniel Fraser	Robert Lind	Philip Pincosy
Edward & Wanda Bock	Wanda Frederick	Ogden & Jennifer Lin Jones	Hugh & Robin Poling
Terry Bollinger	Michael Frostad	Nicolas Loebel	Robert Pool
Ann Boynton	John Funk	Daniel & Joyce Lotz	Albert Porter
Robert Breidenthal	Anita Gale & Richard Edwards	Marvin Luke	James & Paige Price
Timothy Bressler	Martin Georges	Uy-Loi Ly	Scott & Julianne Pugh
William Brine	Dayton Griffin & Kelie Kegley	Preston Lyon	Lloyd Qually
Robert Brinker	Christian Gunther	Lawrence Malcom	David Quam
Frank Brown	Richard & Marie-Elizabeth	Navprit Mangat	Roger Raman
Adam Bruckner	Haase	Robert Marhefka	Paul & Sharon Stewart Reeves
Christopher & Elizabeth Burns	David Halaas	Judith Matthew	Donald & Erlene Reha
Robert Bush	Roger & Mary Lou Hanson	Arthur Mattick	Eric Reichel
Stanley Butchart	Ronald Hart	Erik Mattson	Luise Reichel
Eric Butcher	David Hartman	Wilma Maurel	Margaret Remlinger
Preston & Nancy Carter	Edna Hendriksen	Mary Mazick	Diana Rennhack
Abhijit Chakravarty	James Hermanson	Norman McCormick	Jerry Rising
Ronald Champoux	Terry Higman	Charles McDonald	Jason Roof
Jim J. Chang	Sean Hill	J.A. & Vickie McGrew	Thomas Rose
Kyu Choe	Kenneth Hoffman	David McMurray	John Ross
Joseph Christiansen &	Paul Hoffman	Mary & Eugene Melanson	Richard Rothermel
Susan Kennedy	Keith Holsapple	David Meller	Charles Rushmer
Walter Christiansen	Jonathan & Winnette Holtz	Mitzi Melzer	David Russell
Robert & Mary Clark	Leslie & Sidney Hoskins	Joseph Menard	Touraj Sahely
Paul Clement	Mark Hudgins	Perry & Lori Meyer	Loganathan Sankaran
Richard Colgren & Nell Justice	Albert Hwang	Stephen & Mary Miller	Joao & Debra Santos
E. Nadine Cook	Grace Jacobson	Gary Moir	Chip Saturn
Dana Dabiri	Arthur & Amie Jacot	Susan Monk	Arita & Perry Scarlatos
Dennis & Diane Dallara	Robert Jarrell	Kristi Morgansen	Richard Scherrer
Richard Daly	George & Enid Jeffs	Donald & Anita Morris	William Schmidt
Samuel Dao	Dale Jensen	Steven & Jacqueline Morta	Friedrich & Roberta Scholz



Christine & Bruce Schwager
 Richard & Judith Schweikhardt
 Richard Seaver
 Michael & Michelle Shepherd
 John Shields
 Raymond Shreeve
 Uri Shumlak
 Hal Smith
 Richard Smith
 William Smith
 George M. Snyder
 Paul & Alea Soderman
 George Soli
 George Solomon
 Kenneth Spratlin
 Loren & Carol Steinhauer
 John Steiner
 Donald Stevenson
 Douglas Stevenson
 Amy Stewart
 Paul & Kathy Stoltz
 Jeffrey Stone
 Amy Supple
 George Sutphin
 Joseph Sutter
 David Taflin
 Deneen Taylor
 Reid & Angela Templin
 Douglas Thayer
 Richard Todd
 Kwok-On & Lina Tong
 Ming Tsai
 Sheng Tsai
 Ian Turek
 William Tymczyszyn
 Michael Ungs
 Rao & Usha Varanasi
 Jesse Vickers
 Douglas Vojir
 John & Linda Wagemann
 Thomas Walker
 Douglas Wallinger
 Gordon Watanabe
 Robert & Laura Watt
 Philip Weber
 Edward Wells
 John Westergaard
 Lisa Wetherbee
 Anthony Wiederkehr
 Andre Williams
 Patricia Willner & Neil Martin
 James Wilson
 Daniel & Joann Wilson
 James Wolf & Kimberly May
 Asher Yap
 Oktay Yesil
 Tomoyasu Yoshikawa
 Georgia Young
 Seth Young
 Arturo Zamora
 Robert Zubrin

CORPORATE DONORS

Aeromech Incorporated
 Aeronautical Testing Service
 American Institute Of
 Aeronautics & Astronautics
 Andrews Space & Technology
 Aspen Aerogels, Inc.
 Aviation Training Consulting
 The Boeing Company
 Capital One Services, Inc.
 Conner Homes Company
 ERC, Inc.
 Erickson Air-Crane, Inc.
 Ewing Technology Associates
 Ford Motor Company Fund
 Foster-Miller, Inc.
 GE Foundation
 Gencorp Foundation, Inc.
 General Dynamics Space
 Propulsion Systems
 Goodrich Corporation
 Hewlett-Packard Company
 Honeywell Foundation
 Insitu Group Inc.
 Lockheed Martin
 Corporation
 The Henry Luce Foundation
 Manifest Destiny
 Microsoft Corporation
 Morta Engineering & Testing
 MSNW
 Murdock Charitable Trust, M J
 Nelson Scientific
 Explorations, LLC
 Northrop Grumman Corp.
 Reactive Energetics, Inc.
 The San Diego Foundation
 Science Applications
 International Corporation
 Seatbelt.Com
 The San Diego Foundation
 The Seattle Foundation
 Sienna Technologies, Inc.
 United Technologies Corp.
 Universities Research Assoc.
 Universities Space Research
 Assoc.

NEW ENDOWMENTS

Ted Sarchin (BS 33) recently established the Theodore and Marie Sarchin Endowed Fellowship in Engineering for graduate students in the department. Ted had nearly 40 years of experience in the field of ship design, and now lives in Southern California. In 1972, he earned the Navy Superior Civilian Service Award for his significant contribution to the development of cycloidal propulsion technology. Professor Fred Kirsten would be proud!

When **Peter Christie (MS 66)** passed away in 2003, his widow Rose informed us that Pete asked her to create an endowment in the department to support students. Pete was highly respected for his work as a structures engineer and stress analyst. He did not retire, and worked for more than 45 years at Boeing. He and Rose were married 44 years, and had two children, Kathleen and Sue.

From the estate of **Professor Abraham Hertzberg**, his children established the Ruth C. Hertzberg Endowed Fellowship in Aeronautics and Astronautics, in memory of their mother as their father had wished. While a faculty member, Abe had established the Abraham Hertzberg Distinguished Lectureship Endowment.

George Dragseth (BS 48, MS 50) established an endowed fund that provides support for any aspect of the life of the department. George, who died in 2003, worked at The Boeing Company.

Please Add A&A to Your Giving List

Aeronautics & Astronautics is benefiting from the generous support of alumni and friends whose donations help us to educate students, advance research, and shape the future. Some specific funds to which you might consider giving are:

- The Guggenheim Hall Restoration Fund
- The AERO/ASTRO Fund (which provides us with the greatest flexibility for addressing a variety of needs)
- Scholarship and Fellowship Programs.

We invite you to help create futures in Aeronautics and Astronautics. Please contact Paul Julin in the College of Engineering at 206.685.1927, or by e-mail: julin@engr.washington.edu.

Alumni Updates

Bradley Johnson (BS 03) is a structural engineer with Boeing Commercial Support-Rapid Response Center.

Tomohiko Ishiyama (MS 04) is working as an engineer at Epson in Portland, Oregon, and hopes to eventually return to A&A to pursue his PhD in controls.

Bill Johnson (MS 04) graduated in April 2005 from the Euro-NATO Jet Pilot Training Program, followed by more training in his final fighter/weapon platform.

Peter Norgaard (BS 04) stopped by during the holidays and told us about the rigors of graduate study at Princeton University.

Dave Peterson (BS 04) is pursuing graduate studies in Aerospace Engineering and Mechanics at the University of Minnesota in the area of hypersonic CFD.

Kristen Pilawski (BS 04), Anna Larsen (BS 04), Josh Rickey (BS 04), and Jason Smith (BS 04) all of whom live in Los Angeles, went to The Tonight Show, and got up-close and personal with Jay Leno! Kristen works for Boeing, Josh is at Northrup Grumman, and



Anna is at Raytheon. Jason, a mechanical engineer at Raytheon, provides support for production laser targeting systems.

We're sad to report that Konnie Landis, wife of alumnus **Bill Sutherland (BS 04)** passed away last June. Our thoughts are with Bill and his family.

Clint Travis (BS 04) is an engineer in the Static Loads Division of Boeing, designing the 787 Dreamliner. Clint is completing his MSAA here as well.

Min-Zu Tsai (MS 04) is pursuing his PhD at UCLA. He's enjoying all the activities and sights (and sports) in Los Angeles.

Kakani Young (BS 04) stopped by in June, during a break from her PhD studies at Caltech. She was a recipient of the National Defense Science and Engineering Graduate Fellowship.

Jim Dorer (MS 05) visited Seattle last May, the first trip here for Jim, who earned his degree as an EDGE student while working at Williams International in Michigan. He and his wife, Teresa, met the faculty and staff and toured the Northwest.

Rob Hanson (MS 05) is working at Andrews Space, Inc., a local aerospace company co-founded by alumnus **Jason Andrews (BS 94)**. Andrews Space made news when it won a \$2M defense contract to develop conceptual designs for the Hypersonic Cruise Vehicle.

Please enter your alumni updates at: <http://www.aa.washington.edu/people/alumni/submit.html>, or via the enclosed envelope.

We and your fellow alums are eager to hear about your latest personal and professional endeavors.

<http://www.aa.washington.edu> • Tel: 206.543.1950 • Fax: 206.543.0217

Time Sensitive Material

UNIVERSITY OF WASHINGTON
COLLEGE of ENGINEERING

Aeronautics & Astronautics

Guggenheim Hall 206, Box 352400
Seattle, Washington 98195-2400

RETURN SERVICE REQUESTED

64-0660



Highlight

Wanda Frederick
Writer and Editor

MaLora Ann Bate
Writer and Editorial Assistant

Contributors:
Adam Bruckner
Scott Eberhardt
Thomas Jarboe
Eli Livne
Tom Mattick
Rolf Rysdyk

Send address corrections, questions and
comments to the editor:
highlight@aa.washington.edu

Nonprofit
Organization
U.S. POSTAGE
PAID
Seattle, WA
Permit NO. 62