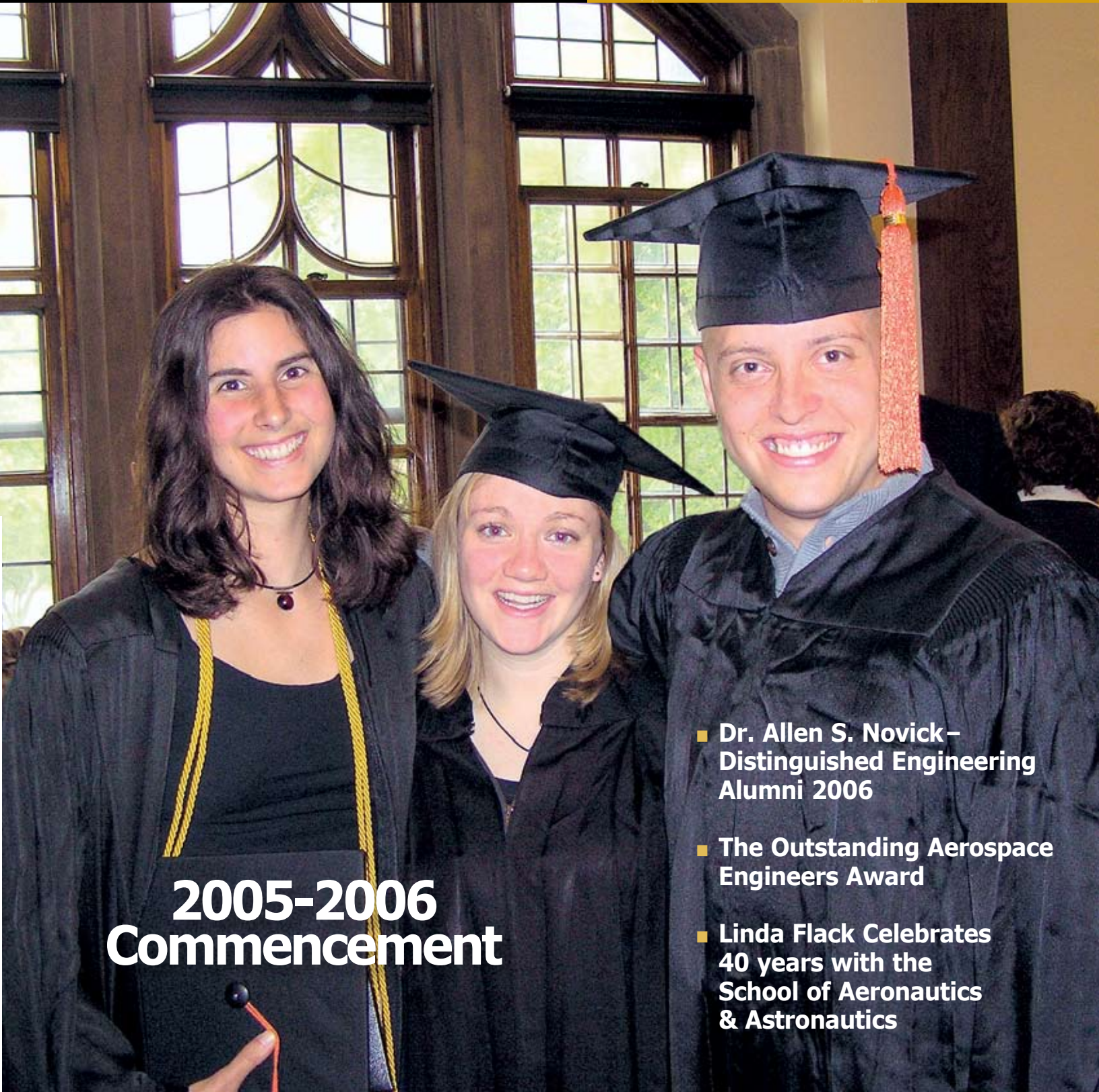


AeroGRAM

A newsletter for alumni & friends of the School of Aeronautics & Astronautics

Covering the 2005-2006 academic year



**2005-2006
Commencement**

- Dr. Allen S. Novick – Distinguished Engineering Alumni 2006
- The Outstanding Aerospace Engineers Award
- Linda Flack Celebrates 40 years with the School of Aeronautics & Astronautics

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AAE Headlines

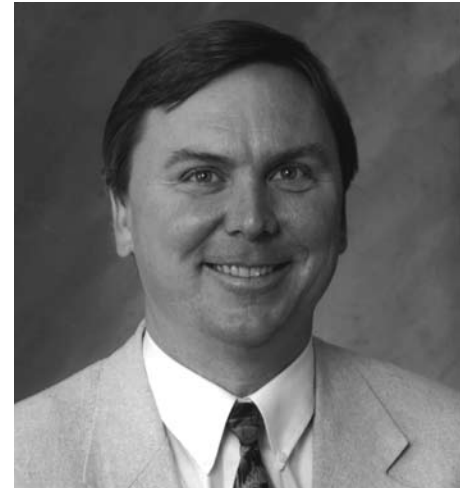
Thanks to your support, construction of Armstrong Hall of Engineering is making great progress. Those of you visiting campus will not miss it or you can visit the webcam at <https://engineering.purdue.edu/ECN/WebCam/cam06/> The School will move into Armstrong Hall in the summer of 2007.

The 2005-06 academic year was a great one for AAE faculty who conducted research totaling more than \$6.8 million in external expenditures. This represents growth of more than 30%. Congratulations to the AAE faculty. We are also pleased that three faculty members were promoted: Jim Garrison to Associate Professor with tenure and Wayne Chen and Steven Collicott to Full Professor. Also, there were many faculty accomplishments acknowledged by Purdue and peers and colleagues around the world. A few of these are listed below.

- Bill Anderson again received the AIAA Liquid Propulsion Committee Best Paper Award
- Bill Anderson and Steve Heister were recipients of the CT Sun School of Aeronautics and Astronautics Excellence in Research Award
- Wayne Chen was named University Faculty Scholar
- Bill Crossley received the School's Gustafson Outstanding Teacher Award
- James Longuski received the School's Elmer F. Bruhn Excellence in Teaching Award and had his book "The Seven Secrets of How to Think Like a Rocket Scientist" published
- CT Sun was the recipient of the Sigma Xi Faculty Research Award and had the 2nd Edition of his book "Mechanics of Aircraft Structures" published
- Marc Williams received the College of Engineering Outstanding Advisor Award

Student interest in the School remained strong with an undergraduate enrollment in Fall 2005 of 432 and a graduate enrollment of 215, the largest graduate enrollment in the School's history. The students are outstanding as evidenced by Jim Gregory who was named student engineer of the year by Boeing and Megan MacDonald who presented the Best Student Paper at the JANNAF Propulsion meeting. Also note that fellowships were awarded to Lindsay Millard (PEO Sisterhood), Yen Yu (Zonta Scholarship) and Geraldine Fritsch (Willy Sadeh Scholarship). We hope that many of you will be taking advantage of the newly minted AAE MS degree within Purdue's Engineering Professional Education Program.

I congratulate Ms. Linda Flack who celebrated her 40th Anniversary with the School. It is likely that she registered you for classes and provided tutoring when you needed it most. In many ways, she is the School of Aeronautics and Astronautics and we are pleased that she has promised to stay for years to come. She even gets a much deserved window office in Armstrong Hall!



Thomas N. Farris

As you probably know, Dean Linda P.K. Katehi became Provost at the University of Illinois in the spring. She led much positive growth in the College and School during her four-plus years at Purdue. In fact, the College received a 6th place ranking in US NEWS just before her departure. We wish her well. We are very pleased that Dr. Leah H. Jamieson was selected as the John A. Edwardson Dean of Engineering following a national search. We very much look forward to Dean Jamieson's leadership.

Dr. David (BSAE '64, DEA '93, OAE '99 and HDR '01) and Linda Swain funded the David O. and Linda Schimmel Swain Scholarship Program, which awards full tuition and fees for an Indiana resident studying in the School of Aeronautics and Astronautics for four years. The Swain-Schimmel Scholars will be funded by an annual gift that will support four students' tuition and fees throughout their four years at the School of Aeronautics and Astronautics, assuming the awardees continue to meet the academic standards for renewal. For the academic year 2006-2007, three students will receive a Swain-Schimmel Scholarship - a freshman, sophomore, and junior Aeronautical and Astronautical Engineering student. Each year thereafter, four students will receive the Swain-Schimmel Scholarship. The Swains generously have agreed to support the program for 15 years leading to a total contribution estimated at more than \$650,000. You will be reading about Swain-Schimmel Scholars in future Aerograms.

We always welcome you back to campus so that we might show you up-close the educational opportunities that your support provides our students. Having you back on campus gives us the chance to say thank you for your support and, more importantly, connects you with our present students so that you too can know why we make educating Purdue Aeronautical and Astronautical Engineers our life's work. We strive to make the Purdue education live up to the standards that you remember so well and remind you that we cannot do so without your support. Thanks again for your part in making times at Purdue so exciting.



Engineering Professional Engineering

PURDUE
UNIVERSITY

Bringing Purdue to You

The School of Aeronautics and Astronautics, through Purdue University's Engineering Professional Education program, is offering master's level courses in aerospace engineering and plans to increase its offerings so that students can earn non-thesis MS degrees in Aeronautics and Astronautics entirely via distance learning courses beginning in Fall 2006.



Brady Kalb

Brady Kalb is the first Engineering Professional Engineering Aeronautical and Astronautical MS recipient. He started grad school in the fall of 2004 after earning his Bachelor of Science degree in May 2004. He took 4 classes and, during that semester, accepted a position at General Electric Aircraft Engines in Cincinnati in January 2005. They agreed to pay his tuition for distance courses, to allow him to complete his masters' degree and he began taking courses online that same semester.

There are many advantages for taking a distance program, although tuition for the distance program is higher than tuition for an in-state on-campus student, his companies' tuition reimbursement program was probably the main benefit. It allowed him to work full-time in an engineering role and have the remainder of his education paid for.

Also being able to watch class whenever it is convenient and receiving courses with the streaming-video option gives the ability to watch class whenever you have time, rather than having to be on a set schedule. Brady found the Streaming video to be the best method for him.

For further information on the courses offered through the School of Aeronautics and Astronautics, please visit the web site at:

<https://engineering.purdue.edu/AAE/DistanceGradEd>

The School of Aeronautics and Astronautics is also offering several non-credit short courses that allow students to increase their knowledge in specialized topics or gain an overview of new areas in aerospace engineering. These short courses are administered by Purdue's Engineering Professional Education, which maintains a list of all Professional Development Short Courses. More information can be found on the web site.

https://engineering.purdue.edu/CEE/professional_development_programs/

The Neil Armstrong Hall of Engineering



Interior shot of Armstrong Hall

The Neil Armstrong Hall of Engineering is one of the cornerstones of Purdue's strategic plan and the university's commitment to remaining at the forefront of engineering research and education. Prominently located at the corner of Stadium and Northwestern Avenues, Armstrong Hall will be the flagship of the College of Engineering, and it will provide a dramatic, welcoming northern gateway to Purdue's campus.

Construction continues on schedule with the help of a mild winter. **Cindie J. Greaton (BS Biological Sciences 1980)** daughter of **K.O. and Betty Johnson** recently toured the building, with Senior Director of Development Cheryl Altinkemer and Associate Professor and Assistant Head of Mechanical Engineering Keith Hawkes. On the 3rd floor of Armstrong Hall will be the K.O and Betty Johnson Aeronautics and Astronautics Suite.

Keith Hawkes, Cheryl Altinkemer and Cindie Greaton on top of Armstrong Hall



Boeing Young Engineer of the Year

Boeing has partnered with Flight International to launch the Boeing Engineering Student of the Year Award, reflecting the shared desire of the industry to promote aerospace engineering as a career option. The judges of this category were three eminent retired Boeing engineers and all three expressed their admiration of the extremely high standard of entry.

The winner is **James Gregory**, who completed his submitted work as a post-doctoral student at the US Air Force Academy in Colorado Springs. The work covered two areas – the development of pressure-sensitive paint for use in unsteady aerodynamics; and the piezo-fluidic actuator for use in thrust-vectoring. Gregory is a graduate of Georgia Institute of Technology and Purdue University. He has previously won awards from the American Institute of Aeronautics and Astronautics, and a NASA research fellowship.

Boilermaker Test Pilots

Five Boilermaker Test Pilots in Wichita, KS. Pictured from left to right, at a recent Society of Experimental Test Pilots dinner.

Kevin Campbell BSAE '75, MS '76 - As a senior FAA Flight Test Pilot in Wichita, Kevin has participated in several certification programs at Boeing, Cessna, Learjet, and Raytheon over the last 15 years. An Associate Fellow in SETP, Kevin has conducted flight tests on over 70 aircraft models, including Air Force One.

Mark Schlegel B.S.E.Sc '68, MS '69 - As a Senior Engineering Test Pilot and Lead Pilot for the Global Express at Bombardier Aircraft Company, Mark has been involved in Wichita flight test for over 28 years at Bombardier, Learjet and Cessna. Mark is an SETP Associate Fellow and serves as the Central Section representative to the National Board of Directors.

Dale Felix BSAE '51 - As a retired Chief of Flight Test at Boeing (Wichita) and former Learjet and FAA Test Pilot, Dale was actively involved in Wichita flight test for over 35 years. Dale was instrumental in the development of the B-52 while at Boeing and holds the distinction of having been selected as the first SETP Fellow from the Central Section.

Pete Reynolds B.S.E.Sc '66 - As founder of PTR Aero LLC and former Vice President of Flight Operations at Bombardier, Pete was integral to Learjet and Bombardier flight test for over 30 years. Highlights include managing flight test programs for 11 new aircraft in an 11 year period. In 1993, Pete was elected to be the second (and only other) SETP Fellow from the Central Section and in 1999 was the recipient of the SETP J.H. Doolittle Award for outstanding accomplishments in aerospace engineering and technical management.

Marc Mannella BSAE '83, MS Aviation Systems from the University of Tennessee, '95 - As a Test Pilot for the Hawker 4000 at Raytheon Aircraft Company, Marc is a newcomer to Wichita flight test having recently retired as a Marine Corps Test Pilot. Marc is an SETP Associate Fellow and Chairman.



NASA Appoints Purdue Graduate

Purdue graduate **Mark Geyer BSAE'82; MSAE'84** has been appointed as deputy program manager of NASA's Constellation Program. The program will be based at NASA's Johnson Space Center in Houston. Geyer earned a bachelor's degree in engineering and a master's degree in aeronautics and astronautics from Purdue.

Geyer most recently served as manager of System Engineering and Integration for the Development Program Division of the Exploration Systems Mission Directorate at NASA Headquarters in Washington, DC.

Prior to joining Johnson in 1990 as a systems engineer supporting the lunar and Mars exploration office, Geyer worked at Lockheed Missiles and Space Corp. in Sunnyvale, Calif. Geyer began his NASA career in the new initiatives office working on the Mars rover sample return project and later the assured crew return vehicle.

In 1994, Geyer joined the space station program office, and he served as the Increment 0 lead for the space station from late 1998 until April 2000. He served as manager of the program integration office for space station, and in June 2004, he was named manager of operations integration.

Lt. Gen. Hudson assumes command of ASC



WRIGHT-PATTERSON AIR FORCE BASE, Ohio – Lt. Gen. John "Jack" Hudson assumed command of Aeronautical Systems Center on August 15, 2005 during a ceremony at the National Museum of the United States Air Force. The general was also promoted to his current rank during the event.

"Leading the center is an enormous responsibility, and something I can't do on my own, but I know I have an absolutely superb group of leaders here," General Hudson said after the ceremony. "The center is here to deliver war-winning capabilities to military war fighters, and our goal is to deliver capabilities on time and on budget for the U.S. Air Force, our sister services and our international allied partners."

General Hudson's previous assignment was at the Pentagon as the Assistant Deputy Undersecretary of the Air Force for International Affairs. As ASC commander, General Hudson will serve as the Program Executive Officer for aircraft procurement and modernization and will manage a budget of approximately \$19 billion and a workforce of more than 12,000 people located here and at 37 units worldwide. The general has served as the director of several system program offices, was the senior military assistant to the Undersecretary for Defense for Acquisition and Technology, and director of the Joint Strike Fighter program. He received his commission from the U.S. Air Force Academy in 1973 and is a command pilot with more than 3,500 flying hours in the A-10, A-7, T-38 and 42 other types of aircraft.

Charles D. Walker

Retires from The Boeing Company

Purdue astronaut alumnus Charles D. Walker BSAAE'71, OAE'99 has retired from The Boeing Company. He and his wife Susan now plan on exploring professional and personal goals that they have plotted out over the years

Walker joined the McDonnell Douglas Corporation in 1977 as a test engineer on the Aft Propulsion Subsystem for the Space Shuttle orbiters. He joined the Space Manufacturing (later named Electrophoresis Operations in Space, EOS) team as one of its original members. He shares in a patent for the McDonnell Douglas developed continuous flow electrophoresis (CFES) device.

From 1979 to 1986, he was Chief Test Engineer and Payload Specialist for the McDonnell Douglas EOS commercialization project. He was involved with the program support activities at Kennedy Space Center, Florida, and at the Mission Control Center in Houston, Texas.

Confirmed by NASA in 1983 as the first industrial payload specialist, Walker accompanied the McDonnell Douglas CFES equipment as a crewmember on mission STS-41-D, Discovery, August/September 1984. He made his second flight on STS-51-D, Discovery, in April 1985. His third flight on STS-61-B, Atlantis, in November 1985, saw the first construction project in space as crewmembers tested building methods in preparation for the construction of the space station. He accumulated over 20 days in space and traveling 8.2 million miles.



In May 1986, Mr. Walker was appointed Special Assistant to the President of McDonnell Douglas Space Systems Company; working in Washington, D.C. He has also been a member of the National Research Council's Space Applications Board, and an independent organization review of national space policy.

In 1999 Mr. Walker was appointed Senior Manager of Space Programs Business Development and Marketing with The Boeing Company Washington D.C. Operations.

In addition to his technical activities Mr. Walker has authored several papers and book contributions on space development, commercialization, and space history, plus columns and articles appearing in national newspapers and magazines. He is a board director of the National Space Society.

ZERO Gravity Flight Experiment AAE 418

This year, sixty-five undergraduate student teams from all over the country converged on Houston, Texas to conduct experiments in a reduced gravity environment aboard the agency's famous "Weightless Wonder" aircraft.

Each year, the Reduced Gravity Student Flight Program (RGSFP) gives undergraduate students the opportunity to propose, build, and fly a reduced gravity experiment. The teams performed the experiments aboard NASA's C-9 aircraft, which produces weightlessness 25 seconds at a time by executing a series of about 30 parabolas – a steep climb followed by a free fall – over the Gulf of Mexico. During the free falls, the students are able to gather data in the unique environment and experience how an astronaut feels while floating in space.

On March 7th, Purdue astronaut Dr. Andrew Feustel flew in zero-gravity with Purdue undergraduates Andrew Maurer and Kate Bradley. "Fortune" magazine reporter Kate Bonamici also flew with them. This happened because Andrew Maurer led his team of students, in Purdue's unique AAE 418 "Zero-gravity Flight Experiment" class, to write a research proposal for an original zero-gravity experiment that was selected by NASA in a nationwide competition.

The students then designed, built, debugged, and flew their original experiment and took data in weightlessness on this NASA research aircraft on both March 7 and 8. Dr. Steven H. Collicott is the faculty advisor to the team.

Purdue astronaut Dr. David Wolf flew with two Purdue students and Dr. Collicott in zero-gravity in July 2004. In the last nine years Purdue students have amassed the equivalent of 1.5 days in orbit, 1.5 hours on Mars, and nearly 1 hour on the moon in this competitive NASA program. This surpasses the achievements of students from any other university in the world.

Blue flight suit in the lower right is Dr. Feustel, above him is Kate Bonamici from Fortune, on the left is Purdue student Andrew Maurer, and Kate Bradley (now Purdue alum) is to the left of Dr. Feustel.



The William E. Boeing 2006 DISTINGUISHED LECTURE

Dennis Mendoros, founder, owner, and managing director of Euravia Engineering & Supply Co. Ltd. delivered the seventh William E. Boeing Distinguished Lecture on November 30, 2005. Entitled **Technological Advancement through Innovation and Cluster Development**, Mendoros shared his thoughts on why developed nations should not compete on price alone and why continuous product development, innovation, and a well-managed supply chain should drive competitiveness.

An aeronautical engineer and U.K. Civil Aviation Authority licensed engineer, Mendoros studied aeronautical engineering in Scotland and the Hellenic Air Force in Greece. Following service in

the Hellenic Air Force as an engineer at the Tactical Air Force Headquarters, he served with General Electric as an evaluation engineer and progressed to head of all foreign programs for the Hellenic Aerospace Industry.

Mendoros is a founder, member, and chairman of the Northwest Aerospace Alliance (NWAA) in England. The NWAA is considered a role model for cluster development representing more than 750 aerospace companies aimed at promoting competitiveness and best practices. He is also a member of the Northwest economic panel of the Bank of England, board member of the University of Central Lancashire, member of the Lancaster University Court, and works closely with a number of

other regional universities.

As a board member of the Northwest Development Agency he was chairman of the Northwest Innovation and Technology Advisory Board and Business Development group. He is a member of the Institute of Mechanical Engineers, a senior member of the American Institute of Aeronautics and Astronautics, and a non-destructive testing engineer. Mendoros was awarded the Order of the British Empire (OBE) in the Queen's Millennium honors list for services to industry and commissioned a deputy lieutenant for the County of Lancashire.





Igniting FALL SPAC

Purdue University alumnus and astronaut Col. Mark N. Brown was the guest VIP at the 10th annual Purdue Fall Space Day which took place on Saturday October 20, 2005. Over 350 elementary and middle school students took part in the annual event.

School students are given the opportunity to learn about aeronautical and astronautical engineering and space exploration by participating in age-appropriate activity sessions throughout the day. Past VIP astronauts include Guy Gardner; Mark Brown; Gary Payton; Don Williams; John Casper; Janice Voss; Loren Shriver and John Blaha.

Purdue student volunteers lead the event and present a lesson pertinent to the activity with a NASA educational video and a PowerPoint presentation about the science, technology, and history of the activity. Purdue students are a good role model and are on hand to help the younger students. Each of the nine activities provides an interactive educational experience that reaches across several disciplines. 157 Purdue students from 22 majors ran the 2005 event.

In celebration of its 10th anniversary this year, the theme was "Igniting a Generation" and each of the twenty-one groups was named after a Purdue astronaut alumni.

Purdue Fall Space Day is hosted by the School of Aeronautics & Astronautics and sponsored by the Indiana Space Grant Consortium; DaimlerChrysler; Purdue Engineering Student Council (PESC) Eli Lilly and past PFSD student directors Mitch Epstein and Gina Pieri. It was inaugurated on November 9, 1996 by Cindy Mahler, the 1996 president of Purdue University chapter of Students for the Development and Exploration of Space. (Purdue SEDS) Due to sponsorship, PFSD is able to provide an entire day's worth of space, science, and engineering centered activities for third through eighth graders at no cost to the participants.



a Generation

E DAY

2005



Facts and Figures

- **Now in its 10th year, over 2,381 elementary students have benefited from the program since it started in 1996**
- **In 2005, 296 Boys and 132 Girls attended**
- **Elementary Students came from 91 schools in three states, Ohio, Illinois and Indiana**
- **2005 had the highest number of Purdue University volunteers at 157 from 22 majors from Purdue University**

NEWS ABOUT *you*

Class Notes

Dr. Michael Murphy BSAE '57; MS '59; PhD.'64 - Nominated by a committee of the American Institute of Aeronautics and Astronautics as one of two people to be candidates for the President of that national organization. Previously, he has been VP Technical (twice) and VP Finance of that organization.

Robert Swaim BSAE 1957, MSAE 1959, Ph.D. (EE) Ohio State 1966 received the AIAA 2005 Sustained Service Award in San Francisco in 2005. He received this award in recognition of three decades of outstanding and sustained service to AIAA section, regional, and national activities and 48 years as an AIAA member.

Robert J. McElvain BSAE'58 Sedona, AZ. Instructor for AARP Tax Aide Services and is an avid tennis player

Joseph C. Ditto BSAE '59 recently retired from The Boeing Co. after over 46 years on one application to the Douglas Aircraft Co. He left program management in 2000 to become the Director of a new multiple discipline technology called Mission Assurance (MA) for the Boeing Expendable (Rocket) Launch Systems. Mr. & Mrs. Ditto are enjoying retirement from their homes in both California and Indiana.

Tom Leech BSAE'59 has published two new books in 2004, "How to Prepare, Stage & Deliver Winning Presentations" and "Outdoors San Diego: Hiking, Biking & Camping"

Dr. David H. Quick BSAE'61 Chair, American Society of Engineering Education College-Industry Partnership Division; Program Chair, 2005 ASEE Annual Conference CMC Industry Day Sessions; AIAA Corporate Member Rep. on behalf of Rolls-Royce; Charter Member of the Industry-Government-University Roundtable for Enhancing Engineering Education; Director on ASEE Corporate Member Council Executive Board; Director on ASEE College-Industry Partnership Division Executive Board; Chair, Rolls-Royce Engineering Awards Committee; Vice Chair, Rolls-Royce Engineering Education Committee

Lawrence A. Barlock BSAE'62 Rancho Palos Verdes, CA. Systems Engineer and Program Manager for Space Surveillance and Tracking Systems Program, Northrop Grumman Space Technology

Thomas H. Graham B.S.E.Sc.'63 Costa Mesa, CA. VP - Corporate Administration, Yamaha Electronics Corp.

Raymond MacKay BSAE'63 Peabody, MA. Principal Engineer - Aeromechanics GE-Aviation

Thomas W. Parkinson BSAE'64 Huntington Beach, CA, retired from Boeing in April 2004 as division director of U.S. Government Business Development for Expendable Launch Systems.

John C. Seymour BSAE'65 Brookfield, CT. Chief Pilot Citation Shares

Randy B. Werhane BSAE'65 Austin, TX. President of a large property management company and has been out of engineering since 1969 after working on the F-15 program at McDonnell-Douglas from the first day of that program.

Kenneth J. Held BSAE'66 Palos Verdes, CA. Is now a self-employed Engineering Consultant

Leonard J. Srnka BSAE'68 Bellaire, TX, is a research adviser with Exxon-Mobile Upstream Research Co., in Houston, working on new geophysical methods to more efficiently find and produce oil and gas offshore.

Spencer W. McKellip BSAE'69 Project Engineer DaimlerChrysler - Analysis Dept. Commercial Vehicle Division. Responsible for technical liaison with Mitsubishi FUSO and Freightliner Trucks. Married for 35 years with two children and two grandchildren. Due to retire within three years living between Stuttgart and Southern France.

J. Paul Williams BSAE'70, Oakton, VA, was honored by Who's Who Legal for his trademark work.

Mark K. Craig BSAE '71, DEA '02 - has been elected the President of the American Astronautical Society for the coming year. He has been a VP Technical for that group previously. He had worked for NASA for some 38 years prior to accepting his current job as the Director of Systems Engineering for the Space, Earth, and Aviation Sciences business unit of Science Applications International Corporation (SAIC).

Charles D. Walker BSAE'71 Annandale, VA. Has retired from The Boeing Company. (See article on page 6)

Steven Watson BSAE'71 Bozrah, CT. Owner/Partner Watson's StreetWorks. Awarded the 2003 National Street Rod Association's Manufacturer of the Year and Hot Rod Industry Alliance Council of Specialty Equipment Market Association's Business of the Year Award

Michael P. Pumilia BSAE'72 Marietta, GA. Systems Engineer for Lockheed Martin Aeronautics. Michael has also received the American Kennel Club Gold Medallion to commemorate 25 years as a Judge for all obedience classes, and the Gold Medal for 20years for Tracking Dog Events

Barry C. Dye BSAE'73 Camino, CA. Retired as Air Traffic Controller with the FAA

Terry R. Penney BSAE'73 Lakewood, CO, is helping research, develop and launch hybrid vehicles with OEM's across the country as part of the DOE's advanced vehicle program

Dr. Charlotte (Charlene) Edinboro (Fajardo) BSAE'75 is working as an epidemiologist, while maintaining veterinary affiliations through the local veterinary medical association, a local feral cat rescue group, a local humane society, and the county health department. Charlene has recently won the Oxford Laboratories Award for outstanding work in advancing the knowledge of small animal endocrinology, for research into risk factors for the epidemic of feline hyperthyroidism.

Dr. Thomas L. Doligalski B.S.E.Sc'76 Cary, NC. Chief, Mechanical Sciences Division, U.S. Army Research Office

Dr. Steven M. Ehlers BSAE'77; MS'78; Ph.D.'91 Vice President of Product Design and Development for Callaway Golf Company, Carlsbad, CA.

William H. Gerstenmaier BSAE'77 has been named associate administrator for Space Operations Mission Directorate at NASA headquarters. (See article on page 17)

Matthew A. Heuss BSAE'81 Sr. Quality Assurance Representative/Quality Engineering, Eli Lilly and Company

Mark E. "Buzz" Lanning BSAE'81 Highlands Ranch, CO. Staff Engineer - Atlas V Propulsion, Cryogenic test, long-term Cryogenic storage and advanced technology programs with Lockheed Martin Space Systems

T.J. Sharps-Racoosin BSAE'82 Seaside, CA, Promoted to Commander, USN Reserves September 2004; Vice President, St. Timothy Lutheran Church Council; Established Consulting Company Racoosin Solutions 1997; Microsoft Certified Professional

We have been delighted with the response to the Online Update Alumni Records page on the Aeronautics and Astronautics website. We have tried to include as many as possible and will ensure that all who have taken the time and trouble to email in, will be recognized. The web page to update your records can be found at:

<https://engineering.purdue.edu/AAE/Alumni/Update/AlumniRecords>

Douglas S. Schroeder BSAAE'82

Stafford, VA. Is Deputy Director for the National Security Space Office and is a Captain in the U.S. Navy

Kevin A. Burkhart BSAAE'83

Barrington, IL. Vice President, Capital Markets, AAR Corporation

Kenneth J. Luebke BSAAE'84

Grapevine, TX. Systems Engineer Senior Staff, Lockheed Martin Aeronautics. Transferred in March 2006 from Information Systems to Systems Engineering

Raymond E. Stone BSAAE'85

St. Charles, MO. Vice President & Deputy Treasurer, Citizens for Responsible Community. Jan 2005 – Received a Resolution from the Missouri House of Representatives

Rick Theriault BSAAE'85

King City, OR. Principal Manager, Systems and Flight Controls, Rockwell Collins Head-Up Guidance Systems

Jeffrey A. Karnes BSAAE'86

Keller, TX. Lt. Col. USMC has rejoined the Joint Strike Fighter as the government program integrator and test pilot and is embedded with the Lockheed Martin flight test team at the Fort Worth production facility. Jeffrey also flies Hornets with VMFA-112 out of the Fort Worth Joint Reserve Base

Rhonda D. Walthall BSAAE'86

Escondido, CA is a Member of the SAE E32 Committee for Engine Condition Monitoring

Bill Beckman BSAAE'87

Alexandria, VA Director, Exploration Programs, The Boeing Company

Michael W. Burkle BSAAE'87

Lakeville, MN. Program Manager, Lockheed Martin Jeffrey J. Otolski BSAAE'87, Chanhassen, MN. Independent Software Consultant, Jeffrey has two children Lauren 6, and Jacob 4.

Jerry Brown BSAAE'88

Manager, C & C Group

Mark Drajeske BSAAE'88

Chesterfield, MO Simulation Software Specialist with The Boeing Company

John E. DeWald BSAAE'89

Left engineering in 2000 to become professional pilot and is now Pilot/Captain with NetJets. He was previously employed by Great Lakes Airlines and promoted to Captain in October 2005

David M. Lanman BSAAE'90

Centerville, OH. Is Chief Operations Branch in the U.S. Air Force

Ram Shanmugasundara BSAAE'90

Downingtown, PA. Flight Simulator Engineer, The Boeing Company

Federiko L.D. Yap BSAAE'90

Higley, AZ. Director, Technical Sales, Honeywell

Robert J. Laudeman BSAAE'91

Naperville, IL. Is Director in International Tax for McDonalds Corporation

Andrew Myers BSAAE'91, ME'95

New Palestine, IN, is an associate principal at BSA LifeStructures in Indianapolis

Angel Salinas BSAAE'92

Stafford, VA. Is Deputy Program Manager for Office of Naval Research, Arlington, VA.

Gregory A. Payne BSAAE'92

Richland, WA. Software Developer, Artium Technologies, Inc.

Dr. Gopalakrishnan Srinivasan

PhD'92 Bangalore, Karnataka. Associate Professor, Indian Institute of Science

Greg Wood BSAAE'92

Colorado Springs, CO. Is Space Launch Operations Officer for the US Air Force

Andrew Gonzalez BSAAE'93

Wylie, TX. Broadcast Systems Sales Engineer, Radio Frequency Systems, Inc. Associate Member of the Association of Federal Consulting Engineers (AFCE)

Jeff Tyrcha BSAAE'93

Allen, TX. Manager for BAE Systems. Board Member, Dallas Aerospace Education Foundation. Executive Vice President, Dallas Air Force Association

Christie (Amrozowicz) Chojnacki

BSAAE'94 North Royalton, OH. Business Manager for Nordson Corporation

Robert B. Klus BSAAE'94

Zionsville, IN. Operations Manager, Data Systems & Solutions. Member of Knights of Columbus and has a 2 year old son Evan

Robert Weir McCracken, IV BSAAE'94

Poway, CA Promoted to Major in USMC October 2005. Instructor FA-18 Training Squadron at MCAS Miramar, San Diego, CA. 3rd daughter born July 2005

Dr. Salman Ahmad BSAAE'95

Saco, ME. Completed General Surgical Residency at the Maine Medical Center, Portland, ME. Now plans on pursuing a 2-year fellowship in Trauma and Surgical critical care

Artagnan Ayala BSAAE'95

Gilbert AZ. Master Black Belt, Six Sigma Thought Leader, Solutions Provider, The AIT Group, Inc. Has been married for 10 years with three daughters, practices Martial Arts and has been a consultant for 5 years in a wide range of industries

Brent W. Joray BSAAE'96

Burleson, TX, is a Structural Stress Analyst at Bell Helicopter in Fort Worth, TX.

Kate Henn BSAAE'97

Merritt Island, FL. Engineering Manager for United Space Alliance. Kate has been honored with the National Management Assoc. Chapter 830 Leadership Award and is married with two sons aged 2 and 5.

John A. Moretti BSAAE'97

Naperville, IL. Systems Engineer, Northrop Grumman

Daniel T. Smiczek BSAAE'97

Los Angeles, CA. FX Supervisor/Visual Effects for Rhythm & Hues Studios

David McKinley BSAAE'98

Annapolis, MD. Aerospace Engineer, A.I. Solutions

Bill Reimann MS'98

Zhuhai, People's Republic of China. Director of Operations – Asia is developing an extension manufacturing facility and global distribution operation for Black Diamond Equipment, Ltd. Serves on Board of Directors for Black Diamond Asia.

Dr. Anne Gick PhD'99

Herndon, VA. Senior Engineering Specialist for The Aerospace Company. Anne and her husband Jon J. Gick increased their family with a daughter Margaret Ena Gick April 20, 2005 a sister for David and Rose Mary

Dr. Pablo D. Zavattieri PhD'00

Ann Arbor, MI. Senior Research Engineering, General Motors

Casey Kirchner BSAAE'01

Metairie, LA. Mechanical Systems Specialist, RS-68 Launch Engine

Darcey J. Kuhn BSAAE'01

Hermosa Beach, CA. Is a Range Coordinator for The Boeing Company/Sea Launch

Nicholas Saddah BSAAE'01

League City, TX. Engineer, NASA, JSC

Lisa M. Kobza BSAAE'02 Glendale, CA. Test Engineer, Hamilton Sundstrand

Allison V. (Lambeth) Parlee BSAAE'02, MS'04 Redondo Beach, CA. Directed Energy Systems, Systems Engineer for Northrop Grumman Space Technology

Ryan E. Srogi BSAAE'02 Norfolk, VA. Lieutenant, U.S. Navy, has been designated a naval aviator while serving with the Training Squadron Seven in Meridian, MS.

Emil E. Tchilian BSAAE'03 Boulder, CO. is Systems Spacecraft Engineer for Ball Aerospace and Technologies

William Karashin BSAAE'04 Fort Worth, TX. Associate Aerospace Engineer, Lockheed Martin

Jacob Mitchell BSAAE'04, South Bend, IN., is a product and development engineer with ACC Climate Control.

Jay P. Nerderman BSAAE'04 Wichita, KS. Is an Engineer Associate for the Cessna Aircraft Company

Joseph R. Paunicka BSAAE'04 Tukwila, WA. Is a Flight Test Engineer with The Boeing Company

Chad Ptak-Danchak BSAAE'04 Kent, WA. Loads and Dynamics Structural Analyst for The Boeing Company

Jonathan Shearer BSAAE'04 Long Beach, CA. is a Stress Analyst with Northrop Grumman

John Shew BSAAE'04 Hermosa Beach, CA. Engineer, Quartus Engineering Inc.

Brian F. Schoening BSAAE'04 Hermosa Beach, CA. is a Design Engineer for Northrop Grumman

Justin D. Tucker BSAAE'04 Peoria, IL. Is an Engineering Consultant for Daxon Engineering, Inc.

Charles Weaver BSAAE'04 Lafayette, IN. Design Engineer, Butler International

Jon P Amback BSAAE'05 Palmdale, CA. Is an Aeronautical Engineer Associate for Lockheed Martin Aeronautics

Cristina L. Gordon MS'05 Tucson, AZ. PhD student in Applied Mathematics, University of Arizona

Thomas D. Hedberg Jr. BSAAE'05 Phoenix, AZ. Aerospace Design Engineer, CDI-Aerospace

Jeri Lynn Metzger BSAAE'05 Hermosa Beach, CA. Structural Dynamics Engineer, Northrop Grumman Space Technology

Tied the Knot

Richard J. Wheaton BSAE'49 and Betty R. Drake (CFS'43) November 26, 2005

Lewis C. MacKechnie BSAAE'76 and Margaret A. Gabbert (HuL'78), July 2, 2005

Daniel E. Carlock BSAAE'82 and Anne A. Appel October 22, 2005

Charles D. Fisher BSAAE'03 and **Melanie Silosky BSAAE'04** April 22, 2006

Matthew J. Gault BSAAE'97 and Catherine L. Domrois, Oct. 9, 2004

Brian R. Getten BSAAE'97 and Cheryl A. Guderjan (M'98, MBA'04), April 16, 2005

Melanie Silosky BSAAE'04 and **Charles D. Fisher BSAAE'03** April 22, 2006

Ryan E. Srogi BSAAE'02 and Rachel M. Cullison (NRS'04), May 30, 2004

Rebecca Karnes BSAAE'04 and Joe Taylor May 28, 2005

Jacob Mitchell BSAAE'04 and Nicole Forsberg, Sept. 25, 2004

Jennifer Watson BSAAE'03 and Carlos Perez, May 1, 2006

Family Additions

Jonas Q. Burgett BSAAE'90 and Brooke E. Minkert EDU'04, son, October 2, 2005

Michael Chojnacki BSAAE'90 and Christie (Amrozowicz) a son, Luke David on May 2, 2006

Heather (Greenwald) Planey BSAAE '92, MS '94 and **Michael Planey BSAAE'96** a daughter Violet Isabel Planey, October 28, 2005

Joseph R. Kline BSAAE'93 and Anne Murphy, son Ray, August 6, 2005

Kent Wiechart BSAAE'93 and his wife, son Nicholas Gael, November 7, 2004

Joseph Baker BSAAE'95, MS'98 and **Kimberly S. Hay BSAAE'98**, a son December 28, 2005

John A. Moretti BSAAE'97 and Jennifer Moretti, a daughter Grace Elizabeth

Benjamin L. Austin Jr. BSAAE'99, MS'02 and **Amy E. Gleason EDU'02**, a daughter, August 10, 2005

Travis N. Tanner BSAAE'03 and Brittney Tanner, daughter, June 15, 2005

In Memoriam

Ralph B. Trueblood BSAE'43, Green Valley, AZ. January 8, 2006

Franklin Edward West, Jr. BSAE'43, June 15, 2006 Southern Pines, NC.

Willis K. Drake BSAE'47, Edina, MN, August 8, 2005

Arthur J. Sprowl BSAE'47, La Canada, CA, May 6, 2005

John W. Bandelier BSAE'48, Kokomo, IN, May 25, 2005

Thomas G. Bee BSAE'48, Washington, D.C., September 10, 2005

Leon "Lee" Cooning Jr. BSAE'48, Bay Pines, VA, April, 2005

Roderick J. Cyr BSAE'48, Overland Park, KS, May 22, 2005

Robert L. Agnew BSAE'49, Xenia, OH, December 12, 2005

Donald S. Blake BSAE'49, Brevard, NC, July 12, 2005

Emory R. Carlson BSAE'49, Fort Wayne, IN, August 12, 2005

Edwin S. Ritchie BSAE'49, Glenview, IL. January 5, 2006

Ernest Lee Roy Moore BSAE'50, Bulverde, TX, December 19, 2005

Arthur D. Bellish BSAE'51, Indianapolis, March 24, 2006

R. Thomas Fleming, Jr. BSAE'53, San Diego, January 31, 2006

James W. Wertenberger BSAE'53, Sarasota, FL, July 21, 2005

Wilfred D. Mascolo BSAE'54, Commack, NY, December 5, 2004

Norman Paul Mittermaier BSAE'56 March 5, 2005

Donald Baganoff BSAE'57, Palo Alto, CA, December 17, 2005

James M. Church BSAE'57, OH, April 13, 2005

W. Frederick Lohss BSAE'57, Pentwater, MI, Aug. 15, 2004

Kenneth E. Bryan BSAE'60, Frankfort, MI, April 11, 2005

Scott K. Manliet BSAE'61, PhD'71, Rancho Palos Verde, CA, September 12, 2005

Dr. Harlan Frederick Nelson BSAE'64, MSAE '68 December 19, 2005

Richard J. Weber BSAAE'72, Round Rock, TX, August 18, 2005

Daniel R. Cheney BSAAE'75, Fairfax Station, VA, December 5, 2005

Patrick K. Murphy BSAAE'88, Cary, NC, August 18, 2005



DISTINGUISHED ENGINEERING ALUMNI 2006

Dr. Allen S. Novick

For his technical and managerial leadership in the production of commercial aircraft engines, and for his commitment to bettering industry in Indiana.

Dr. Novick is also presented with the Outstanding Aerospace Engineering Award by Head of School Dr. Tom Farris

The College of Engineering is proud to present the 2006 Distinguished Engineering Alumni recipient, Dr. Allen S. Novick BSAE '65, MSAE '67, PhD '67.

Dr. Allen S. Novick joined the Detroit Diesel Allison Division of General Motors in 1972 after receiving his bachelor, master, and doctorate degrees in Aeronautical Engineering from Purdue University. He progressed through assignments including research and technology, preliminary design, advanced engines, engine development, program management, business development, commercial business, customer operations and supply chain management.

Dr. Novick later served as Vice President, Cost Excellence, where he established the Rolls-Royce Cost

Excellence philosophy and organizational structure. This position addressed the Rolls-Royce Financial Excellence area of emphasis, which focuses on achieving product cost competitiveness and embedding cost consciousness as a culture and design criteria. In his current position as Vice President, Marketing Intelligence & Support, Novick assesses and analyzes external market issues and dynamics that impact Rolls-Royce Corporation's Capability Center and Customer Facing Businesses. Additionally, Dr. Novick leads the development of winning proposals in support of projects based in Indianapolis.

Dr. Novick served as a member of the General Aviation Manufacturers Association Board of Governors and also as Chairman of the Association's



Dr. Novick with Prof. Emeritus George Palmer

Technical Policy Committee. He was also a founding member and Chairman of the Regional Airlines Association, Associate Member Council. Dr. Novick formerly served as a member of the Board of Directors for Purdue Engineering Alumni Association from 1988-1992. Also, in 2005 Dr. Novick was a co-founder of the Indiana Advanced Aerospace Manufacturing Alliance (IAAMA).

John Lincoln Award



Charley Saff (BSAAE '71) was presented with the USAF Lincoln Award at the USAF Aircraft Structural Integrity Conference in November 2005.

Mr. Saff leads the Structures Integration effort for J-UCAS, the Joint DARPA/USAF/Navy/Boeing Uninhabited Combat Air System Program. In this capacity, Mr. Saff coordinates structures, materials, and manufacturing research and development activities that will lead to successful design, manufacturing, development, testing, and production of this unique vehicle. The first incarnation of this vehicle, the X-45A, had a number of advanced structures, materials, and manufacturing technologies incorporated into its airframe.

The John W. Lincoln Award was established in 1996 by the aircraft structural integrity community to recognize a distinguished career expert who has made significant contributions toward advancements in flight vehicle structural integrity and safety. It is named in honor of the late Dr. John W. (Jack) Lincoln and is presented annually during the USAF Aircraft Structural Integrity Program (ASIP) Conference.

Engineering Dean's Club

Annual Luncheon 2005



(L-R) Carlos Kemeny; Phillip Boettcher; Colleen Shea; Ashley Mehringer; Samantha Sanders; abs Sally Mathison meet Neil Armstrong



(L-R) George Palmer; Neil Armstrong; Walter Hesse and Purdue President Martin Jischke

Neil Armstrong BSAE'55, OAE'99, HDR'70 was on campus during Homecoming 2005 and met with some of the 22 engineering students in the college's Engineering Ambassadors Program.

AAE senior Phillip Boettcher (standing behind Armstrong) met him at the Engineering Annual Dean's Club Luncheon and said that it was a "powerful, rewarding, and motivational experience to meet arguably the most famous of all of Purdue's alumni."

Created in 2004, the program enlists top students as emissaries in its alumni, development, and legislative efforts and in its student recruitment and retention activities. The ambassadors represent "the face" of Purdue Engineering and gain valuable leadership experience that enhances their education through a for-credit course in which they are enrolled.

Also at Engineering Annual Dean's Club Luncheon, Professor Emeritus George Palmer, Walter Hesse and President Jischke meet Neil Armstrong in the Memorial Ballroom.

PROGRAM ASSESSMENT SURVEY

Professor and Associate Head Marc H. Williams has accepted the appointment as the College of Engineering's ABET Coordinator. The appointment continues through Engineering's ABET accreditation in the fall 2007 semester.

The School of Aeronautics and Astronautics is asking for feedback from recent graduates which will help the school with preparation for the fall 2007 ABET accreditation process. We are seeking your assessment of the degree to which the Schools' Educational Objectives have been

met and the relative importance of those objectives to your career. We also welcome comments about the strengths and/or weaknesses of the AAE Program.

A letter and survey has recently been sent to 1999-2001 AAE graduates, although we have only targeted recent graduates, this survey is open to any graduate of the school. We prefer that you fill in the web-based questionnaire online, which can be found on the links section on the Alumni page or our web site: <https://engineering.purdue.edu/AAE>.

However a PDF version of the Survey Form can be downloaded from the same page on our web site. Please complete and send to:

Lisa Crain
Purdue University
School of Aeronautics and
Astronautics
315 N. Grant St
West Lafayette, IN 47907

The Industrial Advisory Council (IAC)

The Industrial Advisory Council (IAC) serves an important role in the School of Aeronautics & Astronautics. The success of our programs depends on strong support from industry and the Industrial Advisory Council serves as a link between industry and the university.

The IAC meet twice a year in the fall and spring and review a large variety of topics related to our current operations and future goals. The spring meeting was held April 7, 2006.

The current members of the IAC are shown below. We sincerely appreciate the efforts of the members of the IAC to take time from their busy schedules to assist us in our programs, and look forward to working with them in the future.

Dr. William H. Ailor III (PhD '74)
Principal Director
Space Hazards and Operations
Support Directorate
The Aerospace Corporation

Mr. Frank H. Bauer (BS '79, MS '80)
Chief Engineer, MESA
NASA Goddard Space Flight Center

Mr. Bradley D. Belcher (BS '82)
(IAP Member)
Chief Experimental Engineer
Joint Strike Fighter F136 Engine
Rolls-Royce Corporation

Dr. Paul M. Bevilacqua
(MS '68, PhD '73)
Chief Scientist
Lockheed Corporation

Ms. Andrea M. Chavez (BS '88)
Director
Manufacturing & Test Operations
Ball Aerospace & Technologies Corp.

Mr. Michael J. Corso (BS '71)
Department Chair
Tort and Insurance Litigation Department
Henderson, Franklin, Starnes & Holt, P.A.

Mr. Darryl W. Davis (BS '78)
Vice President, Air Force Systems
Global Strike Solutions
Boeing Integrated Defense Systems

Mr. Daniel F. Devitt (BS '75)
Director - Engineering
Vought Aircraft Industries, Inc.

Mr. Michael P. Dreessen (BS '83)
Vice President
Sensors & Electronics
Miltec Missiles & Space

Dr. John W. Gallman
(BS '84, MS '86)
Principal Engineer
Research and Advanced Technology
Cessna Aircraft Company

Mr. Joseph J. Gernand (BS '80)
(IAP Member)
Boeing - NASA Systems
Space Shuttle Program

Mr. Andrew H. Kasowski (BS '72)
Vice President
Engineering Product Development
Cessna Aircraft Company

Dr. Andrew M. King
(MSME '84, PHD '88)
Director, Mission Assurance
Commercial & Civil Programs
Space & Intelligence Systems
The Boeing Company

Mrs. Mary Kriebel (BS '85)
Propulsion Systems Manager
Northrop Grumman

Dr. Donald L. Lamberson
(BS CHE '53)
Major General, USAF (Ret.)
Technical Advisor and Consultant

Mr. Thomas L. Maxwell (BS '69)
General Manager
Military Systems and Design Integration
GE Aircraft Engines

Mr. David K. McGrath (BS '83, MS '84)
Director, Systems Engineering
ATK Thiokol

Mr. G. Thomas McKane Jr. (BS '66)
Chairman of the Board
A.M. Castle & Co.

Mr. James P. Renna (BS '86)
Director, Dynamic Systems Engineering
Sikorsky Aircraft

Mr. Charles Robert Saff (BS '71)
Boeing Technical Fellow
Boeing Company

Mr. Randal E. Secor (BS '76)
F35 Deputy Program Manager - JSF
Northrop Grumman Corp.

Dr. Robert L. Strickler
(BS '60, MS '62, PHD ME '68)
(IAP Member)
President
Sangamon LLC

Dr. Anthony L. Thornton (Ph.D. '92)
Senior Manager, Organization 1530
Validation & Qualification Sciences
Sandia National Laboratories

Mr. John J. Walsh (BS '82)
President
Ducommun Technologies



School of Aeronautics and Astronautics alum **B.J. Austin** was featured in the *Lafayette Journal and Courier* as a shining example of a Purdue graduate staying and working in the area after graduation. With a bachelor's degree and master's degree in aeronautical and astronautical engineering from Purdue University, Austin is the general manager for IN Space LLC in the Purdue Research Park.

IN Space LLC, located in the Purdue Research Park in West Lafayette, IN, was formed in 2003 to research, develop and design advanced propulsion technologies and provides engineering services to the aerospace community in the form of system design, analysis, modeling and testing support.

In addition to B.J. Austin, IN Space LLC is staffed by AAEE faculty members Dr. Stephen D. Heister who is the Strategic Development Director, Dr. Bill E. Anderson is the Technology Innovation Director and Scott E. Meyer is the Propulsion Systems Director.



B.J. Austin of IN Space LLC holds a rocket at his office in West Lafayette, IN. The company develops propulsion systems for rockets.

Photo Michael Heinz/Journal and Courier

Linda Flack Celebrates

WITH THE SCHOOL OF
AERONAUTICS & ASTRONAUTICS

40 years

On May 23, 2006, Linda Flack celebrated 40 years with the School of Aeronautics and Astronautics. Linda joined the School as a secretary in 1966 just after graduating from high school in Morocco, IN. In 1968, she became a secretary for Prof. Cargino in the scheduling office.

In 1969, she shared in the celebrations when School of Astronautics & Aeronautics alumni Neil Armstrong, made history along with Buzz Aldrin with the Apollo 11 moon landing. Linda was promoted to administrative assistant in 1981 and has the longest tenure of any support staff in the School's history. Linda has seen

Tom Farris presents Linda with a commemorative plaque



Marc Williams and Linda

Linda is the key member who makes the school's programs function smoothly. She handles all details of both undergraduate and graduate applications, enrollment, registration, co-op programs, and more, and she is also the primary contact with current students and prospective students. Assistant Head Prof. Marc Williams and his wife Isabella hosted a dinner for Linda and her family on Sunday May 20, 2006, where she was presented with a plaque from head of school Prof. Tom Farris. The school also held a reception for her on May 23, where she was presented with gifts from colleagues.

Linda's creativity, dedication, and performance have made her an invaluable resource for all of her 40 years at Purdue.

Congratulations to Linda and her family for her wonderful achievement.

many changes during her time with the School. "I think we have a great School and we are just like a family," she said. "This is my second home as I have been here since I was 17 years old."

In 2003, Linda was presented with the Customer Service Award as part of the Awards of Excellence from the College of Engineering. Linda was cited as being "a credit to the university" and "has been at the next level for many years."

"This is my second home as I have been here since I was 17 years old."

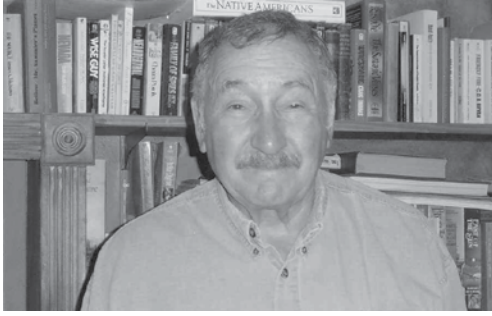
Acoustic Emission Testing – Dr. Ronnie K. Miller

Acoustic Emission Testing is the sixth volume in the Nondestructive Testing Handbook series, now in its third edition and published by the American Society of Nondestructive Testing in August 2005. The co-technical editors for this book include Eric V.K. Hill, a professor at Embry-Riddle Aeronautical University, and **Dr. Ronnie K. Miller**, a Purdue graduate (B.S.A.A.E. 73, M.S.A.A.E. 75 and Ph.D. 79), who

was the sole technical editor for *Acoustic Emission Testing, Volume 5, 2nd Edition, Nondestructive Testing Handbook* series.

Dr. Miller is a well known expert in Acoustic Emission having completed his Ph.D. at Purdue with a thesis entitled: *ACOUSTIC EMISSION: An Application to Fracture Mechanics*. He has had careers in both the Aerospace Industry and the Nondestructive Testing Industry hav-

ing worked for Hughes Aircraft, General Dynamics, United Technologies Corporate Research Center, Dunegan/Endevco, Physical Acoustics Corporation, and the MISTRAS Holdings Corporation (the parent company of Physical Acoustics, QSL-Plus and Conam Inspection and Engineering Services). Presently he is a free-lance consultant living in Loveland, Ohio with his wife and youngest daughter.



Dr. Marty Allen Ferman

DR. MARTY ALLEN FERMAN – Book Fund Scholarship

A Book Fund Scholarship has been established by Purdue alumnus **Dr. Marty A. Ferman**. The first three recipients are: **Allen Guzik; Dana Lattibeaudiere** and **Daniel Maguire**.

Dr. Ferman received his Bachelor of Science in Aeronautical Engineering from Purdue in 1957, his Masters in Applied Mechanics from Washington University, St. Louis, MO. in 1962, and his Ph.D. from California Coast University, Santa Ana, CA. in 1995. Dr. Ferman has also seen Military Service with both the Indiana and Missouri National Guard and saw six months active duty in Artillery, Combat Engineers, Infantry and Communications.

Dr. Ferman has had a long and illustrious career with McDonnell Aircraft of over 34 years from 1958 until his retirement in 1992 where he rose from rank of Associate Engineer to Principal Technical Specialist. He developed techniques for Advanced Design for McDonnell and the US GOV in the Areas of flutter, Aeroelasticity, Buffet, Loads, Fatigue, Optimization and Acoustical Fatigue. He also worked on numerous projects including; Mercury Space Capsule, GAM-72 Missile, Model 122b Missile, The NASP, The MDC Space Shuttle Proposal, and other space/Missile projects; aircraft the F-4, F-15, F/A-18, AV8-B, DC-10, C-17, MD 11 and MD 12, and other aircraft for the USAF. He was the Chief Dynamicist on the McDonnell Giromill from 1979 to 1981.

Following his retirement from McDonnell Aircraft, he joined Parks College of St. Louis University as an Associate Professor in Aerospace Engineering. He was the Director of the Graduate Studies Program from 1995-2005. He has published more than 119 papers and reports.

WILLIAM H. GERSTENMAIER **SELECTED TO LEAD NASA SPACE OPERATIONS**



Administrator Michael Griffin announced August 12, 2005 that **William H. Gerstenmaier BSAE '77, OAE '2003**, will serve as associate administrator for the Space Operations Mission Directorate at NASA Headquarters. Since June 2002, Gerstenmaier has been program manager of the International Space Station Office at Johnson Space Center.

As associate administrator for Space Operations, Gerstenmaier directs NASA's human exploration of space. He also has programmatic oversight for the International Space Station, Space Shuttle, Space Communications and Space Launch Vehicles.

Gerstenmaier began his NASA career in 1977 at the Glenn Research Center in Cleveland performing aeronautical research and was involved with wind tunnel tests on the Space Shuttle. In 1980, he joined the Space Shuttle program as propulsion flight controller, and in 1992 Gerstenmaier got his first managerial assignment for the Orbital Maneuvering Vehicle project at JSC.

In 1990, he led the Space Shuttle/Space Station Freedom Assembly Operations Office responsible for resolving technical assembly issues and developing assembly strategies for what would eventually become the International Space Station. Gerstenmaier was selected in 1995 to be the operations lead in Moscow for the first phase of the Shuttle-Mir program, serving as primary interface to the Russian Space Agency for operational issues between the Space Shuttle program and Russia's Mir space station. He also was responsible for daily activities and the health and safety of NASA astronauts on Mir.

In 1998, Gerstenmaier was named Space Shuttle program integration manager. In December 2000, he was selected as deputy manager of the International Space Station program, where he was responsible for day-to-day operations. Selected in 2002 as manager of the International Space Station program, Gerstenmaier was responsible for the overall management, development, integration and operation of the project, including the design, manufacture, testing and delivery of complex spaceflight hardware and software, and working directly with the program's international partners.

Gerstenmaier received a bachelor's degree in aeronautical engineering from Purdue University in 1977 and a master's degree in mechanical engineering from the University of Toledo, Ohio, in 1981. In 1993, he completed course work at Purdue for a doctorate in dynamics and control, with a minor in propulsion.





Dr. John McMasters with the 1/5 scale model

A 1/5 scale model replica of a futuristic flying wing sailplane built and flown in 2001 has been donated to the Smithsonian Institution's National Air and Space Museum for display at the Annex which opened in 2004 at Dulles International Airport.

The "Altostratus" is a conceptual sailplane design by Purdue alumni **Dr. John McMasters PhD '75**, a Technical Fellow of the Boeing Company. This fictional Altostratus was equipped with many technological advancements including computer assisted pilot control. The original design for the Altostratus I flying wing had a 25 meter wingspan and an aspect ratio of 25:1. Smithsonian officials were impressed with the Altostratus because it demonstrated that aeronautical advances can be made through the use of model planes.

The final plane had a wingspan of 5 meters, compared with the original plane design of 25 meters. Silva and his friend Gary Fogel picked the mountains of Tehachapi for the first test flight because of the high winds and ample grasslands, in case problems arose during landing. The first flight lasted about 20 minutes, and the plane survived unscathed, although subsequent flights were made with strengthened wings.

Altostratus Sailplane

Dr. John McMasters Ph.D.'75

Purdue alumni help launch IMAX® film about Mars



Mark Brown



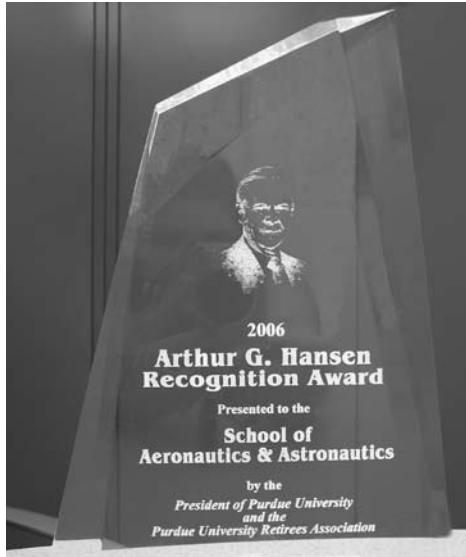
Guy Gardner

Two Purdue University astronaut alumni helped kick off a documentary about the exploration of Mars showing at the IMAX Theater at the Indiana State Museum in Indianapolis. "Roving Mars," a Walt Disney Pictures film that opened January 27 at select IMAX theaters nationwide, is presented as a public service by Lockheed Martin and supported locally by the Purdue-based Indiana Space Grant Consortium and in conjunction with NASA.

"The mysterious 'Red Planet,' Mars, has inspired countless science fiction dreams and nightmares. Now, for the first time, experience the reality of the Mars surface as seen through the eyes of two intrepid, death-defying explorers — Spirit and Opportunity, the Mars Rovers," reads the description of the film on the IMAX Web site.

Two Purdue alumni Mark Brown BSAAE '73, and Guy Gardner MSAAE '70 both made on screen introductions and Guy Gardner was on hand for the first two showings of the film at the IMAX Theater at the Indiana State Museum.

The Purdue connection to the film continued later in the spring when alumnus David Wolf BSEE '78 answer questions from the public about the space program at film showings at 10 a.m. and 11:15 a.m. May 25 at the Indiana State Museum. Wolf received a bachelor's degree in electrical engineering in 1978. He was a mission specialist on the International Space Station and spent 119 days aboard the Russian space station Mir. He is currently a member of Ross's Mars spacesuit design team.



David O. and Linda Schimmel Swain Scholarship



Thanks to a generous gift by **David O. Swain** (BSAE '64) and Linda Schimmel Swain, the Swain-Schimmel Scholarship supports four Indiana resident students in the School of Aeronautics and Astronautics. David Swain is a 1960 graduate of Lizton High School in Hendricks County, Indiana. Linda Schimmel Swain is a 1963 graduate of Frankfort High School in Clinton County, Indiana.

Mr. Swain was Chief Technology Officer of The Boeing Company and Chief Operating Officer for Boeing's Integrated Defense Business. Dr. Swain joined McDonnell Douglas Astronautics in 1964 as an engineer on the manned Gemini space project. Dr. Swain received the Distinguished Engineering Alumni Award in 1993. He was named an Outstanding Aerospace Engineer in 1999 and received an Honorary Doctorate from Purdue in 2001.

Upon making the gift, Dr. Swain said "Linda and I have benefited greatly from our experience and education from Purdue. It led to a great career for me at McDonnell-Douglas and Boeing. We want the young people of Indiana with limited financial resources to have that same opportunity."

SCHOOL OF AERONAUTICS & ASTRONAUTICS *Wins Hansen Award*

The School of Aeronautics & Astronautics has been chosen as the 2006 Arthur G. Hansen Recognition Award for its relationship with its retirees.

A trophy was presented at the annual retirement banquet on June 7th 2006 in the North Ballroom of the Purdue Memorial Union. A master plaque listing each recipient by year is displayed in the Purdue Memorial Union adjacent to similar University awards. In addition to the plaque, the recognition includes a \$2,500 cash award, from TIAA-CREF, to the unit to encourage further interface with its retirees.

The award is named for Arthur G. Hansen, Purdue's eighth president, who established the retiree's association in 1976. The annual award was created to recognize the efforts of University units that cultivate and maintain meaningful relationships with their retirees. Many Purdue retirees have spent much of their work life at Purdue and have developed a strong sense of loyalty to and pride in the University. Through their work, they have enhanced the image of the University and have contributed substantially to its greatness. The School of Aeronautics &

Astronautics was nominated by Professor Emeriti W.A. "Gus" Gustafson, George Palmer and Lawrence Cargino. They say of the department, "Over the years, we continue to feel welcome and remain connected to our school in many different ways. Our school head, Thomas Farris, personally goes out of his way to be sure that the retirees are invited and encouraged to participate in faculty meetings, student activities, and all social gatherings."



(L-R) David Filmer, Tom Farris, Gus Gustafson and Larry Cargino

Outstanding
AEROSPACE ENGINEER AWARDS
 PURDUE UNIVERSITY



(L-R) Thomas Gates; Stephen Rizzi; William Schmitendorf; Andrea Chavez; Richard Van Allen and Debra Haley

The 2005 recipients are:

Andrea M. Chavez
BSAAE'88

Director of Manufacturing
 and Test Operations
Ball Aerospace & Technologies Corporation

Thomas S. Gates
BSAAE'81; MS'83; PhD'89

Head, Mechanics of Structures
 and Materials Branch
NASA Langley Research Center

Debra L. Haley
BSAAE'78

Executive Director
 Development and Fielding
 Systems Group
Wright-Patterson Air Force Base

Stephen A. Rizzi
MS'85; PhD'89

Senior Research Engineer
NASA Langley Research Center

William E. Schmitendorf
BSAE'63; MS'65; PhD'68

Associate Dean for Academic
 Affairs
*School of Engineering,
 University of California, Irvine*

Richard E. Van Allen
BSAE'68; MS'69; PhD' 77

Director, Space Systems Division
Microcosm, Inc.



*Lt. Gen. John "Jack" Hudson
 with Guy & Linda Gardner*

*Professor Emeritus Larry Cargino
 and his wife Frances*

Bill & Mary Schmitendorf

Andrea Chavez; Della Nugent; Teri Duncan and Dan Duncan

Head of School Tom Farris and Tom Gates



The Purdue School of Aeronautics & Astronautics honored six individuals with the 2005 Outstanding Aerospace Engineer Award. This award was created to recognize the school's very best alumni for significant contributions to the aerospace field.

The awards were presented during the seventh annual awards ceremony on Thursday, October 6, 2005 at the University Inn, West Lafayette, IN.

"The Purdue University designation Outstanding Aerospace Engineer recognizes the professional contributions of graduates from the School of Aeronautics & Astronautics and thanks them for the recognition that their success brings to Purdue and the School. Criteria for the Award state that recipients must have demonstrated excellence in industry, academia, governmental service, or other endeavors that reflect the value of an aerospace engineering degree" said Thomas N. Farris, professor and head of School of Aeronautics and Astronautics. "This celebration gives us a very special opportunity to have our students interact with the best possible role models." The 101 OAEs represent just over 1% of the more than 7000 alumni of the School.



Sally, Elizabeth, Woody, Clay and Tom Gates

Brad Belcher BSAAE' 82; OAE'04 with Professor Emeritus Gus Gustafson and his wife Sally

Angie and Steven Rizzi

AAE Faculty Roster

Aerodynamics

A. Alexeenko

Assistant Professor; Ph.D. Penn State, 2003, computational rarefied gas dynamics, DSMC, microdevices

G. A. Blaisdell

Associate Professor; Ph.D., Stanford, 1991, computational fluid mechanics, transition and turbulence.

S. H. Collicott

Professor; Ph.D., Stanford, 1991, experimental fluid mechanics, low-gravity fluid dynamics, optical diagnostics, applied optics.

M. C. Jischke

University President; Ph.D., Massachusetts Institute of Technology, 1968.

A. S. Lyrantzis

Professor; Ph.D., Cornell, 1988, computational aeroacoustics, aerodynamics, with applications to rotorcraft and jet flows.

S. P. Schneider

Professor; Ph.D., Caltech, 1989, experimental fluid mechanics, high-speed laminar-turbulent transition.

J. P. Sullivan

Director of Center for Advanced Manufacturing; Professor; Sc.D., MIT, 1973, experimental aerodynamics laser instrumentation, luminescent sensors for temperature and pressure measurements.

M. H. Williams

Professor and Associate Head; Ph.D., Princeton, 1975, aerodynamics, computational fluid mechanics.

Dynamics and Control

D. Andrisani

Associate Professor; Ph.D., SUNY at Buffalo, 1979, estimation, control, dynamics.

M. J. Corless

Professor; Ph.D., Berkeley, 1984, dynamics, systems, control.

D. DeLaurentis

Assistant Professor; Ph.D., Georgia Institute of Technology, 1998; Design Methods, Aerospace Systems and Flight Vehicles; System-of-Systems.

D. Filmer

Adjunct; Ph.D., Wisconsin, 1961, Orbit mechanics, Control, Satellite Design.

A. E. Frazho

Professor; Ph.D., Michigan, 1977, control systems.

J. L. Garrison

Associate Professor; Ph.D., University of Colorado at Boulder, 1997, Satellite Navigation, GPS, Remote sensing.

K. C. Howell

Hsu Lo Professor of Aeronautical and Astronautical Engineering; Ph.D., Stanford, 1983, orbit mechanics, spacecraft dynamics, control; trajectory optimization.

I. Hwang

Assistant Professor; Ph.D., Stanford University, 2004; hybrid system theory, information inference of complex dynamical systems, safety verification, and their application to the control of multiple-vehicle systems, especially air traffic surveillance and control.

J. M. Longuski

Professor, Ph.D., Michigan, 1979, spacecraft dynamics, orbit mechanics, control, orbit decay and reentry.

M. A. Rotea

Professor; Ph.D., Minnesota, 1990, robust and nonlinear multivariable control, modeling and identification.

Propulsion

W. Anderson

Assistant Professor; Ph.D., The Pennsylvania State University, 1996, Chemical propulsion and design methodologies.

J.P. Gore

Reilly Professor, Ph.D. Penn State, 1986, Combustion, turbulent reaction flows, materials processing, pollutant reduction. (by courtesy)

S. D. Heister

Professor; Ph.D., UCLA, 1988, rocket propulsion, liquid propellant injection systems.

I. Hrbud

Assistant Professor; Ph.D., Auburn University, 1997; Electric Propulsion, Space Power, Advanced In-Space Propulsion

C. L. Merkle

Reilly Professor of Engineering; Ph.D., Princeton University, 1969, Computational Fluid Dynamics and Mechanics, Two Phase Flows, Propulsion Components and Systems

J. J. Rusek

Adjunct; Ph.D., Case Western Reserve, 1983, Propulsion, Energy Conversion, Power Generation.

Structures & Materials

W. Chen

Professor; Ph.D., California Institute of Technology, 1995, Mechanical Response of Solids and Structures under Extreme Conditions, Microstructural Effects on Mechanical Behavior, Fatigue Behavior of Engineering Materials, Experimental Solid and Structural Mechanics.

W. A. Crossley

Associate Professor; Ph.D., Arizona State, 1995, optimal design methods, genetic algorithms and aerospace applications, aircraft and rotorcraft conceptual design, composite and smart structure design.

J. F. Doyle

Professor; Ph.D., Illinois, 1977, structural dynamics, experimental mechanics, inverse problems, wave propagation.

T. N. Farris

Professor and Head; Ph.D., Northwestern, 1986, tribology, manufacturing processes, fatigue and fracture.

A. F. Grandt

Raisbeck Engineering Distinguished Professor for Engineering and Technology Integration; Ph.D., Illinois, 1971, damage-tolerant structures and materials, fatigue and fracture, aging aircraft.

H. Kim

Assistant Professor; Ph.D., University of California, Santa Barbara, 1998, Mechanical Engineering.

R. B. Pipes

John L. Bray Distinguished Professor of Engineering; Ph.D., University of Texas, 1972; application of nanotechnology to engineering disciplines including aerospace, composite materials, and polymer science and engineering.

C. T. Sun

Neil A. Armstrong Distinguished Professor; Ph.D., Northwestern, 1967, composites, fracture and fatigue, structural dynamics, smart materials and structures.

T. A. Weisshaar

Professor; Ph.D., Stanford, 1971, aircraft structural mechanics, aeroelasticity, integrated design.

Engineering Education

P.K. Imbrie

Associate Professor, Freshman Engineering; Ph.D., Texas A & M, 2000, Educational Research, Solid Mechanics, Experimental Mechanics, Nonlinear Materials Characterization.

Faculty Update

Fellow of ASME

Dr. Weinong W. Chen was named a Fellow of the American Society of Mechanical Engineers in August 2005. (ASME) The Fellow grade, the highest elected grade of membership in the society, is conferred upon a member with at least 10 years of active engineering practice who had made significant contributions to the profession.



Chen teaches aeronautics and astronautics and materials engineering at Purdue. His research in applied mechanics, physics, and materials science had been published in 55 scholarly journals. He received

his education and training at Beijing University of Aeronautics and Astronautics and California Institute of Technology, where he earned a Ph.D. in 1995.

Founded in 1880 as the American Society of Mechanical Engineers, today's ASME is an 120,000-member professional organization focused on technical, educational and research issues of the worldwide engineering and technical community.

University Faculty Scholar

Dr. Weinong W. Chen has been named College of Engineering University Faculty Scholar as of December 19, 2005. The Faculty Scholar program recognizes outstanding faculty who are achieving academic distinction at an accelerated rate. Dr. Chen joined both the School of Aeronautics and Astronautics and Materials Engineering as Associate Professor with tenure in January 2005 from the University of Arizona. Dr. Chen's research in applied mechanics, physics, and materials science has been published in 55 scholarly journals.

The University Faculty Scholar program was established in 1998 to recognize achievements in leadership, academic distinction, and national and international recognition of faculty members who hold the rank of associate or full professor. This year, only three engineering faculty were so honored.



Welcome to new faculty member

Dr. Alina Alexeenko *Assistant Professor of Aeronautics and Astronautics*

The School of Aeronautics and Astronautics welcomes new faculty member Dr. Alina Alexeenko for the 2006-2007 year. She joins the school as Assistant Professor in the aerodynamics group from the Aerospace and Mechanical Engineering Department at the University of Southern California at Los Angeles, CA.

She received her Bachelor of Science in Mathematics and her Masters in Applied Mathematics from the Novosibirsk State University, Russia, and her Ph.D. in Aerospace Engineering at Penn State University:

Her research interests include computational rarefied gas dynamics, direct simulation Monte Carlo techniques, coupled thermal-fluid analysis of microdevices, and high-altitude aerothermodynamics and thermal radiation.

Bruhn Best Teacher Award

Dr. William Crossley has been awarded with the Bruhn Best Teaching Award. Bill is now the School's nominee for the engineering wide 2007 A.A. Potter Best Teacher Award.



Faculty Promotions

Congratulations to **Dr. Weinong W. Chen** and **Dr. Steven H. Collicott** who were promoted to the rank of Professor of Aeronautical and Astronautical Engineering and to **Dr. James L. Garrison** who was promoted to the rank of Associate Professor of Aeronautical and Astronautical Engineering. All with effect from August 14, 2006.



Wayne Chen



Steven Collicott



Jim Garrison

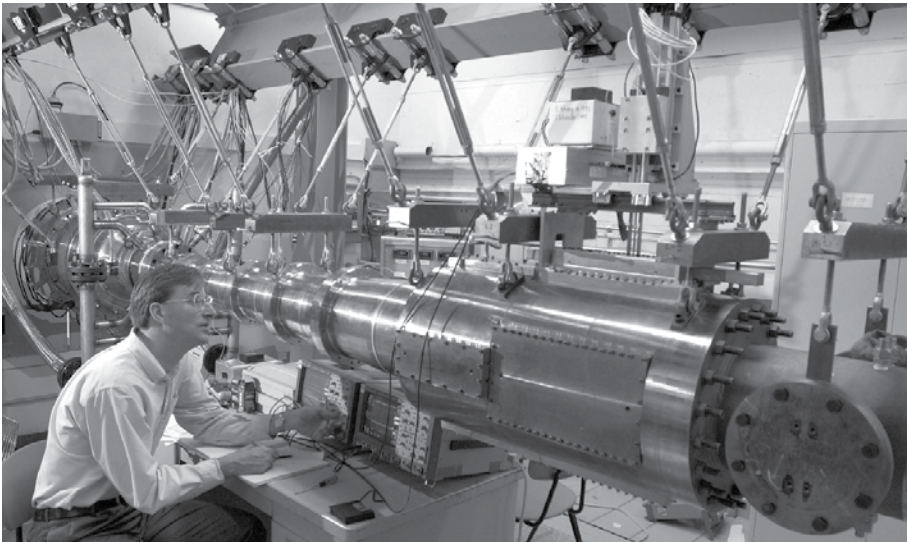
W.A. Gustafson Undergraduate Teaching Award

Congratulations to **Prof. James M. Longuski** for winning this year's W.A. Gustafson Undergraduate Teaching Award. The award is for student recognition for teaching and voting for this nomination was accomplished by distributing ballots to all students with Junior or Senior level standing. Jim Longuski is now the School's nominee for the Murphy Outstanding Undergraduate Teaching Award 2006.



'Quiet'

Mach 6 wind tunnel at Purdue helps shape future aircraft



Prof. Steven P. Schneider operates the one-of-a-kind wind tunnel, which runs quietly at Mach 6, or six times the speed of sound.

Purdue University engineers have developed a wind tunnel that is the only one of its kind in the world capable of running quietly at “hypersonic” speeds, helping researchers to design advanced aircraft and missiles.

“No other wind tunnel runs quietly while conducting experiments in air-streams traveling at Mach 6 – six times the speed of sound,” said Steven Schneider, an aerospace engineer and professor in Purdue’s School of Aeronautics and Astronautics. Researchers will use the \$1 million wind tunnel to help design advanced aerospace vehicles that travel at hypersonic speeds, or faster than Mach 5, which is about 4,000 miles per hour at sea level. The wind tunnel airflow

has about one-tenth to one-thirtieth of the noise in other high-speed wind tunnels. The tunnel is now running quiet to as high as 130 psia, near the 150 psia design condition.

The quiet operation is critical for recreating the smooth, or laminar, flow of air over the surfaces of aircraft, spacecraft or missiles re-entering the Earth’s atmosphere. Data from tests with models studied in the wind tunnel will lead to a better understanding of when and how the air flowing over a surface changes from smooth to turbulent. Engineers must better understand this transition from smooth to turbulent flow if they are to design improved aircraft and missiles. One aim is to design aircraft that heat up less from atmospheric friction as they re-enter the atmosphere. “Laminar airflows can have eight times less heating than turbulent ones,” Schneider said. Designs that heat up less would require less shielding, enabling engineers to reduce weight and cost.

To obtain quiet flow, laminar flow must be maintained on the wall of the Mach-6 nozzle, whose throat must be polished to a near-perfect mirror finish, eliminating roughness that will trip the flow near the wall from laminar to turbulent. Then, for the wind tunnel to remain quiet, it must be entirely free of particles. Even a single piece of sand could cause turbulence inside the wind tunnel, damaging the finish and ruining the quiet effect.

College of Engineering Awards of Excellence

The College of Engineering Awards of Excellence were initiated in 2002 to honor outstanding faculty and administrative, professional, clerical and service staff.

Now in its fourth year, we are proud to announce the recipient of the Advising Award is Dr. Marc H. Williams, Professor and Associate Head of the School of Aeronautics and Astronautics.

The purpose of this award is to recognize excellence by faculty in the College of Engineering in the advising and mentoring of students.

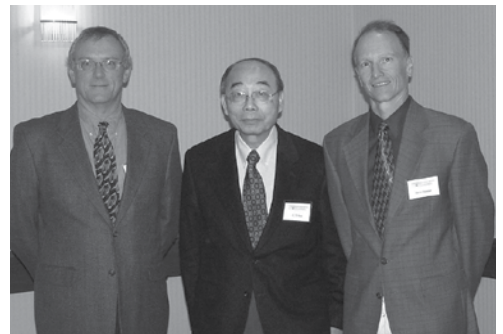
At the Awards banquet held on March 25, 2006, in the Shively Stadium Club in the Ross Ade Stadium, Dr. Williams was presented with a plaque from Linda P.B. Katehi, John A. Edwardson Dean of Engineering.



Marc Williams with his wife Isabella and son Richard

The CT Sun School of Aeronautics and Astronautics Excellence in Research Award

School of Aeronautics faculty members **Dr. William E. Anderson** and **Dr. Stephen D. Heister** were the 2006 recipients of the CT Sun School of Aeronautics and Astronautics Excellence in Research Award and were recognized at the Outstanding Aerospace Engineers Award on October 6, 2005.



Bill Anderson; CT Sun and Stephen Heister



Professor John P. Sullivan

Advanced Manufacturing Summit V

Al Frink, the nation's highest-ranking public manufacturing official, gave the keynote address at Purdue University's fifth annual advanced manufacturing summit.

Advancing Manufacturing V: The Future of Midwest Manufacturing took place May 23, 2006 on campus and examined current and future issues confronting Indiana manufacturers from regional and national perspectives.

John Sullivan, director of Purdue's Center for Advanced Manufacturing welcomed attendees and introduced Frink who is the U.S. Department of Commerce assistant secretary for manufacturing and services, International Trade Administration. Purdue President Martin C. Jischke discussed the goals of the summit.

In addition to Purdue, summit sponsors included the Central Indiana Corporate Partnership, Indiana Manufacturers Association and the Indiana 21st Century Research and Technology Fund. Associate sponsors included TechPoint, Indiana Health Industry Forum, Indiana Economic Development Corp. and Purdue's Technical Assistance Program.

Purdue's Center for Advanced Manufacturing at Discovery Park supports research to develop and improve manufacturing processes, productivity and materials in conjunction with Indiana manufacturers. The center for the last two years has sponsored regional manufacturing summits to address local issues and challenges and to explore opportunities for collaboration.

Discovery Park is Purdue's hub for interdisciplinary research and enterprise. The Center for Advanced Manufacturing is one of 10 centers within Discovery Park.

Discovery Park

Commencement

2005-2006



In 2005-06, the school awarded 133 BSAAE degrees and 76 MS degrees and 14 PhD degrees. Congratulations to all of our graduates.

august 2005

B.S. AAE

James Kallimani
Andrew Rodenbeck
Jason Tang

M.S.

Maizakiah Abdullah
Cristina Gordon
Joseph Harber
Adam Ladd
Steven Lamberson
See-Chen Lee
Muharrem Mane
Kamlesh Nankani
Jonathan Nehrbass
Chieh Ooi
Raoul Rausch
Tyler Robarge
Jungjun Suh
Travis Tanner
Yen Ching Yu

Ph.D.

Jeong-Min Cho
Guofeng Gao
James Gregory
Md-Wahid Mamun
Hongbok Park

december 2005

B.S. Students

Timothy Allensworth
Robert Anderson
Nicholas Baker
Michael Caldwell
Jimmy Chiu
Matthew Conlin
Brad Crosson
Lloyd Droppers
Joseph Ewing
Nina Fernandez
Cristina Figueroa
Matt Foertsch
Jeff Fosler
Kevin Franklin
Edward Galotta

Conrad Golbov
Michael Grant
Brian Gray
Jeeyeon Hahn
Melissa Hartwell
Thomas Hedberg
Gregory Henning
Kevin Hollingsworth
James Kobyra
Robert MacDermott
Kyle McDaniel
Neel Mehta
Anne Mills
Michael Moessner
Dalia Morales
Ramy Mourad

Maria Mullins
Lisa Rosenthal
Gretchen Rybarczyk
Sree Raman Sachin
Anthony Sanders
Lionel Tan
Rolf Tellefsen
Nihar Vartak
Sara Weisbrod
James Wills

M.S. Students

Christopher Bies
Matthew Borg
Eric Briggs
Adam Butt

Yoonsung Choi
Louise Olivia Djibo
Brenda Eichel
Yun Ge
Filippo Genco
Giacinto Genco
Pol-Enrico Gonzalez
William Grosse
Christopher Habrel
Jimmy Hidayat
Liaquat Iqbal
Daeseong Jo
Cyril Jos
Andrew Kacmar
Masaki Kakoi
Javier Lovera Yepes

John Maier
Marriner Merrill
Arun Padmanabhan
Michael Skillen
Dino Smajlovic
Jason Spohn
Eng Kee In Tan
Zachary Thicksten

Ph.D.

Howoong Namgoong
Timothee Pourpoint
Shann Rufer
Craig Skoch

may 2006

B.S. STUDENTS

Ryan Abbott
Miguel Alanis
Ameya Alkari
Stephen Beirne
Richard Berger
Ryan Blank
Phillip Boettcher
Paul Boucher
Jeffrey Boyd
Laura Brower
Erin Calderwood
Jasmine Cashbaugh
Nick Chachor
Arun Chander
Ariane Chepko
Patrick Christensen
Lee Coduti
Adam Coffey
John Collins
Rebecca Dale
Jason Darby
Megan Darraugh
William Daugherty
Sara Davia
Chad Davis
Brian Duckett
Michael Dumas

James Fairbanks
Pete Febbraro
Robert Fink
Christopher Fles
Daniel Gillies
Dawn Gordon
Seth Hahn
Kimberly Hicks
Eric Holley
David Humble
Bradley Hurwitz
Chiaki Ichikawa
Thomas Jennings
Christopher Kester
Woo-Jae Kim
Timothy Kite
Tatsuya Kotegawa
Jeffrey Ksander
Dheer Lashkari
Eric Leonard
Douglas Link
Jonathan Malda
Andrew Maurer
Aaron Mayne
Daniel Miller
Adam Naramore
Michael Nash
Lauren Nordstrom

Jason Olmstead
Jillian Parent
Hirem Patel
Lakme Patel
Niccole Pattee
Husein Poonawala
Heidi Poppelreiter
Christine Poulin
James Radtke
Justin Rohde
Charles Rush
Christopher Schreiner
Ryan Schulz
Benjamin Scott
Gaetano Settineri
Zade Shaw
Bridget Sherer
Clayton Smith
Matthew Smith
Timothy Sparks
Seth Strohecker
Benjamin Talbert-Goldstein
Lionel Tan
Ian Thomson
Daniel Uffelman
Zheng Wang

Mark Weaver
Brandon Wedde
Sarah Weise
David Wilson
Garret Willis
Gregory Wilson
Elizabeth Wolfe
Yusaku Yamashita

M.S. STUDENTS

Mobolaji Adeisa
Avinash Agarwal
Jung-Hyun Ahn
Ke-Winn Chan
Jit-Tat Chen
Matthew Churchfield
Amado Dehoyos
Adam Deitemeyer
Geraldine Fritsch
Miguel Gonzalez
Daniel Grebow
Christopher Grupido
Randal Hartnett
Kelli Hsieh
Alessandro Ianniello
Brady Kalb
David Mathis
Daniel McCaffery

Seth McDonald
Christopher Miller
Nicholas Moyle
George Mseis
Yi Pan
Hwun Park
Benjamin Phillips
Joshua Revenaugh
Swanand

Sardeshmukh
Tracey Smith
Machiko Sudo
Christopher Ulrich
Brian Ventre
Christoph Wagner
Sergey Zakharov

PH.D.

Loren Garrison
Ihab Hanna
Chih-Yung Huang
Hyukbong Kwon
Kuo-Tung Tseng

STUDENT *awards*

Air Force ROTC Selects Interns

Four Purdue University students from the School of Aeronautics & Astronautics have been chosen to participate in the Air Force Officer Accession and Training Schools Summer Technical Recruiting Internship Program.

Molly Kane; Matt Conrad; Timothy Rebold, and Mark Pfeil are four of only 32 interns selected nationwide for this prestigious program. All four will work at Air Force Laboratories during the summer, and upon completion of the program may be offered a \$15,000 a year scholarship to participate in the Air Force Reserve Officer Training Corps program.



Matt Conrad



Molly Kane



Mark Pfeil



Tim Rebold

2006 Herbert F. Rogers Scholarship

Nick Chachor

2006 Koerner Scholarships

Sophomore: Pritesh Moody;

Courtney Rogge

Junior: Andrew Mundell;

Breanne Wooten

Senior: Phillip Boettcher;

Ariane Chepko

2006 Graduate Teaching Assistant

Mohammad Ayoubi

2006 Magoon Graduate Teaching Award

Geraldine Fritsch; Mohammad

Ayoubi; Erik Dambach; Jit-Tat Chen;

Daniel Grebow; Masaki Kakoi



(L-R) Prof. Tom Farris; Geraldine Fritsch; Mohammad Ayoubi; Erik Dambach; Jit-Tat Chen; Daniel Grebow; Masaki Kakoi

David and Linda Schimmel Swain Scholarship

Freshman - George Samuel

Sophomore - Daniel Kipfer

Junior - Timothy Rebold

Rogers Prize

Nick Chachor

2006 Elmer F. Bruhn Undergraduate Research Assistantship

Joshua Dias; Fabien Kluessendorf;

Ross Spoonire

Gary and Sue Payton Scholarship

Poorvi Kalaria

Russell Cedars Memorial Scholarship

Pritesh Moody

David L. Filmer Scholarship

Laura Brower

Amelia Earhart Scholarship

Laura Brower

Dr. Marty A. Ferman Book Fund Scholarship

Allen Guzik; Dana Lattibeaudiere;

Daniel Maguire

International Chapter P.E.O Sisterhood

Lindsay Millard

Willy Z. Sadeh Graduate Student Award in Space Engineering and Space Sciences

Geraldine Fritsch

Zonta International Amelia Earhart Fellowship

Yen Yu

SMART: Science, Mathematics and Research Transformation Scholarship

Josh Rodewald has been selected to receive a 2005-2006 Science, Mathematics and Research Transformation (SMART) Scholarship. This fellowship is sponsored by the Department of Defense and is administered by the American Society for Engineering Education (ASEE). His application was selected from over 600 applications that were received this year. This fellowship will cover tuition and required fees for up to two years and is a very prestigious fellowship.

AIAA Central Regional Student Conference

Graduate student *Lloyd J. Droppers* and AAE senior *Ariane B. Chepko* won Second Place in the Undergraduate Division of the AIAA Central Regional Student Conference. For their paper "Characterization of a Hydrogen Peroxide and HTPB Hybrid Rocket

A.H. Ismail Interdisciplinary Program Doctoral Research Travel Award

Matthew Churchfield

Phoi-tack Lew

Mane Muharrem

A. Nusawrdhana

Congratulations to the following students who have earned top honors!

The School of Aeronautics & Astronautics is proud to announce the 2006 Purdue Student Engineering Foundation (PSEF) Outstanding Students:

<p>Outstanding Senior Award</p>	<p>Outstanding Graduate Student</p>
	
<p>May 2006 Gregory Wilson</p>	<p>May 2006 James Canino</p>



The Outstanding Senior Award

Each year the Aeronautics Honorary Society, Sigma Gamma Tau, sponsors the outstanding senior award. The nominees are selected by the faculty, and the Outstanding Senior is selected by a student vote. Congratulations to Phillip Boettcher.



Phillip Boettcher


Winners of the ATK AAE 251 Thiokol Propulsion S.P.A.C.E. Awards






**Spring 2005
First Place Team**

(L-R) Stefan Oechsner; Alan Schwing; Dorrie Byford; David McGrath; Keith Fay; Oscar Guzman; Elisabeth Hanssens





**Fall 2005
First Place Team**

(L-R) Kyle Donahue; Andrew Mundell; Albert Chaney; Adam Waite; Nicole Bryan; David McGrath; (not pictured Levi Brown)

The Society of Women Engineers

Congratulations to the following students from the School of Aeronautics & Astronautics who received awards during the 2005-2006 academic year:

- Jasmine Cashbaugh** *Ball Aerospace & Technologies Corp.*
- Dawn Gordon** *Outstanding Senior, Corning, Inc.*
- Kathryn Mitchell** *Shirley McCarty Award*
- Courtney Rogge** *Lockheed Martin*
- Christine Troy** *Women in Engineering Award*
- Elisabeth Wahl** *Rockwell Collins*
- Elizabeth Wolfe** *Vought Aircraft*
- Danielle Yapple** *The Boeing Company*

AIAA Best Paper

The AIAA Liquid Propulsion Technical Committee has named AIAA Paper 2005-4298 the 2005 AIAA Best Paper. Co-authors, **James C. Sisco; Nicholas J Nugent; Kevin J. Miller and Dr. William E Anderson** received Certificates of Merit to recognize technical and scientific excellence, at the awards luncheon on Wednesday, 12 July 2006, during the AIAA/ASME/SAE/ASEE Joint Propulsion Conference at the Sacramento Convention Center, Sacramento, California. Their technical paper is entitled "Experimental Study of Combustion Instabilities in a Single-Element Coaxial Swirl Injector"

Smith wins second Grand Prix, carries on family tradition

Clayton Smith celebrates his victory in the Purdue Grand Prix with fiancée Becky Clark.

(Purdue News Service photo/David Umberger)



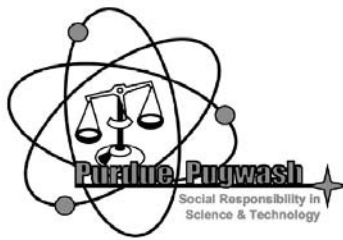
School of Aeronautics and Astronautics senior Clayton Smith won his second Purdue Grand Prix kart race on Saturday, April 22 at the University's kart track north of Ross-Ade Stadium, carrying on a family racing tradition at Purdue that goes back nearly 20 years. Smith came in as the pole sitter for the 49th annual event and dominated the race. Even though Smith previously won the race in 2004, he said he never took winning this year's race for granted.

Smith said he credits his whole family — which includes brothers, Ian and Dustin, uncle Tom, and cousin Kyle, all previous Grand Prix winners — with the victory. Ian won in 1993, 1994 and 1995; Dustin won in 1996; Kyle won in 1998; and Tom won in 1989.

The first Grand Prix kart race, featuring cars that were made from scratch and powered by lawnmower engines, ran in 1958 and took place on an intramural field and adjacent parking lot near what is now the Recreational Sports Center. The race also was run for a time on the Engineering Mall before moving to the current track location in 1969.

Purdue Student Pugwash

Social Responsibility in Science & Technology

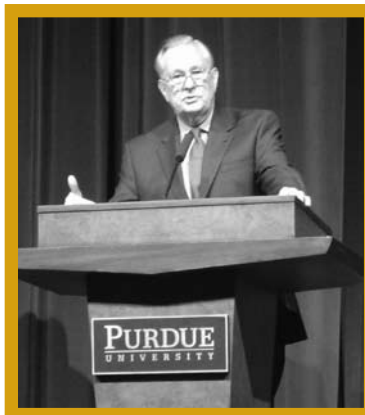


A student founded Student Pugwash USA in 1979 with the fundamental belief that young people play a vital role in determining the socially responsible application of science and technology. In 1955 Albert Einstein, Bertrand Russell, and other eminent scientists issued a manifesto urging scientists to "think in a new way" about their moral responsibilities in the nuclear age. In 1957, the first Pugwash Conference was held in Pugwash, Nova Scotia, bringing together some of the greatest scientific minds to address nuclear weapons issues and the social responsibility of scientists. SPUSA strives to convene the next generation of scientists around today's parallel issues.



From left to right: Dr. Martin Jischke, Jonathan Braun, and Dr. Arden Bement.

Purdue Student Pugwash presented the Midwest Regional Conference on Saturday April 1, 2006 with keynote speaker Dr. Arden Bement Jr., Director of the National Science Foundation. The Conference centered on the topic of "The Integrity of Science in the 21st Century." Other topics that were heard on that day were: bioethics, and the connection between politics and technical fields. AAE senior Jonathan Braun was the Pugwash President for 2005-2006.



Dr. Arden Bement speaks in Fowler Hall about scientific integrity during the Purdue Pugwash Midwest Regional Conference.

Jonathan joined Pugwash in the fall of 2004 when it was just beginning its reconstruction and quickly took a leadership role as the Vice President. "At the time, I was looking for an organization with an open atmosphere for serious discussions. Pugwash seemed like an excellent opportunity." Jonathan stated. Later, in the spring of 2005 Jonathan was elected to be the next President. Pugwash grew quickly in the year to come hosting 17 speakers on critical topics like gene therapy, the military's role in space exploration, and global warming. "It made me happy to see that what we were doing was catching the attention of Purdue students." Jonathan stated. Boasting a dedicated membership of over 90 people with 15 executive members, Purdue Pugwash is currently

the largest student chapter in the nation. Jonathan now serves on the Board of Directors for Student Pugwash USA where he hopes he can continue to enrich the lives of students and improve scientific awareness and interest. To learn more about Purdue Student Pugwash, you can visit

www.purdue.edu/pugwash.

Student Awards & Fellowship

International Chapter P.E.O Sisterhood

Providing Educational Opportunities for Women

Graduate student **Lindsay Millard** has been awarded a \$10,000 P.E.O Scholar Award for the 2006-2007 academic year from the International Chapter P.E.O Sisterhood. This is a very prestigious addition to Lindsay's outstanding record.

P.E.O. was founded on January 21, 1869, by seven students on the campus of Wesleyan College in Mount Pleasant, Iowa. Nearly 70,000 women have benefited from the organization's educational projects. To date, P.E.O. has awarded Educational Loan Fund dollars totaling more than \$95 million,

International Peace Scholarships exceeding \$17 million, Program for Continuing Education grants topping \$23 million and Scholar Awards in excess of \$7 million.



Lindsay Millard

Space Engineering/Space Life Sciences/ Space Policy

*Willy Z. Sadeh Graduate Student Award
in Space Engineering and Space Sciences*

Graduate student **Geraldine Fritsch** was presented with the 2005 Willy Z. Sadeh Award in Space Engineering and Space Sciences.

Funding for this award is provided by endowment gifts from the Sadeh family, in combination with individual donations made in the name of Willy Z. Sadeh. Eligible applicants were graduate students specializing in space-based research at any accredited college or university in the world. Students must be specializing in the broad areas of space engineering, space life sciences, or space policy. Official recognition was made in conjunction with the Awards Presentations Ceremony at the AIAA Aerospace Sciences Meeting.



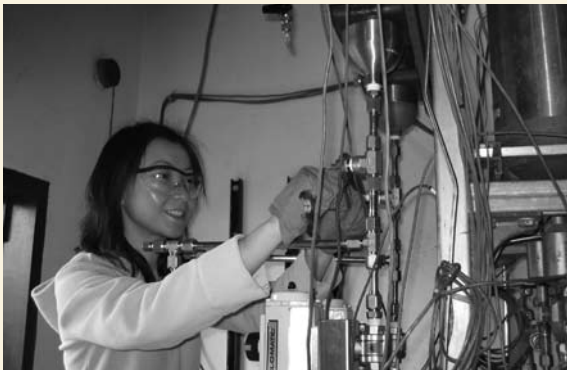
Geraldine Fritsch

Zonta International

Yen Yu, a graduate research assistant in the School of Aeronautics and Astronautics has been awarded a prestigious Zonta International Amelia Earhart Fellowship for the 2006-2007 academic year. Yu, from Taiwan earned a bachelor's and master's degree from the School of Aeronautics & Astronautics in 2003 and 2005 respectively. Her research focus is rocket propulsion.

The Zonta International Amelia Earhart Fellowship was established in 1938 and provides funds to women for graduate study in aerospace-related science and engineering. Earhart was a member of Zonta, a worldwide service organization of business and professional executives dedicated to advancing the status of women worldwide. Zonta has awarded more than \$5.7 million of over 1,122 fellowships to women from 57 countries. Today,

Zonta International has over 33,000 members in over 68 countries and continues to support women's efforts to become leaders and explore new fields of study.



Yen Yu

U.S. News and World Report Survey

Purdue University's College of Engineering graduate program is ranked sixth in the nation overall, up from 10th last year. Several of its schools are among the top 10 in a *U.S. News and World Report* survey released Friday, March 31. The School of Aeronautics and Astronautics was ranked **6th** in the nation.

To determine overall ranking, the magazine used data provided by the institutions. The information was used to compare factors such as standardized test scores, applicant acceptance rates, the ratio of doctoral students to faculty, research expenditures and research spending per faculty member.

Aeroliner e-newsletter

Spring 2005 saw the introduction of our new e-newsletter, Aeroliner. The name is taken from a weekly student paper that was written by the School's students during the 1950s. Aeroliner is one of the School's efforts to keep you updated on its activities and accomplishments. Six issues have now been sent out to good reviews, if you haven't received it yet and wish to, please send us your e-mail address at: aae-alumni@ecn.purdue.edu

Following our April 2006 edition where we included a downloadable 1955 edition of the AeroGram, we heard from alumni Art Wiggins ATE'53 who was the editor in the early 1950's. Art was very generous in sending thirteen copies from 1952 - 1953 for the school to copy. We are delighted to announce that the thirteen copies can be downloaded from our web site at: <https://engineering.purdue.edu/AAE/News/Publications/OldAeroliners/>

The copies include the following dates:

1952	1953
October 21	January 20
November 4	February 16
November 18	March 2
December 8	March 16
December 24	March 30
	April 27
	May 11
	May 20

PURDUE

UNIVERSITY

Homecoming 2005



(L-R) Michael Grant, Erin Calderwood, Brian Ventre & Elisabeth Hanssens



Brian Ventre talks to alumni and friends

Students from the School of Aeronautics and Astronautics helped out with Homecoming 2005. Michael Grant; Erin Calderwood, Brian Ventre and Elisabeth Hanssens all manned the AAE booth in the MSEE building throughout the day. This was a good stopping off point for alumni and friends to meet up.

Purdue Homecoming September 23, 2006

Join the Homecoming Celebration on September 23 (Purdue versus Minnesota) at the Purdue Mall. Stop by the School of Aeronautics and Astronautics booth in the MSEE building. Enjoy connecting with alumni, students and friends.



(L-R) Rob Landis; Harry Cikanek; Phillip Boettcher; Ariane Chepko; William Gerstenmaier and Brad Hurwitz. (Not pictured – Dr. Peter Schubert)

SEDS Spring Space Forum

Return to the Moon

Four VIP's took part in the Students for the Exploration and Development of Space (SEDS) Spring Space Forum on Thursday, April 20, 2006, where the panel was asked such questions as: "Should we go to the Moon and what should we do when we get there?"

William Gerstenmaier is the Associate Administrator for Space Operations at NASA HQ. Since June 2002, he had been the program manager of the International Space Station at NASA JSC. As the program manager, Gerstenmaier was responsible for the overall management, development, integration, and operation of the International Space Station.

Harry Cikanek is the associate director for exploration systems at NASA Glenn Research Center. He is responsible for overseeing all of Glenn's activities that support NASA's Exploration Systems Mission Directorate, which is related to developing advanced propulsion technology and engineering flight test support for the new Crew Exploration vehicle, which will be the craft that replaces the Space Shuttle.

Peter Schubert is the senior director of research and development at Packer Engineering, a multi-disciplinary engineering consulting and technical services company. Schubert is actively involved in space-based manufacturing research, including several recent conference papers and a NASA grant at Purdue. He holds 20 U.S. patents and has more than 30 publications.

Rob Landis works in the Mission Operations Directorate at the NASA Johnson Space Center in Houston. As operations lead flight controller in the international liaison office, Landis travels to Moscow, Russia, to support the International Space Center.

The students have worked on this project for 13 weeks for about 40 - 60 hours per week, and it was presented in about 2 hours in front of the guest VIP's, their peers and faculty. Phillip Boettcher was the Project Manager and Brad Hurwitz was Asst. Project Manager.

Organized by Ariane Chepko and the SEDS committee and sponsored by the Indiana Space Grant Consortium, SEDS Spring Space Forum is an educational community-driven event geared toward generating interest in both students and the public on issues concerning space exploration. The panel talked about the possibility of returning to the Moon and the potential research that can be done there. In addition to the experts, faculty member Dr. Stephen Heister and graduate students Lloyd Droppers and Etan Karni completed the panel and the event was moderated by Dr. Ivana Hrbud.



AAESAC members represent the school at the Distinguished Engineer Alumni reception for Dr. Allen S. Novick. (L-R) Brad Hurwitz; Nick Chachor, Kyle Donahue; Matt Negilski; P Imil and Greg Wilson

The Aeronautical and Astronautical Engineering Student Advisory Council (AAESAC) was founded in 1998 with the purpose of increasing interaction between undergraduate engineering students at all levels of education and the administration of the School of Aeronautics and Astronautics. AAESAC serves to strengthen the partnership between students, faculty, and administrators and to continue building Purdue Engineering's excellence in education, research, and service.



During the year, AAESAC members have helped out at many events across campus including, Homecoming and Educational Outreach Tours of the laboratories. They also represent the School of Aeronautics and Astronautics when professional speakers come to speak. AAESAC holds events such as Professor Pizza, the AAE Forum, recruiting events and the Aero Social Night.

Nick Chachor takes a group of 8th grades students from Frankfort Middle school for a tour of Aerospace Science Laboratory on April 11, 2006



Your financial support leaves a lasting impact on Purdue and the School. These gifts help us to achieve our mission in preparing students to be leaders in the aerospace field. Our annual Donor Honor Roll lists our alumni and friends and corporate donors who have given generously of their financial resources to support the School of Aeronautics & Astronautics. Many thanks for your investment in us. Listed are those who have generously donated during the period July 1, 2005 – June 30, 2006. Thank you for your support.

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