



# AEROCONTACT

A E R O S P A C E E N G I N E E R I N G

A newsletter for  
alumni and friends of  
the Department of  
Aerospace Engineering

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Department Chair**
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## DARPA Funds NIA's *SkyWalker* Program

The *SkyWalker* Program is a 30-month, \$11 million effort that focuses on using atmospheric energy and wing load morphing to create long-enduring flight.

The National Institute of Aerospace (NIA) and the University of Maryland's A. James Clark School of Engineering and Department of Aerospace Engineering announced in August, 2006 that they have been awarded the first phase of an \$11 million unmanned aeronautical vehicle (UAV) research and development program funded by DARPA.

***SkyWalker* continued on page 3**

## Space Robotics Institute Established at Maryland

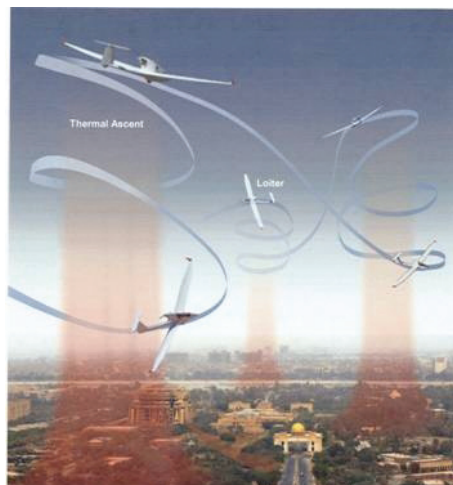
Congress has allocated \$3.5 million for the creation of a new space robotics institute that will be led by Clark School researchers.

The NASA 2006 budget, signed by the President, allocates \$3.5 million for the creation of an Institute for Dexterous Space Robotics at the university. This project was announced in late 2005 by Maryland Senators Barbara Mikulski and Paul Sarbanes as part of the conference report on the Science, State, Justice, Commerce, and Related Agencies 2006 spending bill. This announcement of federal funding was one of several to forward Maryland innovation projects.

Teaming with Carnegie-Mellon University and Stanford University, the Clark School's Space Systems Laboratory will create and lead a university consortium for advanced robotics to address NASA's current and future needs for cutting-edge robotics. The University is establishing the Space Robotics Institute under terms of a sole-source cooperative research agreement with the Goddard Space Flight Center.

***Robotics* continued on page 2**

*SkyWalker* will be able to perform intelligence surveillance and reconnaissance missions. Right, an artist's rendition of *SkyWalker* over the streets of Bagdad.





## Department Chair Darryll J. Pines

The University of Maryland and the A. James Clark School of Engineering announce the appointment of Darryll J. Pines as professor and chair of the school's Department of Aerospace Engineering. Dr. Pines began his post in October, 2006.

Dr. Pines has been a department faculty member for more than a decade and recently served as associate chair. He also serves the University as the Director of the GEM and SLOAN Scholars Programs which work to recruit and retain underrepresented students for graduate study in the Clark School. During the last three years, Dr. Pines worked in collaboration with DARPA and the Department of Defense.

His research centers on structural dynamics, including structural health monitoring and prognosis, smart sensors and adaptive, morphing and biologically inspired structures, and the guidance, navigation and control of aerospace vehicles.

Dr. Pines is a fellow of the Institute of Physics, associate fellow of the American Institute of Aeronautics and Astronautics and member of the American Helicopter Society; author of nearly 50 archival journal papers, six book chapters and more than 120 conference papers; and associate editor or board member of three academic journals.

Please join us in congratulating, and welcoming back, Dr. Pines.

### **Robotics story from front page**

continued from page 1

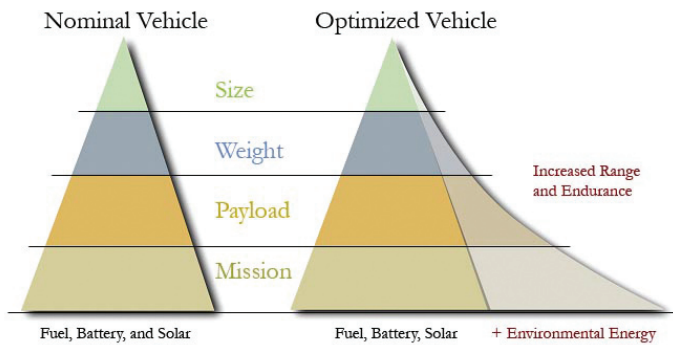
The institute will focus on creating robotic technologies capable of meeting future NASA needs, from large space telescope construction and maintenance to on-orbit assembly of interplanetary spacecraft to surface exploration of the moon and Mars in partnership with space-suited astronauts.

On a regular basis, technologies developed at the Clark School and at partner institutions will be implemented on Clark School testbed systems, such as the Ranger dexterous robotics system originally developed for a space shuttle flight demonstration.

These integrated simulations will demonstrate the technologies in relevant simulation environments, such as the Department's Neutral Buoyancy Research Facility, as the last step in the process of

qualifying the systems as ready for space flight development, test and operations. Senator Mikulski stated, "Science is the key to innovation and innovation is the key to our future." The technology developed at the Institute will have applications on Earth that will in turn spur the development of new technologies and new jobs in the state of Maryland.

This federal funding not only links the institution with NASA, but also with the National Institutes of Standards and Technology (NIST). Founded in 1901, NIST is a federal agency within the U.S. Commerce Department's Technology Administration. NIST's mission is "to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life."



Normal aircraft of a given size and weight use fuel, battery, and solar power to carry some payload and complete a mission. The Skywalker program will design a vehicle where a small amount of size and weight is added for sensors and actuators which will sense and use environmental energy (thermal currents rising through the air) to extend the payload capacity and the flight duration of the aircraft.

The **SkyWalker** flight program was originated at NIA by Dr. James E. Hubbard, Jr. as part of a focused and concerted effort to use Smart Structure and Smart Skin technology to enhance the performance of modern air vehicles.

This program is a collaborative effort between NIA, the University of Maryland, NASA Langley Research Center, Aurora Flight Systems, Georgia Tech and the Army Research Laboratory. Dr. Hubbard, Langley Distinguished Professor for the University of Maryland, is in residence at NIA and will lead the effort. The program will pursue Prof. Hubbard's goal to use smart structures and smart skin technology to enhance the performance of modern air vehicles. Sky Walker is bio-inspired and uses unique proprietary sensing technology to mimic the enduring flight of the albatross bird species.

SkyWalker is bio-inspired and uses unique proprietary sensing technology to mimic the enduring flight of the albatross. "The grey headed albatross routinely circumnavigates the globe during its migration. They can make the 13,000 mile trip in about 48 days by exploiting energy available in the atmosphere," stated Dr. Hubbard. "Sky Walker will use similar techniques of atmospheric energy exploitation in order to increase UAV range, endurance and on-station persistence."

As UAVs become a popular means for data collection and dissemination, the vehicles can become large, heavier and more expensive, thus creating a greater need for fuel. Using convective energy found in the atmosphere can reduce the requirement of added fuel capacity while increasing the UAV's ability to increase its range and endurance. The program uses an enabling sensor technology consisting of wing surface pressure sensors that can measure real-time lift and drag components and forward-looking environmental sensors that locate potential energy waypoints.

The SkyWalker Program is an R&D program focused toward achieving "Endlessly Enduring Flight" by

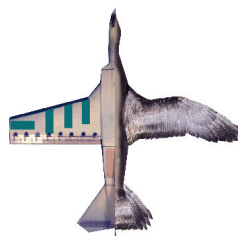
allowing unmanned aeronautical vehicles (UAVs) to exploit energy in the atmosphere such as thermals and updrafts and wing load morphing to significantly extend vehicle range and endurance.

More specifically it is a program that uses an enabling sensor technology consisting of wing surface pressure sensors that can measure real-time lift and drag components and look ahead environmental sensors for energy exploitation to extend range and endurance. This concept is demonstrated above.



This research program provides a ubiquitous capability that, when applied to the current UAV inventory, will allow enduring flight. It is particularly well suited to the Intelligence Surveillance and Reconnaissance mission being conducted in an urban environment, such as Bagdad, as it is designed to exploit heat thermals, updrafts and the like to increase persistence and maneuverability.

"We are very excited with the team that Dr. Hubbard has formed to conduct this very exciting research project. We are looking forward to an entire new generation of aircraft that can transform themselves into shapes that are optimum for their missions," commented Prof. William Fourney, former Chairman of the Department and a member of the NIA Technical Advisory Committee.



For more information about Dr. Hubbard's research, visit his website at:

<http://research.nianet.org/morpheuslab/SkyWalker.htm>

## Flatau and Wereley Awarded Multi-Year Grant

Dr. Alison Flatau and Dr. Norman Wereley have been awarded a \$6 million research grant over the next five years from the U.S. Department of Defense under the Multidisciplinary University Research Initiative (MURI). Prof. Flatau's award is for research on magnetic and mechanical energy in alloys called magnetostrictive materials.

Flatau serves as co-principal investigator along with faculty from six other universities: Virginia Tech, Iowa State, University of Minnesota, Ohio State, Penn State, and Rutgers.

This MURI awards provide long-term support for research, graduate students and laboratory instrumentation development in specific science and engineering research themes vital to national defense.

For more information on this research project and magnetostrictive materials, visit: <http://www.aerosmart.umd.edu/index.html>



## Wind Tunnel's Media Day a 'Storming' Success

University of Maryland held its annual 'Hurricane Wind Tunnel Media Day,' on July 28. Reporters were invited to stand in the Glenn L. Martin Wind Tunnel, with the goal of showing what it looks and feels like to be in winds as strong as 115 mph.



Dr. Barlow speaks with a television news crew in the wind tunnel.

This event began in 2004 to provide reporters the opportunity to get into the wind tunnel before the start of Atlantic hurricane season. The wind tunnel is one of the busiest wind tunnels in the coun-

try and is booked months in advance for research activity. Prior to 2004, typically every year, as the first hurricane of the season approaches land, media on tight deadlines would contact the tunnel asking to tape a segment in the wind tunnel. Dr. Jewel Barlow, Director of the GLMWT decided an entire day should be set aside so reporters could get their shots ahead of time.

Reporters interviewed Barlow about wind tunnel research while standing in the tunnel test section, with the speeds set at about 40 mph. Then the reporters were strapped into a rock climber's harness, tethered to the floor and left in the tunnel with nothing but their microphone, as winds cranked up to the start of a Category 3 storm. Wind and wind tunnel experts, as well as scientists who can talk about hurricanes, are on hand to answer questions.

Media Day is sponsored by University Communications and the Wind Tunnel staff, headed by Professor Jewel Barlow, wind tunnel director; Ahmad Kassae,

assistant director, and Hossein Esmaili, research associate. Each year, the event draws reporters and cameras from numerous Washington-Baltimore television and radio stations, and newspapers.



## Department Representatives Invited Guests at White House Visit

President George W. Bush announced his *American Competitiveness Initiative* at Parkland Magnet Middle School for Aerospace Technology, located in Rockville, Maryland in April. Dr. Inder Chopra, Director, Alfred Gessow Rotorcraft Center and Nicole P. Roop,



Assistant Director, Undergraduate Studies, were invited guests of the White House and Parkland Middle at the event and Initiative announcement.

Regional education and political leaders were also on hand to tour the school and hear the President's ideas to make the U.S. the technological capital of the world. The President proposed increasing the amount of government-funded research performed in the private sector and in educational environments, especially at the collegiate level.

The Initiative also includes a goal of training 70,000 high school teachers in advanced placement science and math areas, and having 30,000 adjunct professors (professionals from the field) in the classroom. These programs were included in the 2006 reauthorization of the Higher Education Act.

## Second Annual Alfred Gessow Memorial Lecture Held



On April 21, Dr. Lisa Porter (pictured above), NASA's Associate Administrator for the Aeronautics Research Mission Directorate, gave the second annual Alfred Gessow Memorial Lecture. Her lecture was titled "NASA's new Aeronautics Program." Ms. Porter leads the agency's aeronautics research efforts and is co-lead in the development of a national aeronautics policy in cooperation with other government agencies.

Sponsored by the Alfred Gessow Rotorcraft Center, Ms. Porter's lecture



was prefaced by rotorcraft and hypersonics presentations by department graduate students, and a rotorcraft and hypersonics research overview by Dr. Inder Chopra, Dr. Ken Yu, and Dr. Mark Lewis. The day was concluded with tours of various aerospace labs on campus.

## Clark School Unveils Martin Exhibit

Pres. C.D. Mote, Jr., and officials from Lockheed Martin Corporation helped Clark School Dean Nariman Farvardin unveil a new display housing the bust of Aerospace Department and Clark School benefactor and aviation pioneer Glenn L. Martin on April 10 in the Kim Engineering Building.



Mal O'Neill, chief technology officer at Lockheed Martin, spoke at

the ceremony attended by Clark School faculty, staff, students and alumni, and Lockheed Martin staff.

The new exhibit features text and photos about Martin's contributions to aviation and the university, and about his business successes. His company was a predecessor to Lockheed Martin. The exhibit also

highlights the current beneficiaries of the many professorships funded by Martin's generous gifts.

The Martin bust was sculpted by Marchello Storelli in 1957. The new exhibit was crafted by Clark School alumnus Helmut Guenschel, B.S. '62 civil engineering, who attended the ceremony. The exhibit will be moved to its permanent home in the main lobby of Martin Hall.



## Save the Date for Maryland Day 2007

Plans are already underway for the 9th annual Maryland Day on April 28, 2007 from 10 a.m. until 4 p.m.. Once again the Aerospace Department and the Clark School of Engineering will be having information sessions, displays, lab tours, and the always popular student design competition. This year, the department displays and student competition will be taking place on the plaza of the Kim Building. See you there!



## Fourney to Lead Engineering's 'Keystone Academy'



Dr. Bill Fourney, professor and former chair, has been named as lead Keystone Professor of the Keystone

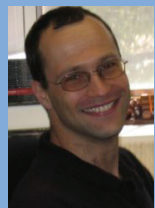
Clark School Academy of Distinguished Professors. In all, there are six Keystone professors within the Clark School's engineering disciplines. The program fosters exemplary undergraduate teaching skills and commitment to excellence in fundamental engineering courses.

Keystone professors receive renewable three-year appointments with a base salary increase and discretionary funds to support their activities, and are assisted by additional support personnel in covered courses. ENES 100: "Introduction to Engineering" is the first course covered by Keystone.

6 Other fundamental engineering courses will be included in the future.

## Shapiro and Cadou Promoted to Associate Professor

Dr. Ben Shapiro and Dr. Chris Cadou



were promoted to Associate Professors in the Aerospace Engineering Department. Both joined the department in August of 2000. Dr. Shapiro has a joint appointment with the Engineering School's Institute for Systems Research where his research focuses on control of micro-scale systems, fluid dynamics, and biochemical-medical applica-

tions. Dr. Cadou's research interests include combustion (micro and conventional scales), laser diagnostics (conventional and micro), and compact power systems.

## Humbert Awarded Best Paper

A paper co-authored by Dr. J. Sean Humbert, Assistant Professor, and two California Institute of Technology



researchers was awarded the American Institute for Aeronautics and Astronautics Best Paper distinction by the 2005 American Institute of Aeronautics and

Astronautics (AIAA) Guidance, Navigation and Control Conference. Their paper was titled "Pitch-Altitude Control and Terrain Following Based on Bio-Inspired Visuomotor Convergence."

## Cadou Nominated for Advisor of the Year

Dr. Chris Cadou, Associate Professor, was the Clark School of Engineering's nominee for the Provost's 2005-2006 Faculty Academic Advisor of the Year. These nominations honor individuals such as Dr. Cadou for providing excellent academic advising service. Prof. Cadou was recognized for his outstanding service during the 2006 University of Maryland Advising Conference in August.

## departmentNOTES

Dr. James Baeder and his wife Kate welcomed a son, Paul Douglas Baeder, to the world this past June.

Dr. V.T. Nagaraj, Senior Research Scientist for the AG Rotorcraft Center, chaired the Aircraft Design Session at the AHS International 62nd Annual Forum in Phoenix, Arizona.

Ms. Julia John, who was a member of the Aerospace Engineering Department since 2001, accepted a position in May with the Department of Cell Biology and Molecular Genetics as an Accounting Associate. We wish Julia all the best!



Mr. Peter Alexander is the newest member of the aerospace family as Accounting Clerk. He is also seeking his degree in business management and

was student manager for Dining Services on campus. Peter is originally from Trinidad and Tobago, and now resides in Prince George's County.



The 3rd annual Aerospace Honors Program Recognition Ceremony took place on May 20th in the Kim Building. Eighteen graduating seniors received the Honors medallion and certificate presented by Drs. Fourney and Flatau and their honors project advisor. The class of 2006 was the largest in the history of the honors program which began in 1997.



# Class of May 2006

## Bachelor of Science

Ahure, Louise  
 Alessandra, Amanda ★  
 Alvarado, Matthew  
 Anderson, Dennis  
 Barba-Sorra, Victor  
 Blaine, Joel  
 Bouchat, Nicholas  
 Brookman, Stephen ●  
 Bubert, Edward  
 Chandra, Avinash  
 Chippa, Christopher  
 Cohn, Matthew  
 Coker, Joseph ★✂  
 Cook, Eugene ★✂❖  
 Corbitt, Sara  
 Davis, Jonathan ●  
 Dube', Alexander  
 Eagle, W. Ethan ★✂ℳ  
     *2nd Degree: Mathematics*  
 Eckert, Aaron  
 Ellis, Derek  
 Falini, Patrick  
 Fields, Kelly  
 Fotzeu-Fotzeu Jean  
 Gardner, Peter ✂  
 Graff, Jonathan

Gupta, Jishnu  
 Haynes, Patrick  
     *2nd Degree: Economics*  
 Hendrickson, Jason  
 Higgins, Padraig  
 Hoffman, Benjamin  
 Hoffmaster, Ryan ★■❖  
 Howard, Andrew ★  
 Husain, Sajjad  
 Kavlick, Mark  
 Khoury, Shane  
 King, Jacob ★  
 Kless, Matthew  
 Korzun, Ashley ★●◆  
 Kurits, Inna ★●ℳ  
 Laning, Stephanie ★✂  
 Lindsay, Andrew  
 Ling, Victor  
 Lloyd, Adam  
 Mackey, Donald ★  
 Marquart, Jeffrey ★✂◆  
 Meehan, Megan  
 Meeroff, Jamie ★✂❖  
 Meinerz, Michael  
 Moser, Amanda  
 Moskal, Christopher  
 Needham, Erin  
 Nitsch, Paul

Pappafotis, Nicholas  
 Ries, Paul ★(SM) ✂◆  
 Robinson, Jason  
 Rosendall, Paul ★✂ℳ  
 Schmaus, Joseph ✂◆  
     *2nd Degree: Mathematics*  
 Schoonover, Kevin ★✂  
 Schroeder, Mari  
 Strubin, Russell  
 Sumner, Jesse  
 Trepp, Samuel  
 Wagner, Benjamin  
 Weaver, Brian ★◆  
 Wilson, Nicholas  
 Zajac, Alexander

★ Aerospace  
 Engineering Honors  
 ✂ University Honors  
 ◆ cum Laude  
 ● College Park Scholars  
 ■ Gemstone Honors  
 ℳ Magna cum Laude  
 ❖ Summa cum Laude  
 (SM) Senior Marshall

## Master of Science

Lauren Chung  
 Keith De Weese  
 Ryan Frigm  
 Mamta Jangid  
 Charles McConnell  
 Shyam Menon  
 Daniel Rolf  
 Michael Scher,  
 Melissa Turner  
 Ananthanarayanan Veeraragavan



## Doctor of Philosophy

Shreyas Ananthan, *Analysis of Rotor Wake Aerodynamics During Maneuvering Flight Using a Free-Vortex Wake Methodology*; Advisor: Dr. J. Gordon Leishman

Ronald N Couch, *Development of Magnetic Shape Memory Alloy Actuators for a Swashplateless Helicopter Rotor*; Advisor: Dr. Inderjit Chopra

Timothy Thierry Leach, *Effect of Structural Heat Conduction on the Performance of Micro Combustors and Micro Thrusters*; Advisor: Dr. Christopher Cadou

Jamie Ann Lennon, *An Architecture for the Autonomous Generation of Preference-Optimized Trajectories*; Advisor: Dr. Ella Atkins

Ashish Sudhakar Purekar, *Piezoelectric Phased Array Acousto Ultrasonic Interrogation of Damage in Thin Plates*; Advisor: Dr. Darryll Pines

Kevin Ronald Uleck, *A Temperature Dependent Fatigue Theory for Plumes Matrix Composites*; Advisor: Dr. Anthony Vizzini

Min Xue, *Real-Time Terminal Area Trajectory Planning for Runway Independent Aircraft*; Advisor: Dr. Ella Atkins

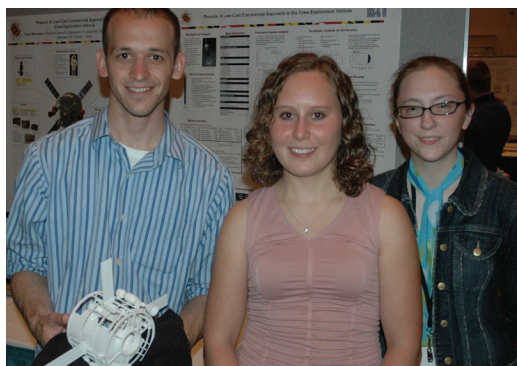
Seniors **Paul Rosendall, Joseph Coker, Inna Kurits and Donald Mackey** swept the undergraduate technical paper competition at the American Aeronautics and Astronautics Association (AIAA) Region-I Mid-Atlantic Student Conference.

Rosendall (pictured right) won first place with his paper titled "Enhanced Algorithms for an Underwater Visual Positioning System," and will present his paper at the AIAA Foundation National Student Conference competition held at the AIAA Aerospace Sciences Meeting in Reno, Nevada this upcoming January. Coker received second place, while Kurits and Mackey tied for third, and all the winners were awarded cash prizes.

This year's regional conference was held at Penn State where over 50 individual and team papers were presented by undergraduate and graduate students. These students represented the University of Virginia, Virginia Tech, Johns Hopkins University, Virginia Commonwealth, the National Institute of Aerospace, and Old Dominion University, in addition to the University of Maryland and Penn State. Of the 35 undergraduate individual papers submitted, 20 were Maryland juniors and seniors.

The 2007 Region I-MA conference will be held April 13th & 14th at the National Institute of Aerospace (NIA) in Langley, Virginia.

Paul Rosendall receives his first place award at the conference.



Above: RASC-AL Graduate team members Sickenberger, Benson, and Koscielniak

Two University of Maryland Aerospace Engineering teams participated in the NASA RASC-AL (Revolutionary Aerospace Systems Concept - Academic Linkage) design competition held in Cape Canaveral, Florida. This year's theme

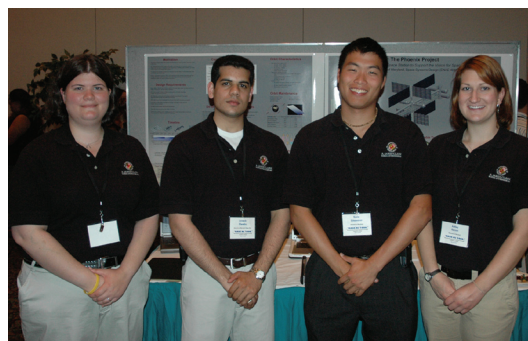
was "Space Exploration: The Next Steps." The university design projects addressed the utilization of NASA's exploration architecture to perform potential future space missions.

The graduate team of **Agnieszka Koscielniak, Liz Benson, and Richard Sickenberger** was awarded first place in the graduate division, beating six other teams: four entries from the Georgia Institute of Technology and one entry each from Carnegie-Mellon University and the University of Alabama-Huntsville. The team presented its design for a low-cost human spacecraft based on a term

project for last fall's ENAE 788D class. As part of the prize, they received a paid trip to present their paper and design at the International Astronautical Federation meeting in Valencia, Spain in October.

The undergraduate team, composed of **Avi Chandra, Ashley Korzun, Meg Meehan, and Kevin Schoonover** representing the 36 students of ENAE 484, presented their classes' project on modifying the International Space Station to create a rotating space station for partial gravity biological studies. Although the Clark School team was among four schools very tightly grouped at the top of 14 undergraduate entries, the team was not awarded either of the two undergraduate prizes.

Below: The RASC-AL Undergraduate team presenters Meehan, Chandra, Schoonover, and Korzun



RASC-AL 2006



The University of Maryland captured second place honors in the 23rd annual AHS International's Student Helicopter Design Competition. The graduate team was comprised of **Peter Copp (team leader)**, **Moble Benedict**, **Bryant Craig**, **Brandon Fitchett**, **Nitin Gupta**, **Arun Jose**, **Jishnu Keshavan**, and **Shyam Menon**. Their faculty advisors were Dr. Inder Chopra and Dr. V.T. Nagaraj.

Their design, called **Penguin/Pyros**, was designed as a two-seat, single-engine turbine training helicopter with operating characteristics representative of the [world's] turbine [helicopter] fleet, while being cost-competitive with current [piston-engined] training helicopters, along with the conceptual design of a low-cost turbine engine. Maryland's team was awarded a cash stipend for their second place win.

This competition was co-sponsored by Bell Helicopter and promotes student interest in vertical flight technology. Proposals are judged in four categories: technical content, application and feasibility, originality, and organization and presentation.



The **SAMPE student chapter design team** won second place in a field of 18 universities at the SAMPE Wing Competition.



Kunal Kothari and Scott Jacoby at SAMPE 2006

A paper authored by graduate student **Kunal Kothari** won second prize at the national 2006 Society for Advanced Materials Process Engineering (SAMPE) University Research Program student paper competition, Ph.D. category. The paper was titled Microstructure and Mechanical Properties of Rapidly Consolidated Gamma Titanium Aluminides. Kunal received a cash prize of \$600.

Professor Norman Wereley and Research Engineer Vjekoslav Pavlin served as advisors to the design group.



9



Ashley Korzun with Maryland President C. Dan Mote

**Ashley Korzun**, senior, was inducted into the Maryland Medallion Society by university President Mote as a finalist for two prestigious university-wide awards, the Byrd Citizenship Prize and the Wilson H. Elkins Award.

Korzun was recognized for coordinating

a group of university students to travel to the Gulf Coast region to assist with Hurricane Katrina clean-up efforts, and for her leadership in Tau Beta Pi and the Engineering Student Council.

**Julie Trout**, junior, was re-elected to the University Senate as the Clark School of Engineering Undergraduate representative.



The following awards were handed out to aerospace engineering undergraduates at the Spring 2006 Engineering Honors and Awards Ceremony:  
**Victor**

**Ling** - AIAA Outstanding Achievement Award; **Keith Allen**, **Benjamin Cramer** (not pict.), and **Crystal Proffitt** - Robert M. Rivello Scholarship Award; **Ashley Korzun** - Kim Borsavage and Pamela Stone Student Award for Outstanding Service; **Holly Schurter** - Sigma Gamma Tau Outstanding Achievement Award; **Timothy Lee** - Alumni Association Engineering Chapter Student Honor Award; and **Eugene Cook** (not pict.) - Academic Achievement Award

# alumniNOTES



R. Marques, (right) with Luiz Gustavo Ribeiro, who has taken his previous position at Jet Aviation.

**Rogério Marques**, BS '76, has been named vice president marketing and sales for Jet Aviation in São Paulo, Brazil. Prior to joining Jet Aviation, he served as director of marketing and sales at Embraer's corporate aviation division for the Latin American market.



**Julianne Zimmerman**, MS '90, was named as a 2006 "Woman to Watch" by *Mass High Tech*, *The Journal of New England Technology*. Zimmerman is director of business development at GreenFuel

Technologies, which has created a system for reducing carbon emissions. Julianne's nomination letter details her duties at GreenFuel, where she took over managing the fabrication and delivery of the company's first field trial system, which was installed in August 2005 at a power plant in the southwestern United States. "Her leadership during this intensive crunch period enabled GreenFuel to deliver impressive results on time and established the company as an important new entrant in the energy industry," the letter states. Zimmerman was among

nine other women who were selected throughout the New England region as notable and accomplished "up and comers" in their fields.

**Michael Griffin**, PhD '77, was elected to the National Academy of Engineering (NAE) for his technical leadership of flight experiments that led to the first quantitative measurements of space intercept physics. Election to the National Academy of Engineering is among the highest professional distinctions accorded to an engineer. Dr. Griffin was also elected as a Honorary Fellow of the American Institute of Aeronautics and Astronautics in April at the Aerospace Spotlight Awards Gala in Washington, D.C. Presented only to exceptional individuals who embody the highest standards possible in the aeronautics and astronautics field, Honorary Fellow is the highest accolade that can be bestowed by AIAA and its Board of Directors.



Maryland Alumni and friends were well represented at the Sikorsky awards ceremony in the spring of 2006: Mike Torok, MS '86, PhD '89 (Chief Engineer of Naval Hawk, Patent Award), Mark Miller (VP of Engineering at Sikorsky, Aerospace Dept. Advisory Board member), Bill Welsh (Chief of Dynamics, Patent award), Andy Bernhard (Lead Engineer for UH-60M IVHMS, with Marshall Tan Award) and Bob Flemming (Lifetime Achievement Award).

**Andy Bernhard**, MS '95, PhD '00, was awarded the Marshall Tan award by Sikorsky Aircraft Corporation for advancing the state of the art of Health and Usage Monitoring Systems (HUMS) through the design, development, integration and testing of the Integrated Vehicle Health Management System (IVHMS) for the UH-60M



**Kirk M. Cantor**, BS '81, was honored for the second time in his career in "Who's Who Among America's Teachers." Dr. Cantor is professor of plastics and polymer technology at Pennsylvania College of Technology where he has taught since 1990.

aircraft. The award is presented to an individual under the age of 35 who has made an outstanding contribution to vertical flight in the preceding calendar year. It is named and presented in the Spirit of John Marshall and Robert Tan, two exceptionally promising young engineers who are remembered by their friends and associates at Sikorsky Aircraft.



# alumniNOTES

**Gang Wang**, MS '98, PhD. '01, was selected as the winner of the AIAA National Capital Section Young Engineer/Scientist Award for 2006. Nominated by Professor Norman Wereley, this award is given to recognize professionals who are at the early end of their careers with impressive professional



achievements.

Dr. Wang, pictured (left) with his nominator, Dr. Norm Wereley, was presented with this award at the annual AIAA NCS Honors & Awards Banquet in June at the Army Navy Country Club in Arlington, VA. Dr. Wang is currently an

assistant research scientist in the aerospace engineering department.



The American Helicopter Society (AHS) International

gave its Francois-Xavier Bagnoud Award to **Anubhav Datta**, MS '02, PhD '04, assistant research scientist and lecturer in the Clark School's Department of Aerospace Engineering. The award, established in 1992, recognizes outstanding contributions to vertical flight technology by an AHS International member under the age of thirty. Dr. Datta is the seventh aerospace engineering alumnus to receive this award. Past recipients of this award include:

- 2005 - Vineet Sahasrabudhe, MS '93, PhD '96
- 2004 - Nikhil A. Koratkar, MS '98, PhD '00
- 1999 - Andreas P.F. Bernhard, MS '95, PhD '00
- 1998 - Farhan Gandhi, MS '92, PhD '95
- 1996 - Michael S. Torok, MS '86, PhD '89
- 1994 - Ed Smith, MS '90, PhD '92

**Christopher Broderick**, BSAE/Math '96, has been named chief executive officer of CoreStreet, a leader in providing software critical to major credential programs. Prior to this post, Broderick held several managerial positions with CoreStreet in California.



**Alice Ryan**, BS '03, has received her Master of Science in Aeronautics and Astronautics from Stanford University where she is pursuing her PhD in environmental engineering within the atmosphere/energy program.

**Matthew Kless**, BS '06, was commissioned as a 2nd lieutenant in the U.S. Air Force and attended officers' training classes at Maxwell Air Force Base. He will take flight training at Langley Air Force Base in Virginia.



**Jonathan Graff**, BS '06, is a Flight Test Engineer with General Atomics Aeronautical Systems, Inc. He is based in Palmdale, California.

**Victor Ling**, BS '06, is a Consultant Engineer for FM Global located in Reston, Virginia.

## Engineering Alumni Chapter Events

### Engineering Alumni Chapter Board Meeting

- Tuesday, January 30, 2007; 6:30 p.m.
- 1107 Jeong H. Kim Engineering Building

*Alumni who are interested in getting more involved with the Clark School of Engineering are invited to attend this meeting. Topics to be discussed include student and alumni mentoring, Maryland Day activities, the Golf Tournament and more.*

### Order of the Engineer Ceremony & Reception

- Thursday, February 22, 2007; 6:30 p.m.
- 1110 Jeong H. Kim Engineering Building

*Participating in the Order of the Engineer Ceremony is the highlight of many student's experiences at the Clark School, and attracts alumni and others who wish to reaffirm their commitment to the ethical practice of engineering.*



**AEROCONTACT** is published several times a year for alumni and friends of the Department of Aerospace Engineering at the A. James Clark School of Engineering.

Your alumni news and comments are welcome. Please send them to:

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Dr. Mary Bowden



### *Spring Schedule of Events*

<b>January 24</b>	First Day of Class
<b>February 19</b>	H.S. Junior Open House
<b>March 19-23</b>	Spring Break
<b>March 30,</b>	<i>Open House</i>
<b>April 13, &amp;</b>	<i>Dates for</i>
<b>April 20</b>	<i>Admitted Students</i>
<b>April 28</b>	9th Annual Maryland Day
<b>May 20-21</b>	Commencement Ceremonies



**A. JAMES CLARK**  
SCHOOL OF ENGINEERING

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