FALL / WINTER 2008

AEROCONTACT

AEROSPACE ENGINEERING
A. JAMES CLARK SCHOOL *of* ENGINEERING

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A NEWSLETTER FOR ALUMNI AND FRIENDS OF THE DEPARTMENT OF AEROSPACE ENGINEERING AT THE A. JAMES CLARK SCHOOL OF ENGINEERING, UNIVERSITY OF MARYLAND, COLLEGE PARK.

IN THIS ISSUE:

Multidisciplinary University Research Initiative on "Rotorcraft Brownout" at Maryland

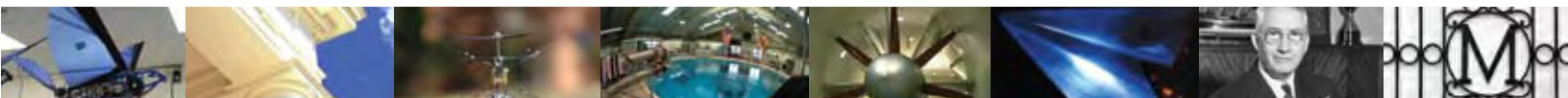
OPTICAL AIR DATA SYSTEMS LLC

The Department of Defense (DoD) has announced that the Clark School has been successful in securing an Air Force Office of Scientific Research (AFOSR) Multidisciplinary University Research Initiative (MURI) on Rotorcraft Brownout.

The brownout phenomenon causes accidents during helicopter landing and take-off operations in arid desert terrain. In some conditions, intense, blinding dust clouds stirred up by the helicopter rotor downwash during near-ground flight, causing the pilot to lose situational awareness posing significant flight safety risks. The problem is compounded by the differences in the brownout dust clouds shown by different types of helicopters, some helicopters having much more acute problems than others. Dr. J. Gordon Leishman, Minta Martin Professor of Engineering, and his team of faculty in both aerospace engineering and mechanical engineering are credited for putting together a successful proposal on the topic "Rotorcraft Brownout: Advanced Understanding, Control, and Mitigation" to secure the MURI grant.

This multidisciplinary research investigation will accelerate the foundational understanding and eventual mitigation of brownout for rotorcraft operations in austere environments. The MURI work includes fundamental experimental and computational studies of the processes of sand, dust and other types of sediment uplift under the action of jet-type flows and strongly three-dimensional flows with embedded vortices typical of those produced by helicopter rotors. Methods for the optical characterization of the dust clouds will also be developed. The goals are to more clearly understand the relationships between certain helicopter design parameters and the problem of rotorcraft brownout, ultimately leading to methods of mitigating the problem. The University of Maryland is partnered with Arizona State University, Iowa State University, and Dartmouth College. The team at the University of Maryland includes Aerospace Engineering faculty, Dr. J. Gordon Leishman (PI), Dr. Roberto Celi, Dr. James Baeder, and Dr. Inderjit Chopra, as well as Mechanical Engineering faculty, Dr. Ken Kiger and Dr. Ugo Piomelli.

"This will be a very exciting project that will lead to a new understanding of how to combat Helicopter Brownout for AFOSR," states Dr. Darryll Pines, Aerospace Engineering Department Chair.



chair's MESSAGE

DARRYLL PINES

Dear Alumni and Friends,

Welcome to the Fall 2008 issue of our AEROCONTACT newsletter. Last semester was truly an exciting time period for our alumni, students, staff and faculty. Several notable alumni including Mike Torok (Sikorsky), Mark Tischler (NASA Ames), John Miller (Army Research Lab), Mike Griffin (NASA), and Sandra Ugrina (NIA) were recognized for their contributions to the field of aerospace engineering. The department hosted the AIAA Mid-Atlantic Student Regional Conference in the Jeong Kim Building in April. Three Maryland students placed in the top three in the paper competition held at the conference. The performance of our students reflects the genuine effort put into their unique research projects as well as the quality of our department honors program.

Additionally, this past semester was also particularly rewarding for our current and former graduate students. Several of our graduate students won prestigious National Awards and best student paper awards. The success continued at the University of Maryland campus level as AE undergraduate and graduate students won numerous campus awards.

At the department level, we held our inaugural undergraduate competition for the John Anderson Research Award. This year's first place recipient was Madeline Kirk, mentored by Professor Dave Akin. Our Second Annual Masters and Doctoral Research Award ceremony was held following our Alfred Gessow Memorial lecture. This years' lecture was given by four-star General, Richard Cody. Gen. Cody inspired our students and guests by challenging them to work on technology which will improve the future of rotorcraft. Following the seminar, winners in the Masters (Inna Kurtis) and Doctoral (Anand Veergavan) categories were announced.

The department continues to have success in research by winning major competitive awards and establishing partnerships with both industry and academia. Professor J. Gordon Leishman (PI) successfully obtained an AFOSR MURI on "Rotorcraft Brownout." Professor Dave Akin acquired follow-on funding for the Institute for Dextrous Robotics through NASA Goddard in addition to landing one of ten NASA Lunar Concept Studies grants. Professors Flatau and Fourney won DoD Defense Instrumentation Awards to help purchase necessary instruments further advancing their respective research activities. The department is also currently working on strong collaborative relationships with NAVAIR Pax River and the Lockheed Martin corporation. These activities are still in their embryonic stages, but more will follow in the Spring 2009 newsletter.

Our faculty nabbed several additional notable achievements including, Professor Norman Wereley's selection as a Technical Fellow of ASME, Professor Inderjit Chopra was named an honorary fellow of the American Helicopter Society (AHS) International and Professor Alison Flatau and Professor Dave Akin gave plenary and keynote addresses at major conferences.

SUMMARY OF AWARDS

SPRING 2008 SEMESTER

AIAA UNDERGRADUATE PAPER COMPETITION:

- 1ST PLACE: JASON LEGGETT (SENIOR)
- 2ND PLACE: MICHAEL GENTRY (JUNIOR)
- 3RD PLACE: SARA FIELDS (SENIOR)

NATIONAL AND PROFESSIONAL SOCIETY AWARDS

- LOREAL FELLOWSHIP AWARD: SANDRA UGRINA, PHD'07 (AE) (CURRENT SUPERVISOR: HUBBARD)
- ORVILLE AND WILBUR WRIGHT GRADUATE AWARD: SUPRATIK DATTA (ADVISOR: FLATAU)
- AIAA FOUNDATION AWARD: JOSHUA JOHNSON (ADVISOR: LEWIS)
- AIAA PROPELLANTS & COMBUSTION BEST PAPER AWARD: AMARDIP GHOS, QINA DIAO (ADVISOR: YU)
- SPIE SMART MAT. AND STRUCTURES BEST PAPER AWARD: SUPRATIK DATTA (ADVISOR: FLATAU)
- AHS VERTICAL FOUNDATION AWARDS

UNIVERSITY OF MARYLAND CAMPUS AWARDS:

- 2008 1ST PLACE VID/TERP VIDEO COMPETITION: JOE CONROY AND ANDREW HYSLOP (ADVISOR: HUMBERT)
- 2008-09 FLAGSHIP FELLOWSHIP: BRANDON BUSH (ADVISOR: BAEDER)
- 2008 ANNE WYLIE DISSERTATION FELLOWSHIP: SUPRATIK DATTA (ADVISOR: FLATAU)
- 2008 DISTINGUISHED TEACHING AWARDS: LINA MARIA CASTANO, SONIA HERNANDEZ-DORAN, AND SCOTT OWEN
- UNIVERSITY HONORS PROGRAM BEST UNDERGRAD PAPER: MICHAEL LEVASHOV (MENTOR: AKIN)

Staff members were not absent from accomplishments as well! As a new initiative, we instituted staff award selected completely by our undergraduate students. This year's inaugural winner was Dr. Nicole Roop for her tireless and incredible service to our students while simultaneously completing her doctorate in education. We also added a new staff member, Ms. Erika Aparakakankanange, as our new Graduate Coordinator.

While the department enjoyed an extraordinarily successful and productive semester, it also suffered adversity. On

truly an exciting time period for our alumni, students, staff and faculty

May 22, the department was notified of Distinguished Visiting Professor Robert Korkegi's passing. Bob was well known for his work in hypersonics and as a former director of the Von Karman Institute in Europe. Bob taught in our department for approximately twenty-two years.

With the rankings of both the Graduate and Undergraduate programs steadily on the rise, this fall, we welcome over 70 confirmed first-year students, including freshmen and transfer students. The average combined Reading and Math SAT score of these incoming freshmen was 1,363, the 75th percentile being 1,430. These students also had an average high school grade point average of 4.11 (on a weighted scale). Our incoming class of 44 graduate students has an average grade point average of 3.7, and GRE scores of 2,008. The excellence of our incoming students attests to the level of quality and admiration our programs have earned.

I hope you will enjoy reading this issue of our newsletter, and please don't hesitate to get in contact with me about anything which might be of interest to you. As you know, we are always seeking your support, either in the form of a gift (http://www.aero.umd.edu/alumni/giving.html) to the department or in terms of your time. If you are in town, please drop by and say hello. We always enjoy finding out how our alumni and friends are doing.

Yours truly,

Darryll J. Pines,
Professor and Chair

AE SOARS TO NEW HEIGHTS: UNDERGRAD PROGRAM NOW RANKED 9TH

For the 2008-09 academic year, the undergraduate aerospace engineering program has been ranked 9th in the U.S. News and World Report. The program was ranked among all undergraduate aerospace/aeronautical/astronautical engineering programs at schools whose highest degree is a doctorate.

This year's rankings show a positive movement of one spot from last year's ranking at 10th. The department had stayed consistent at tenth for several years prior. This year's list of top 10 aerospace programs is divergent from past years as there are no programs jointly ranked or tied with another program. The Clark School of Engineering was ranked 21st in the nation in undergraduate engineering education, up four from 2007-08, and 8th among public institutions. The University of Maryland was ranked 53rd among all U.S. institutions and 18th among public institutions this year.

The U.S. News rankings of undergraduate programs accredited by the Accreditation Board for Engineering and Technology (ABET) are based solely on the judgments of deans and senior faculty who rated each program they are familiar with on a scale from 1 (marginal) to 5 (distinguished). Engineering school deans and faculty members (two at each engineering program) were surveyed in spring 2008.

ROBOTICS @ MARYLAND TEAM

UM WINS UNDERWATER VEHICLE CONTEST

Robotics@Maryland won the Association for Unmanned Vehicle Systems International and Office of Naval Research 11th Annual International Autonomous Underwater Vehicle (AUV) Competition in San Diego, California, the first weekend in August.

The team competed against 25 other teams from across the United States, India, Canada and Japan. The other schools in the top eight included University of Texas at Dallas, École de technologie supérieure, University of Florida, U.S. Naval Academy, University of Victoria, Cornell University and Florida Atlantic University.

Each team was challenged to design and build an AUV capable of navigating realistic underwater missions. The Maryland team won the competition in only its second year of participation.

UM's team overcame many challenges during the competition: "Despite losing our main vehicle computer, busting a thruster propeller, temporarily losing our firewire cameras, and watching three team member's laptops die (including mine), the group worked together and handled each problem in turn," said Joseph Gland, graduate student advisor for the Robotics@Maryland team.

The final competition entailed dead reckoning approximately 50 feet through the starting gate, pipeline following, buoy docking, tracking and hovering over an acoustic pinger, grabbing an object and surfacing with the object to a floating ring, Gland said.

The Robotics@Maryland team is made up of students across the campus, including several different engineering majors. The team was assisted by Prof. Dave Akin in the aerospace engineering Space Systems Lab and Prof. Nuno Martins, who serves as faculty advisor. The team is sponsored by the UM Office of the Vice President for Research, the Department of Electrical and Computer Engineering, the Department of Aerospace Engineering, the Institute for Systems Research, and the Clark School of Engineering, and also receives corporate support from Clark School Corporate Partner BAE Systems, E.K. Fox and Apple. Memsense was also a sponsor, donating an Inertial Measurement Unit and other electronic hardware.

SAMPE LIGHTWEIGHT AIRCRAFT WING COMPETITION GARNERS TOP PRIZES

On Tuesday, May 20, fifty-five teams of University students competed at SAMPE '08 in Long Beach, California, to determine which team built the strongest lightweight aircraft wing.

Four student teams from the University of Maryland College Park's department of Aerospace Engineering entered the Wing Design, Build and Test Competition. The one individual and three project teams all placed in the top six, which earned the Maryland SAMPE Student Chapter over $700 in prize money. The following honors were awarded to Maryland finalists.

- 2nd Place: Ben Woods, PhD student
- 3rd Place: Team Y: Jeffrey Pace, Peter Rohr, Pat O'Connor, Brian Patrick, Roberto Semidey, Chris Schooler
- 4th Place: Team Omega: Nathaniel Brown, Brandon Geraghty, Brandon Hall, Anish Sydney, Ian Higgins, Emin Azariah
- 6th Place: Team X: Frank Graham, Ria Malhan, Ilmo Koo, Anand Saxena, Lina Castano, Jay Sanchez, Byungseok Yoo

The three project teams were from aerospace Professor Norman Wereley's ENAE-425/654 Mechanics of Composite Structures class.

In total, $7000 in cash and prizes were awarded to all winners, thanks to the generosity of dozens of contest sponsors. As part of the SAMPE '08 conference and exhibition, this program creates great interest with industry leaders, exhibitors and students to observe new and creative composite building material projects. Each contest entry required a poster, featuring details about the materials and construction of each Lightweight Wing.

Dr. Howard Kliger, president, HS Kliger & Associates, Somerset, NJ, and chair of the contest for the past 11 years, willingly took on the coordination of this project. "Their innovative work coupled with the energy of these young engineers not only excites, but also gives me hope the next great aerospace and civil engineers might be right here in Long Beach."

DESIGN, BUILD, FLY (DBF) TEAM PLACES IN TOP 15

Undergraduate Students, Steve Myers, Tim Spiridonov, Robert Vocke, Aaron Chan, Vincent Posbic, Andrew Wilson, Adam Reese and AE Staff member Evandro Valente participated in the 2008 AIAA DBF competition. This year's team earned high marks for their final report, earning them a report ranking score of #11 out of 55 reports. However, as in recent years the team suffered a fatal crash while in competition, and were unable to complete a full mission. The plane flew fine, but suffered a communications link dropout during the backstrecth of the first flight which resulted in the fail-safe command being initiated that terminated the flight.

JOHNSON AWARDED LINDENBAUM

Congratulations to Aerospace Engineering's Minta Martin Professor Dr. J. Gordon Leishman and aerospace graduate student Bradley Johnson. They were honored with the Lindenbaum Award for Best Paper in the history session of American Helicopter Society International (AHS), which was held in Montreal, Canada this past April.

Their paper, which was presented at the forum by Professor Leishman, was entitled "Engineering Analysis of the 1907 Cornu Helicopter" and focused on the design of the historic Paul Cornu tandem rotor machine. In addition, the paper provided a proper engineering analysis of its capabilities, based on simple rotor theory. Although Cornu has been historically recognized by some as the first to achieve a successful helicopter flight, a simple analysis of his machine proved that his claims of a successful piloted flight were questionable at best, as the helicopter simply did not possess the needed power to achieve hover off the ground.

KEYSTONE PROGRAM FEATURED IN ASEE PRISM MAGAZINE

The Clark School's Keystone Academy of Distinguished Professors was featured in the February 2008 edition of the American Society for Engineering Education's (ASEE) Prism magazine.

The Keystone program was cited in a piece titled "Staying on Track," which examines four engineering schools' efforts to increase undergraduate student retention rates. The Keystone program, initiated within the Clark School two years ago, focuses on improving the educational experience for undergraduates early in their academic careers by arranging for some of the best faculty to teach introductory engineering courses. The program is highly selective, and fosters exemplary undergraduate teaching skills and a commitment to excellence in fundamental engineering courses. William Fourney, Associate Dean of the Clark School and Professor of Aerospace and Mechanical Engineering, is quoted frequently throughout the article.

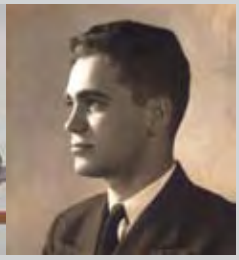
Included in the feature were photos of students working on hovercraft projects in a course taught by Dr. Bruce Jacob, a Keystone professor of electrical and computer engineering (ECE), and director of the computer engineering program. The ASEE Prism article is available online at http://www.redorbit.com/news/education/1274955/staying_on_track/.

AGRC CONTINUES 25TH ANNIVERSARY CELEBRATION WITH GESSOW LECTURE

This year's lecture, held on Friday, May 16th in the Kay Boardroom, was given by General Richard Cody, Vice Chief of Staff of the U.S. Army. General Cody continued the AGRC's tradition of distinguished Alfred Gessow Memorial Lecture speakers joining past speakers including:

- 2005: Dr. John Parmentola,
  Director of Basic Research & Laboratories, US Army
- 2006: Dr. Lisa Porter,
  Associate Administrator Aeronautics, NASA
- 2007: Mr. Michael Deitchman,
  Head Air Warfare and Weapons, ONR

General Cody's focus was on the future of Army Rotorcraft. His talked centered around the Army continuing to provide the warfighter with greater capability and enhanced survivability. General Cody specifically referred to the emerging theme of manned and unmanned assets working in unison to accomplish the mission of the Army. He challenged students in the audience to continue to innovate and make better systems for the US military. Upon exiting the Kay Boardroom in the Kim Building, General Cody was treated to both static and dynamic displays of future Army capabilities in the form of flying autonomous microsystems. He was particularly intrigued by how such systems might benefit the warfighter.



ROBERT KORKEGI PASSES AWAY

DR. ROBERT KORKEGI, A LONGTIME VISITING PROFESSOR IN THE AEROSPACE ENGINEERING DEPARTMENT, PASSED AWAY IN MAY 2008.

BOB WAS WELL KNOWN FOR HIS WORK ON HYPERSONICS AND AS A FORMER DIRECTOR OF THE VON KARMAN INSTITUTE. HE TAUGHT CLASSES IN OUR DEPARTMENT FOR APPROXIMATELY 22 YEARS, A FIXTURE FOR ENAE 311 AND 414 (AERODYNAMICS I AND II).

BOB SERVED ON NUMEROUS MASTERS AND DOCTORAL THESIS COMMITTEES AND CONDUCTED RESEARCH IN HYPERSONIC AERODYNAMICS. HE SERVED ON NUMEROUS NATIONAL AND INTERNATIONAL ADVISORY BOARDS, AND WAS ALSO A FELLOW OF AIAA AND A LEADER IN THE AEROSPACE FIELD.

WE WILL UNDOUBTEDLY MISS BOB DEARLY AS A FRIEND, COLLEAGUE AND CONSUMMATE EDUCATOR WHO WAS SIMPLY ALWAYS AVAILABLE TO OUR STUDENTS. IN HONOR OF HIS CONTRIBUTIONS TO THE DEPARTMENT, A MEMORIAL SERVICE FOR DR. ROBERT KORKEGI WILL BE HELD ON WEDNESDAY, SEPTEMBER 17, 2008. THE SERVICE WILL BE HELD AT 2:00 AT THE MEMORIAL CHAPEL ON CAMPUS.

WERELEY NAMED TECHNICAL FELLOW

Dr. Norman Wereley has been named Technical Fellow of American Society of Mechanical Engineers (ASME). This honor for Dr. Wereley recognizes his many contributions to the field of smart structures with a special emphasis on his research related to smart fluids.

Dr. Norman M. Wereley is an internationally recognized scholar in the field of Adaptive Structures and Adaptive Materials focusing on the specialties of magnetorheological (MR) fluids and MR devices. His innovative research focuses on MR fluid compositions employing nanoparticles, nanowires, and surfactants to simultaneously increase sedimentation stability and maximize controllability.

His second focus is the sophisticated nondimensional analysis of energy absorbers and dampers employing MR fluids with a variable magnetic field controllable yield stress. He has developed highly innovative systems employing MR dampers for semi-active vibration damping systems and MR energy absorbers for adaptive crashworthiness and/or shock absorption systems for automotive and aerospace applications, such as crashworthy helicopter crew seats.

Dr. Wereley was the recipient of a NSF CAREER Award and a U.S. Army Young Investigator Award. He has coauthored over 100 journal articles and six book chapters, and is the co-inventor of over ten patents or patents pending. He was the recipient of the 2004 ASME Adaptive Structures Best Paper Award. Dr. Wereley earned his B.Eng. in Mechanical Engineering from McGill University (1982), and his M.S. and Ph.D. in Aeronautics and Astronautics from the Massachusetts

Institute of Technology (1987 and 1990, respectively). Massachusetts Institute of Technology 1990 Aeronautics and Astronautics.

SHAPIRO, CLARK SCHOOL RECEIVE NSF FUNDED GRANT

Researchers in the University of Maryland's A. James Clark School of Engineering are collaborating across engineering disciplines to create new "cell-based sensors-on-a-chip" technology. Pamela Abshire, electrical and computer engineering (ECE) and Institute for Systems Research (ISR); Benjamin Shapiro, aerospace engineering and ISR; and Elisabeth Smela, mechanical engineering and ECE; are working on new sensors that take advantage of the sensory capabilities of biological cells.

Current research funding for the cell-based sensor technology comes from the National Science Foundation, the Department of Homeland Security and the Defense Intelligence Agency. Potential applications for their use extend well beyond national security, however.

The research won the University of Maryland's 2004 Invention of the Year Award in the physical science category. A patent application is on file with the U.S. Patent and Trademark Office.

USAF CHIEF SCIENTIST PUSHES INNOVATION

Three and a half years into what is traditionally a two-year posting, Mark Lewis, chief scientist for the U.S. Air Force, continues to push for innovation and advancement in hypersonics, materials research and operationally responsive space.

One advanced program on the horizon is an all-composite cargo plane, for which a Request for Information (RFI) has just been released. "It came from a direct interest of [Air Force] Secretary [Michael] Wynne, who asked the question, 'Can we build a plastic C-5?'" Lewis said March 5 at a Space Foundation event in Washington. "A blended wing body might be one of the attractive options ... let's keep all options on the table. Good science depends on the competition of ideas."

The RFI for EAGL, as the program is called, is an "expansive, open-minded request," Lewis said, that extends to materials. "It doesn't have to be classic composites. It could be a hybrid system."

Lewis also mentioned a recent Memorandum of Agreement (MOA) on a project called Blackswift, between the Air Force and the Defense Advanced Research Project Agency (DARPA). "Blackswift

BLACKSWIFT MODEL PHOTO CREDIT: BILL SWEETMAN

is a turbine-based, combine cycle system" that takes off as a traditional aircraft with an air-breathing engine and then converts to a scramjet at altitude. "The key technical challenge is the hand-off ... switching between turbine and scramjet." According to Lewis, a Request for Proposals (RFP) will be released soon, although "we don't know what it will look like. DARPA has funded the initial concept development."

L'OREAL FELLOWSHIP PRESENTED TO UGRINA

Sandra Ugrina, PhD'07 (AE), an aerospace engineering department research associate and resident at the National Institute of Aerospace at Langley, VA has been awarded an esteemed L'Oreal USA for Women in Science (FWIS) Fellowship.

From a competitive pool of 200 candidates, a jury composed of eight eminent scientists and former L'OREAL-UNESCO for Women in Science Laureates and presided over by Dr. Ralph Cicerone, President of the National Academy of Sciences, selected five post doctorate fellows from various institutions across the country. Each Fellow was awarded a $40,000 grant over a period of 12 months to advance and expand their independent research interests with applications critical in today's society.

The L'Oreal USA Fellowship for Women in Science is a national awards program designed to recognize and encourage exceptional female researchers to serve as role models for younger generations and to raise the awareness of the role and importance of women in scientific research. The awards ceremony held this spring was preceded by a panel discussion which included Dr. Shirley Ann Jackson, president of Rensselaer Polytechnic Institute who was also honored with the L'Oreal USA for Women in Science Role Model Award.

SANDRA UGRINA RECEIVING AWARD FROM PRESIDENT AND CEO OF L'ORÉAL USA, MR. LAURENT ATTAL, AND PRESIDENT OF NATIONAL ACADEMY OF SCIENCES, DR. RALPH CICERONE

Ugrina intends to use the fellowship to continue her research in active flow control. The fellowship will help her investigate a different aspect of the problem one focused on laminar flow control. Proposed research includes a design of a distributed parameter control system that would actively extract energy from the boundary layer disturbances.

Ugrina received her doctoral degree in Aerospace Engineering in 2007 under the mentorship of Dr. Alison Flatau. She is currently employed at the National Institute of Aerospace (NIA), mentored by Dr. James Hubbard, Jr. As a result of the organized events, schedule permitting, she hopes to engage more actively in the L'Oreal for Girls in Science initiative and the AAAS conferences.

TOROK RECEIVES ALUMNI HONOR

On April 12, Michael S. Torok, MS '85 and PhD '89, aerospace engineering, received the Distinguished Engineering Alumnus award. Torok received the award at the Alumni Association's annual awards gala.

Torok is chief engineer for U.S. Marine Corps programs for heavy lift helicopters for Sikorsky Aircraft Corp. He is the recipient of many awards from the helicopter industry. He is already a member of the Department of Aerospace Engineering's Academy of Distinguished Alumni.

A passion for and vast experience in aviation has landed Michael Torok the role of chief engineer of U.S. Marine Corps programs for heavy lift helicopters for Sikorsky Aircraft Corp. The company designs, manufactures and services military and commercial helicopters, along with fixed-wing reconnaissance aircraft. Torok is responsible for a $3 billion program to develop the world's most advanced heavy lift helicopter to serve the U.S. Marine Corps for the next 50 years.

Torok has also received the U.S. Army Distinguished Rotorcraft Fellowship and the American Helicopter Society's (AHS) Vertical Flight Foundation Fellowship. As a young engineer, he won the AHS Francois Xavier Bagnoud award, which recognizes outstanding contributions to vertical flight technology by a member under 30, and later the Gruppo Agusta International Award, for international vertical flight cooperation, as part of the Sikorsky/USG/ZFL Individual Blade Control Team. A technical fellow of the AHS, Torok has authored technical papers and publications, and holds seven patents.

NUSCA AWARDED SERVICE MEDAL

In January 2008, Dr. Michael J. Nusca PhD '97, MS '86, BS '82 was awarded

the Superior Civilian Service Award and Medal by Mr. John M. Miller, BSAE '69, MSME '74, Director of the U.S. Army Research Laboratory (ARL), for MG Fred D. Robinson Jr., Commanding General U.S. Army RDECOM. Dr. Nusca is an aerospace engineer at the ARL at Aberdeen Prooving Grounds, in Maryland. His major duties include multiphase, reacting-flow CFD code development used in the analysis of both solid-propellant charges for Army guns, and liquid bipropellants for small rocket engines in Army missiles.

AE PARKLAND MIDDLE EVENTS

PARKLAND MIDDLE

As a 'Parkland Partner' at the Parkland Magnet Middle School of Aerospace Technology, the department of aerospace engineering has been participating in a variety of events throughout their school year. In addition to open houses and college information workshops, we were Partner of the Month in April, having a prominent display in their main foyer, hosting a session during their Family Science and Technology Night, providing items for their school store, and writing articles for their PTA newsletter. More Partner events are planned for the 2008-09 school year such as a balloon payload project and workshops on the Clark School of Engineering's summer programs for middle and high school students.

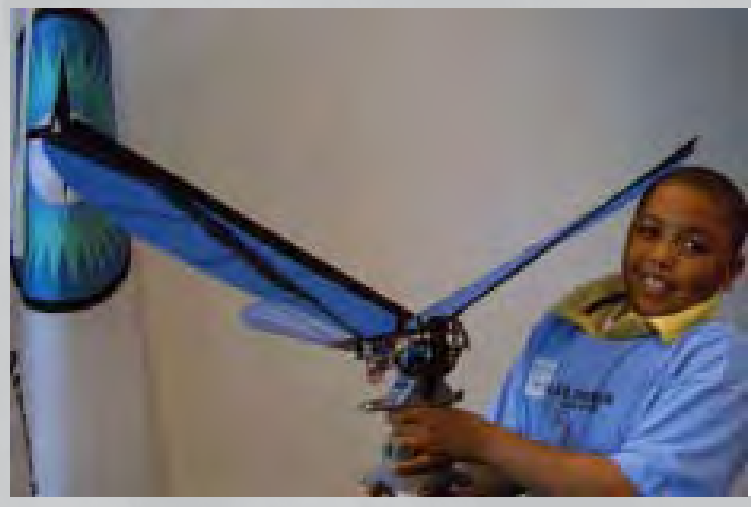
Parkland Middle School is located in Rockville, Maryland and is part of the Montgomery County Public School System. The school offers students in Grades 6, 7, and 8 a rigorous academic program focused through advanced and applied mathematics, science, and technology. The program content is based on the goals and objectives of the MCPS curriculum, and is accelerated and compacted to allow all students an opportunity to complete a high school science course by the end of Grade 8.

TEAM MORPHEUS

STUDENTS AT GLH JOHNSON

In April, the Morpheus Lab hosted all 42 students in the 5th grade class from GLH Johnson Elementary in Danville, VA. The visiting students were greeted by Dr. James Hubbard and given an ornithopter demonstration at National Institute of Aerospace before visiting NASA Langley Research Center and the Virginia Air and Space Center. The trip was made possible through the gracious funding provided by the Aerospace Engineering Department.

Three student members of Morpheus Lab, Nelson Guerreiro, Ryan Hubbard, and Geoff Slipher, along with members of the Newport News Park Radio Control Club (NNPRCC) hosted the Denbigh Baptist Christian School in June for a fun day of flying outdoors. The event was held at the NNPRCC flying field, and began with a brief talk by Morpheus Lab researcher, Nelson Guerreiro. Each student was invited to learn to fly NNPRCC members' aircraft using a "Buddy Box" system. They also had the opportunity to play with one of Morpheus Lab's Ornithopters (AJ), and to practice their flying skills on Morpheus Lab's remote controlled flight simulator.



GRADUATE STUDENTS RECEIVE "GRID" AWARDS

Several aerospace engineering graduate students placed at the campus Graduate Research Interaction Day (GRID).GRID is a campus-wide, conference style event where research (done by graduate students at the University) is presented and discussed by faculty and students from many departments and schools. GRID is a venue for students to get feedback on their research and hone their conference skills in the comparative intimacy of their own campus. Aerospace engineering student winners were:

Advances in Technology (Biotechnology, Nanotechnology, et al.)

- 1st: Kunal Kothari Consolidation of Gamma Titanium Aluminides for High Temperature Structural Applications

Modeling and Simulation

- 1st: Geoff Slipher Resonating Electroactive Polymer Membranes (EAPs) as an Efficient and Inexpensive Actuation Method for Low Speed Active Flow Control.
- 3rd: Shane Jacobs Human-Robotic Symbiosis to Enable Future Planetary Extravehicular Activity

GRID is conducted with an inter-disciplinary focus through a symposium consisting of both poster and oral presentations, judged by panels specializing in each category. Judges consist of faculty, postdoctoral fellows, administrators, library subject specialists, and advanced graduate students. GRID fosters a healthy competition among graduate students awarding the best presentations amongst the participants.

PROJECT TURTLE WINS NASA COMPETITION

A team of Aerospace Engineering students were awarded first place in the undergraduate division of NASA's Revolutionary Advanced Systems Concepts - Academic Liaison (RASC-AL) student design competition in Cocoa Beach, Florida. Project TURTLE (Terrapin Undergraduate Rover for Terrestrial Lunar Exploration) beat out nine other designs including teams from the University of Washington, Georgia Tech, Notre Dame and The University of Alabama in Huntsville.

The 34 students of the senior design class, ENAE 484, were represented by aerospace students Madeline Kirk, Jason Laing, Joe Lisee, Alek Nacev, and David McLaren, and mentored by professors Dave Akin and Mary Bowden. The students delivered a technical presentation and poster display on Project TURTLE, and this year's project also included for the first time a substantial "hands-on" element. Project TURTLE consisted of a full-scale cabin mockup for the pressurized rover, which they used to assess the functionality and habitability of their internal layout.

AEROSPACE STUDENTS HONORED AS 2008 DISTINGUISHED TEACHING ASSISTANTS

Three aerospace engineering graduate students were awarded 2008 Distinguished Graduate Teaching Assistant Awards from the University of Maryland. A reception was hosted by the Center for Teaching Excellence at the Orem Alumni Hall within the Samuel Riggs IV Alumni Center in May in which teaching assistants across campus were recognized. Each was presented with a certificate acknowledging their contributions as a Distinguished Teaching Assistant. The three aerospace engineering recipients of this distinguished award were Lina Maria Castano, Sonia Hernandez-Doran, and Scott Owen.

The University of Maryland's Center for Teaching Excellence is an initiative of the Office of the Associate Provost and Dean for Undergraduate Studies. Its purpose is to support the campus-wide efforts to enhance and reform undergraduate education and to offer tangible assistance to individual faculty and Teaching Assistants as well as to the departments and colleges in which they work.

RECIPIENTS OF THE 2008 DISTINGUISHED GRADUATE TEACHING ASSISTANT AWARD ARE LINA MARIA CASTANO, SONIA HERNANDEZ-DORAN, AND SCOTT OWEN. THEY WERE RECOMMENDED BY DR. DARRYLL J. PINES, DR. ALLEN WINKELLMAN AND DR. DEREK PALEY.

KURITS AND VEERAGAVAN TAKE GRAD STUDENT RESEARCH AWARDS

Inna Kurits (MS) and Anand Veeragavan (PhD) are the 2008 Aerospace Engineering Graduate Student Research Award recipients. The competition was held on May 16th in the Kim Building. The research awards are competitively awarded each calendar year to Ph.D. and M.S. students graduating within the same calendar year. These awards are intended to recognize the scholarly excellence and achievement by the cadre of graduate students in aerospace engineering.

Graduate students are judged on the

following criteria:

(1) Oral Presentation before the awards committee (40%)

(2) Assessment of Scholarly Writings (40%) and

(3) Awards and Accomplishments (20%).

DR. CADOU AND ANAND VEERAGAVAN

Students must be nominated by their research advisors for this award and have a minimum graduate GPA of 3.5. Advisors may nominate no more than two graduate students for these awards.

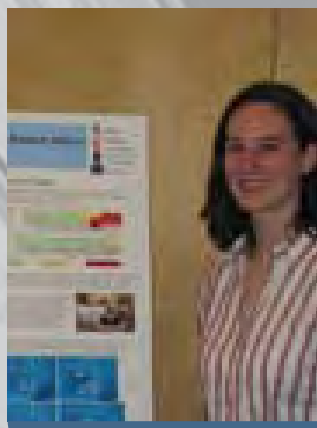
Best Doctoral Research Award: Anand Veeragavan - 1st Place = $1000 cash award and plaque

Best Masters Research Award: Inna Kurits - 1st Place = $500 cash award and plaque.

CALLING ALL AGRC ALUMS

The Department of Aerospace Engineering is continually compiling the Alfred Gessow Rotorcraft Center Alumni Directory. The Directory only becomes available to you once you have added your contact information. please visit our website at www.agrc.umd.edu and follow the link for the Alumni Directory to be included.

ANDERSON SCHOLARSHIP GOES TO KIRK



MADELINE KIRK

The inaugural John D. Anderson Scholarship in Aerospace Engineering was awarded to Aerospace Engineering senior, Madeline Kirk. The winner was announced at a luncheon on April 18th following a Keynote by Dr. Anderson and his family. Madeline received $1,000 and a plaque stating this honor. Michael Gentry (junior) received an honorable mention in the competition.

Dr. Anderson, Professor Emeritus and a previous Department Chair, retired from the faculty in 1999. One of Dr. Anderson's selfless contributions to his students was the establishment of the John Anderson Scholarship in Aerospace Engineering to assist and encourage undergraduate students majoring in aerospace engineering. The competition consisted of a paper submission and poster presentation on aerospace engineering research performed at the University of Maryland.

The following students competed for this award:

Paul Albuquerque (senior), advisor: Dr. J. Sean Humbert

Michael Gentry (junior), advisor: Dr. Norman Wereley

David Gers (senior), advisor: Dr. Ken Yu

Madeline Kirk (senior), advisor: Dr. Dave Akin

Michael Levashov (senior), advisor: Dr. Dave Akin

Ryan Murphy (senior), advisor: Dr. J. Sean Humbert

Ryan Robinson (junior), advisor: Dr. Norman Wereley

The Anderson Scholarship Committee consisted of Dr. John Anderson, Mrs. Sarah-Allen Anderson, Dr. Alison Flatau, Dr. Norman Wereley, and Dr. Darryll Pines.

Madeline's paper and poster was on Design and Development of a Docking System for a Small Free-Flying Robotic Vehicle. She performed her research at the Space Systems Laboratory under the direction of Dr. David Akin, Director of the SSL.

MICHAEL LEVASHOV

LEVASHOV: BEST PAPER

The University of Maryland's University Honors Program chose Michael Levashov's submission as a Best Paper winner. Michael is a May graduate of the aerospace engineering program.

The title of his paper was "A Hardware Study of a Simple Force Reflecting Teleoperator." Fourteen papers/projects were selected from a very competitive pool of Honors students. Michael's paper was also published in the *American Institute of Aeronautics and Astronautics'* journal.

According to his advisor, Dr. David Akin, "His project was an ambitious one for an undergraduate honors research topic...He achieved all of the goals we had originally set and more, and wrote an excellent paper documenting the new system, with quantitative evaluations of performance."

Michael, also an Aerospace Honors student, was in the space track with a second major in physics, and has maintained a 4.0 grade point average. He has been selected as a finalist for the Hertz Fellowship. Michael has also worked for Dr. Alison Flatau on smart materials testing, on the balloon payload project with Dr. Mary Bowden, and at the Magnetic Measurements Laboratory at the Stanford Linear Accelerator Center. He plans to attend graduate school and study robotics control systems.

DATTA HONORED WITH SEVERAL AWARDS

Congratulations to Aerospace Engineering graduate student, Supratik Datta on receiving four awards for the Spring 2008 semester. Datta is currently working in the area of smart materials and structures under the guidance of Professor Alison Flatau. His dissertation research explores potential applications of iron-gallium alloys (Galfenol) in sensors and actuators as a unique structural magnetostrictive material. He also focuses on experimental characterization and modeling of single crystal Galfenol at both macroscopic and microscopic scales.

Datta has been recently awarded the following:

1) Jacob K. Goldhaber Travel Grant. This award is intended to help defray the expenses incurred by graduate students who are traveling to scholarly, scientific, or professional conferences to present papers, posters, or other scholarly material.

2) SPIE/ASME Best Student Paper Award at the SPIE International Symposium on Smart Structures and Materials held in San Diego, CA, Mar 9-13, 2008.

His paper was titled "Magnetomechanical Coupling Factor and Energy Density of Single Crystal Iron-Gallium Alloys."

3) Ann G. Wylie dissertation fellowship carries a stipend of $10,000 and was awarded from the Graduate School at the University of Maryland

4) 2008-09 AIAA Foundation Orville and Wilbur Wright Graduate Award. This award is given out at the 2009 Aerospace Sciences Conference in Orlando, FL in January. The Wright Graduate Awards provide $10,000 awards bestowed annually to four graduate-level students participating in research endeavors as part of their engineering/science graduate studies.

CLARK SCHOOL AMBASSADOR SPEAKS WITH MEMBERS OF CONGRESS

Laura Meyer traveled with 35 students and 111 other representatives on behalf of Citizens for Space Exploration (CSE), to Capitol Hill in Washington, D.C., to support a robust space exploration program.


REP. PRICE (D-NC) AND MEYER

Meyer, an aerospace engineering student, is also a double major in mechanical engineering and a Clark School Ambassador. She joined other students from colleges and universities across the nation to inform elected officials of the importance they need to place on the space program. The students' goal is a Congressional investment in NASA set at 1 percent of the federal budget. The Coalition for Space Exploration, in conjunction with the Bay Area Houston Economic Partnership's Aerospace Advisory Committee, sponsored Meyer.

"You may try 50 ways to solve one problem and even though only one of them becomes your solution, you may have created 10 ideas that can be applied to other problems," Meyer stated. "For example, NASA's work with telescopes has been applied to treating cancer. The telescopes imaging technology has been used to find cancer and the telescope's laser technology has been used to help concentrate chemotherapy treatment to only the affected regions."

CSE works with elected officials, corporate and individual contacts to ensure continued political and public support for our nation's space programs, particularly the International Space Station, the Space Shuttle, and the new Constellation Program. CSE is comprised of a diverse group of small and large business representatives, students and teachers, and county/municipal officials and employees.

[Information for this article was provided by Kathryn Cooper, Communications Manager for the Bay Area Houston Economic Partnership, and Ms. Meyer]

GOLDWATER SCHOLARSHIP TO SSL'S BRADSHAW

Ms. Heather Bradshaw has received the Goldwater Scholarship. Heather is a resident of the State of Virginia and is currently a Junior at Maryland. She is a Mechanical Engineering major with an outstanding record of academic and research accomplishments – which started when she was in the 10th grade! Her current research interest is in developing the next generation of space suits, and she is working in the UM Space Systems lab mentored by Dr. David Akin. Last summer she also participated in the NASA summer academy at the Goddard Space Flight Center on a project related to the James Webb Space Telescope. There she won first place in the Academy Poster competition. Heather plans to pursue a Ph.D. in Aerospace Engineering. Some of you may also remember Heather and her team of two fellow students as the inaugural winner of the Sci/Terp video competition last year.

CONROY/HYSLOP TAKE FIRST PLACE IN VIDTERP COMPETITION

Aerospace graduate students, Joseph Conroy and Andrew Hyslop earned 1st place in the University of Maryland VidTerp Competition in the Engineering category. VidTerp is a University of Maryland competition for students to create a short video about their current research at the University of Maryland. First and second place winners in each of the categories win prizes - $350, 1st place, and $150, 2nd place.

The three categories are:

Science/Engineering/Technology
Arts/Humanities/Society
Student Experience

Videos are focused towards an off-campus audience, specifically secondary school students. They should depict the Maryland experience in a positive light exhibiting exciting and interesting research.

You can view their 1st place video at: http://www.doflick.com/Video.aspx?cId=41&t=2&mr=1

BUSH AWARDED FLAGSHIP FELLOW

Graduate student Brandon Bush has won a 2008-2009 Flagship Fellowship award.

The Flagship Fellowships competition is an initiative of the University of Maryland Graduate School intended to help programs to recruit and retain truly exceptional students. Created through enhancement funding awarded competitively by the Office of the Provost, Flagship Fellowships embody the university's goal of joining a select group of research institutions widely known for an overall doctoral program that has achieved the highest level of excellence. A committee with broad disciplinary representation, appointed by the Graduate School, serves as the selection committee.

Brandon's doctoral research (Advisor: Dr. James Baeder) focuses on the computational study of low Reynold's number aerodynamics, such as the flight of insects and small birds. By understanding the flow physics of these naturally efficient flying creatures, he hopes to be able to contribute to improvements in the aerodynamic efficiency and eventually the commercial viability of current and future generations of micro-air vehicles.

STUDENTS PLACE NUMBER ONE IN HELICOPTER DESIGN

A group of students from the Aerospace Engineering Department supervised by Professor Inderjit Chopra and Dr. VT Nagaraj were successful in placing first in the 25th Annual American Helicopter's Design Competition. Other participants included Georgia Tech and the Naval Postgraduate School.

The objective of the competition was to design an advanced VTOL concept capable of operating from unprepared area and which minimizes energy consumption throughout the operational envelope. This "SMART-COPTER" must be capable of vertical takeoff and landing (VTOL) and will have an initial operational capability (IOC) in 2020.

The Maryland team submitted a design concept in response to a request for designing a revolutionary and energy efficient future Helicopter. Attached is a photo of all team members and their advisors a long with their revolutionary Green Energy Efficient Design.

Students who participated included: Brandon Bush, Choong Yun Lee, Jeong Hwan Sa, Cal Sargeant, Rick Sickenberger, Monica Syal, Evan Ulrich and Nick Wilson.

Every year since 1984, a student helicopter design competition has been co-sponsored by the American Helicopter Society, International, and the rotorcraft industry. Students from the University of Maryland commenced participation in 1988, placing third. They remained absent from the competition for 10 years, until 1998, when Andy Bernhard and a group of other graduate students of the Alfred Gessow Rotorcraft Center revived interest in it. Since then, Maryland teams have participated every year, winning first place eight times in a row, over universities such as the Georgia Institute of Technology, the U.S. Naval Postgraduate School, and the U.S Air Force Institute of Technology. The students develop the design during the course of a one-semester class in Helicopter Design (ENAE 634) offered by the Department of Aerospace Engineering in the Spring of each year. The class is co-taught by Professor Inderjit Chopra, Senior Research Scientist Vengalattore Nagaraj, and Visiting Professor Marat Tishchenko.

AIAA MID-ATLANTIC REGION CONFERENCE COLLEGE PARK | APRIL 11 AND 12, 2008

LEFT: Undergraduate AE students Nate Niles and Breanne McNerney with awards for their outstanding service to AIAA by organizing the Mid-Atlantic Region II Student Conference.

RIGHT: Tom Milnes, Baltimore Chapter President; David Gers, UMCP AIAA Student Chapter President; Jason Leggett (UMCP); Robert Roedt (PSU); Lisa Bacon, AIAA Student Conference Coordinator; (back row) PSU Team

AIAA MID-ATLANTIC REGIONAL STUDENT CONFERENCE HOSTED BY UNIVERSITY OF MARYLAND

AIAA's Mid-Atlantic Regional Student Conference was held on campus at the University of Maryland, College Park on April 11-12, 2008.

It was hosted in the Jeong Kim Building with the banquet held in the Inn and Conference Center. The department wants to especially thank Dr. Alison Flatau, whose leadership, advisement and hard work ensured a successful conference. Dr. Mark Lewis gave the keynote address in regards to the future challenges facing the United States Air Force.

Conference co-chairs, Bree McNerney and Nate Niles, assisted in the planning with committee members, which included:

Julia Ashkanazy

Edwin Fernandes

Jonathan Geerts

David Gers

Aaron Harrington

Teju Jarugumilli

Jessica Jones

Mohammad Khan

Jared Mott

Kush Patel

Awais Raza

Eric Roberts

Siddarth

Shing Chia

Becky Sarni

Laurie Brown

AIAA CONFERENCE

Clark School of Engineering students swept the undergraduate category at the 2008 Region I-MA American Institute of Aeronautics and Astronautics (AIAA) Student Conference.

First Place: Jason Leggett (AE senior) - UMCP, Advisor: Dr. R. Sanner

- Second Place: Michael Gentry (AE junior) - UMCP, Advisor: Dr. N. Wereley
- Third Place: Sara Fields (AE senior) - UMCP, Advisor: Dr. L. Healy; on the basis of her paper, Sara was invited to give a presentation at the 14th annual AIAA Improving Space Operations Workshop hosted by NOAA.

The AIAA Student Conference is a technical paper competition for AIAA student members at the undergraduate and graduate levels from regional campuses. Students are invited to submit technical papers and give formal presentations, which are judged for technical content and clarity of communication. Winners are awarded cash prizes and may advance to the AIAA Foundation International Student Conference, typically held the following January at the AIAA Aerospace Sciences Meeting & Exhibition Center in Reno, NV.

GERS NOMINATED FOR NASA INTERNSHIP

Congratulations to David Gers (AE senior) on his selection as the American Institute for Aeronautics and Astronautics (AIAA) Region I-MA nominee for a NASA Undergraduate Internship.

New for this year, the selection process is based on the recommendations of each AIAA region's student conference committee, and the Student Paper Conference Chair(s). Each region may nominate one student per conference for a summer undergraduate internship at a NASA research center. Student nominations must be from students who attended and participated in the AIAA regional conference as presenters or conference organizers. NASA will select one student intern from the submitted names.

AIAA/SGT BANQUET AWARD WINNERS

OUTSTANDING PROFESSOR OF YEAR:
DR. BEN "POTATO" SHAPIRO

MENTOR OF THE YEAR:
DR. WILLIAM FOURNEY

BROKEN PROPELLOR AWARD:
DR. ROBERT SANNER

OUTSTANDING STAFF AWARD:
DR. NICOLE ROOP

CHAIR'S AWARD FOR OUTSTANDING DEPTARTMENT SERVICE BY A STUDENT:
MR. STEVEN MYERS

SPEAKER:
MR. MIKE GOLD
OF BIGELOW AEROSPACE

MR. MIKE GOLD

MIKE GOLD CURRENTLY SERVES IN DUAL ROLES AS CORPORATE COUNSEL AND HEAD OF BIGELOW AEROSPACE'S WASHINGTON, DC AREA OFFICE. IN HIS POSITION, GOLD IS RESPONSIBLE FOR OVERSEEING A VARIETY OF ACTIVITIES INCLUDING CONTRACTS WITH LAUNCH PROVIDERS, INTERNATIONAL EXPORT CONTROL, THE COMPANY'S RELATIONSHIP WITH NASA, AND CORPORATE STRATEGIC PLANNING. PRIOR TO JOINING BIGELOW AEROSPACE IN A FULL-TIME CAPACITY, GOLD PREVIOUSLY ASSISTED BIGELOW AEROSPACE AS AN ATTORNEY IN THE D.C. OFFICE OF PATTON BOGGS, LLP. WHILE AT PATTON BOGGS, MR. GOLD SUPPORTED SEVERAL CLIENTS IN HIGH-TECH AND EDUCATION-RELATED FIELDS WITH A SPECIALTY IN ADVANCED AEROSPACE VENTURES. GOLD HAS ALSO SERVED AS A STATE AEROSPACE BUSINESS DEVELOPMENT OFFICER, AN ATTORNEY IN THE WASHINGTON OFFICE OF MCGUIRE WOODS, LLP, AND AS A SUMMER LAW CLERK AT THE NASA LANGLEY RESEARCH CENTER.

GOLD IS A MEMBER OF THE D.C. AND NEW YORK STATE BAR ASSOCIATIONS, AND GRADUATED FROM THE UNIVERSITY OF PENNSYLVANIA LAW SCHOOL WHERE HE FOUNDED THE JOURNAL OF CONSTITUTIONAL LAW AND WON A PLACE ON THE MOOT COURT BOARD.

AIAA AWARDS RECEIVED BY CLARK SCHOOL ALUMNUS, STUDENTS

Greg Hiemenz, MSAE '00, PhD '07, received the the 2008 AIAA National Capital Chapter Young Scientist/Engineer of Year Award. The annual Young Scientist/Engineer of the Year Award recognizes colleagues for their achievements, and is the premier award for scientists and engineers under the age of 35 who have made substantial contributions in their field of expertise. Hiemenz is a Principal Engineer at Techo-Sciences Corporation located in Maryland. He was presented with the award at the AIAA National Capital Chapter Banquet.

Undergraduate aerospace engineering students Nate Niles and Breanne McNerney were recognized for their outstanding service to AIAA by organizing the Mid-Atlantic Region II Student Conference held this spring at the University of Maryland. Their awards were also presented at the National Capital Chapter Banquet.

MAY 23, 2008 GRADUATES

BACHELORS OF SCIENCE

Paul Albuquerque

Matthew Babcock

Austin Bogus

James Briscoe

Christopher Cheok

Enrique Coello

Joshua Colver

Aaron Cox

Stuart Douglas

Joel Feinerman

Sara Fields

Paul Freeman

Andrew Gauffreau

David Gers

Zohaib Hasnain

Syed Husain

Madeline Kirk

Jason Laing

May Lam

Mia Lazarus

Jason Leggett

Michael Levashov

Ryan Levin

Kenneth MacFarlane

Omar Manning

Michael Marana

Thomas Mariano

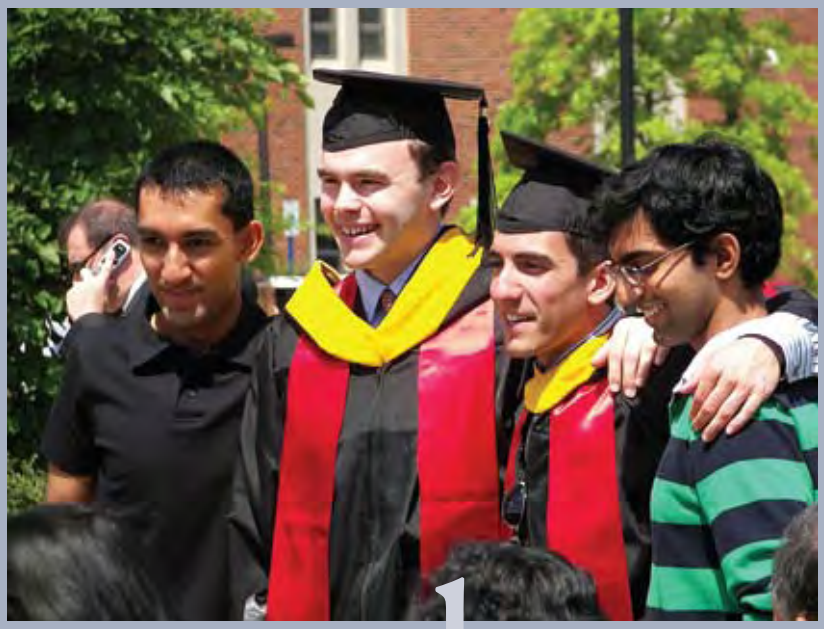
Erin Marx

Jessica Mayerovitch

Adam Mirvis

Ryan Murphy

Steven Myers



graduati

on 2008

Aleksandar Nacev
Robert Nisson
Patricia O'Connor
Ugonma Onukwubiri
Justin Parker
Bryan Patrick
Stephanie Petillo
Vincent Posbic
Adam Reese
Peter Rohr
Tiffany Russell
Matthew Schaffer
Ali-Reza Shishineh
Timofey Spiridonov
Jabez Tan
Joslyn Tarr
Robert Vocke
Jin Yu
Michael Ziegler

MASTERS OF SCIENCE

Adam Beerman
Joseph Coker
Kevin Eisenhower
Joseph Gasbarre
Vikram Hrishikeshavan
Inna Kurits
Sharon Singer
Martin Stolen
Jirapat Supamusdisukul
Nicolas Wilson

PHD

Carlos Cruz
Justin Richeson

greatEXPECTATIONS

Contribute to the department through the University of Maryland's *Great Expectations* campaign and support our mission to transform lives through exceptional educational and research opportunities. Your contributions can support aerospace engineering initiatives such as graduate fellowships, undergraduate scholarships, and named professorships. Please visit www.greatexpectations.umd.edu to learn more.

Gifts may be made by check to "University of Maryland College Park Foundation (UMCPF)." Please designate "The Department of Aerospace Engineering" in the memo line, and mail to:

Darryll J. Pines, Professor and Chair
Department of Aerospace Engineering
3181 Martin Hall
University of Maryland
College Park, MD 20742

You can help make a difference with a gift of any amount!

AEROCONTACT is published for alumni and friends of Department of Aerospace Engineering at the A. James Clark School of Engineering, University of Maryland.

Your alumni news and comments are welcome. Please send them to: Becky Sarni, Department of Aerospace Engineering, 3181 Martin Hall, College Park, MD, 20742. Visit our web site at: http://www.aero.umd.edu

Department Chair: Dr. Darryll J. Pines
Graphic Designer: Allison R. Ernst

WHITING AND TURNER LECTURE TO BE GIVEN BY AEROSPACE ALUM, STEPHEN A. RUFFA (BS '82)

What happens to most companies when the economy dives, fuel prices spike, or crisis strikes? Manufacturers, retailers, airlines and others face a downward cycle of loss, sending turmoil across their corporations, suppliers, and ultimately to their customers—compromising their ability to hold down costs and turn out the quality and innovation so essential to profitability and growth. But this need not be the result. Drawing on his unique study of aerospace manufacturing, his demonstration projects, and research on today's leaders across manufacturing and service industries, author Stephen Ruffa describes how some companies have managed to defy conventional wisdom. By applying "lean dynamics" principles, these firms consistently thrive in today's challenging business environment, sustaining profitability, growth, and innovation.

Date: November 6
Time: 5 p.m. (preceded by a reception at 4:30 p.m.)
Location: Kim Engineering Building lecture hall

www.eng.umd.edu/whitingturner/archive/ruffa.html

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