Fourney Honored by Department and University for Years of Service

September 2006 was marked by two extraordinary events to honor Dr. William Fourney, professor and former chair of the aerospace engineering department.

On September 8th, a celebration was held to honor William L. Fourney for his 12 years of dedicated service as Chair of the Department. The event was emceed by Dr. William Destler, Provost and former Dean of the Engineering School. In attendance were members of Dr. Fourney’s family including his wife Connie, mother-in-law Lena, son Matthew, daughter-in-law Marian and their daughters.

The night consisted of remarks and speeches from various Clark School members. This included administrators, faculty, staff, alumni, students, and the department’s advisory board members. Dr. Fourney was presented with numerous gifts including artwork depicting aspects of Dr. Fourney’s contributions to the University are numerous, and his efforts to improve the A. James Clark School of Engineering cannot be ignored. In his 11-year tenure as Chair of Aerospace Engineering, he has led the undergraduate and graduate programs into the nation’s top 10, increased research expenditures, and consistently recruited the brightest minds to College Park. As Associate Dean for Facilities, he assisted with the development of the Jeong H. Kim Engineering Building along with improvements and reno-
Message From the Chair
Dr. Darryll J. Pines

Welcome to the Department of Aerospace Engineering at the University of Maryland!

Our Department offers one of the nation’s strongest education and research programs in aeronautics and astronautics in the country. The latest U.S. News & World Report rankings rate our graduate program as the best public program in the Northeast and 11th in the nation (6th among public institutions), overall. Since its inception, in large part due to a generous gift by aviation pioneer Glenn L. Martin, our department has established tradition of excellence in research and education, and the best is yet to come.

We offer students a broad range of education and research opportunities. Our location near Washington, D.C. offers unique opportunities for students to engage in research at national and government laboratories, including NASA’s Goddard Space Flight Center, the National Institute for Aerospace, the Naval Research Laboratory, the Applied Physics Laboratory, and the Army and Navy Research Laboratories.

Led by over twenty faculty members and research staff, the Department has a superior record of research accomplishments as evidenced by the number of published and cited research papers and patents that have come from our faculty members. Faculty research is supported by annual expenditures of approximately $16 million. Our level of research expenditures places the department among the very top aerospace engineering departments in the nation.

There are several major research centers in the department including:
- Alfred Gessow Rotorcraft Center
- Space Systems Laboratory
- Space Vehicle Technology Institute
- Advanced Propulsion Laboratory
- Autonomous Vehicle Laboratory
- Composites Research Laboratory

We also conduct work in Microsystems based research which includes:
- Micro and nano air vehicles technology development
- Microcombustion
- Micro and nano control for aerospace and biomedical applications.

These provide our students and researchers the opportunity for team-oriented, cross-disciplinary research and access to state-of-the-art laboratories such as those in the recently constructed Jeong H. Kim Engineering Building.

With approximately 370 undergraduates and more than 140 graduate students, we are the highest ranked department within the A. James Clark School of Engineering, and one of the fastest-rising engineering schools in the country. Our alumni find themselves in high demand for positions in some of the top corporate, government and education institutions and continue to make significant contributions to the field.

As a friend, alumni, or contributor to the department, we hope that you will continue to support the activities of our department including two major events this fall. The first event is the 25th Anniversary Celebration of the establishment of the Alfred Gessow Rotorcraft Center scheduled in the fall. We look forward to seeing many friends and former graduates of the center. The second event is the third induction ceremony of our Academy of Distinguished Alumni. In this event, we honor past graduates of the department for their significant accomplishments to the field of Aerospace Engineering. This year’s inductees will join the likes of Glenn L. Martin and Michael Griffin (NASA Administrator) as members of the prestigious group of graduates.

I hope that you enjoy this newsletter and the exciting things that our faculty and students are doing here at Maryland.
Young Honors Father with Gift

Dr. Erik Young (B.S. ’74, biochemistry) and his wife, Joyce, have helped the Department of Aerospace Engineering to establish a faculty fellowship with a gift of $250,000.

The gift, part of a total $1 million the couple gave to the university, was given in memory of Erik Young’s father, Willis H. Young Jr. (B.S. ’43 and M.S. ’49, aerospace engineering). Dr. Young stated that his father received “extraordinary encouragement and support” during his undergraduate and graduate years at Maryland. Likewise, a major gift was earmarked to the Department of Chemistry and the College of Chemical and Life Sciences, which provided Dr. Young with an “outstanding pre-medical education.”

Dr. Young and his son with Dean Nariman Farvardin and Dr. Jewel Barlow, director of the wind tunnel

The department convened a committee to select the recipient of the Willis Young Faculty Fellow title. Mark Lewis has been selected as the Willis Young, Jr. Faculty Fellow in Aerospace Engineering. This named professorship will begin in the Fall of 2007. Lewis is currently serving as Chief Scientist for the United States Air Force. “The department is

Fourney Celebration continued from page 1

research over the years, and framed prints signed by the faculty, staff, students, and advisory board members. The aerospace conference room has been named in honor of Dr. Fourney and a sign now placed on the wall outside the room was also presented to Dr. and Mrs. Fourney at the conclusion of the evening.

During the evening, a ‘relative’ of Dr. Fourney’s from West Virginia made a surprise guest appearance. Maybell Jerkwater (aka Peggy Dawson), was so excited to see ‘Cousin Bill’ that she called together musicians from the audience. With instruments such as bowls, pans, spoons, plunger, jug, washing board, and grater, the band led everyone in a wonderful rendition of “You Are My Sunshine”. Led by Dean Farvardin, faculty members, staff members, and one of Dr. Fourney’s granddaughters provided the best entertainment this side of the Potomac River. Pictures from the evening can be seen in this newsletter, and a video of the band’s performance is available at www.youtube.com by searching for “Professor Band.”

Matthew Fourney read a letter from his brother Bob titled “The Best Teacher Ever.” A professor now himself, Bob wrote about how while growing up, his father graciously answered phone calls from students during dinner or late at night. Bob stated, “I’ve also gained a new respect for the sacrifices that Dad makes for his students. I now get those phone calls that invariably start with ‘Dr. Fourney, sorry to bother you at home’. I look around at the piles of work, half-finished projects, and grading left to do. I try not to think about the call in terms of my revised bedtime. Thinking of Dad helps me to fake the genuine enthusiasm of my first teacher as I lie and say ‘Oh no, that’s alright, I’m not busy.’” Matthew spoke about Dr. Fourney always being the proverbial teacher, even at while home. Matt told the audience when he was a child, a toy of his had broken while playing with it. When Matt ran to his father hoping he would fix the toy, Dr. Fourney proceeded to inform his son about the stress fractures and the mechanics of the toy and why it had broken.

At the celebration, Dr. Fourney was also presented with a check made out to the Fourney Scholarship Endowment Fund. In the months leading up to the event, donors had contributed over $6,800.00 to the fund. This scholarship was begun by Dr. Fourney in 2004 to provide at least two $1,000 scholarships to students transferring to the University and will be majoring in mechanical or aerospace engineering in the A. James Clark School of Engineering.

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vations for several other campus buildings, including Preinkert Field House. The Kim Engineering Building is a tremendous boon for the Clark School of Engineering. Already a campus landmark, it offers state-of-the-art facilities and promotes cross-disciplinary learning. He has twice been awarded the Clark School Outstanding Service Award, both in 1997 and 2004.

However great Dr. Fourney’s accomplishments are for improving the campus, they are surpassed when recognizing his interest in the people of the University of Maryland. He is highly regarded among aerospace engineering students, faculty, and staff alike. “He is a strong professor and advisor whose personality shows that he enjoys maintaining personal interest in both students and faculty,” says senior aerospace engineer Chris Plumley, Secretary of Maryland’s chapter of the American Institute of Aeronautics and Astronautics (AIAA). His personal dedication to attending AIAA meetings is a clear example of his desire to know and understand Clark School students.

Staff members are not excluded from Professor Fourney’s attention. He began an annual appreciation event in 1997, using money he was given as part of a faculty service award. He also created the A. James Clark School of Engineering Outstanding Commitment Award. It honors retired individuals, with at least 10 years of service, for their exceptional efforts. Each one has their name added to the impressive Faculty and Staff Commitment Award Fountain that sits in front of Glenn L. Martin Hall. “Bill felt that the Clark School achieved its status and prominence because of the commitment of many individuals and that they should be acknowledged,” says Nariman Farvardin, dean of the school.

The group worked with Turkey Creek Community Initiatives, a local advocacy organization in North Gulfport. The community is located about three miles from the Gulf Coast, and is situated in the Gulf Coast watershed. Although it has been over a year since Katrina, the community is still struggling to recover.

The Maryland students spent a week working in the community to clear out trash and hurricane debris. Since the community is in a watershed, there are countless creeks and streams scattered throughout, and they had been accumulating debris since Katrina. One highlight was clearing out a creek that ran parallel to a road that was once part of the iconic “Blues Highway”. In addition to helping restore this unique region to its original beauty, the students were also able to help protect the fragile watershed environment. By cleaning out some of the local waterways, the group was able to help protect the delicate ecosystem. In addition to clearing out the waterways, the students helped residents, many of whom were elderly, who needed assistance getting the bigger pieces of debris from their yards and homes.

The students were lucky enough to meet many of the residents, who were happy to see the volunteers and who wanted to share their stories of coping with the aftermath of Katrina. The local news station heard about the group, and featured them on the evening news. One of the Gulfport residents, a professional chef and Maryland native, saw us on the news and was so grateful to see volunteers from Maryland that she cooked everyone a crab cake dinner! The trip concluded with a Mississippi catfish dinner with over a hundred Gulfport residents.

The trip was financed through donations from the Aerospace Department, the School of Engineering, and Tau Beta Pi. The trip was open to everyone, but was aimed specifically at Clark School engineering students.

In January 2007, 21 students from the University of Maryland drove to Gulfport, Mississippi to spend a week participating in Hurricane Katrina relief work. The trip was organized through Tau Beta Pi, the National Engineering Honor Society and by Holly Schurter, the Maryland chapter vice president. Here, Holly shares their story.

The trip was financed through donations from the Aerospace Department, the School of Engineering, and Tau Beta Pi. The trip was open to everyone, but was aimed specifically at Clark School engineering students.
Bachelors Recipients

**August**
Nicholas Akalovsky
Jason Fuad Hubbard
Scott McGinn Jacoby

**December**
Joseph Anthony Beyer
Lawrence Howard Carroll
Rodderick Todd Metzger

2006 Graduates

Masters Recipients

**August**
Beverly Carol Beasley
Angela Marie Brickler
Mikel John Brigley
Dion Ratevos Davitian
James Samuel Hack
Todd Matthew Herrmann
Joshua Elijah Johnson
Andrew Peter Maynard
Catharine Linet Rea McGhan
Grum Tamrat Ngatu
Maxime Franck Ransan
Geoffrey Allan Slipher
Gregory Carlton Stamp
Evandro Gurgel do Amaral
Valente
Arnuad Isaac Zemmour

**December**
Steven Donohue Barber
Shaun Preston Brown
Dan John Clingman
Amardip Ghosh
Lynn Marie Gravatt
Kathleen Liana Hale
Shane Earl Jacobs
Nathan Thomas Koelin
William Martin Miller
Michael Pearson Naylor
Oliver John Sadorra
Jeremy David Shidner
Troy Sookdeo
Yunshen Tang

Doctoral Recipients

**August**
Sandeep Gupta, Development of a Time Accurate Viscous Lagrangian Vortex Wake Model for Wind Turbine Applications, Advisor: Dr. J. Gordon Leishman

**December**
Jayasimha Atulasimha, Characterization and Modeling of the Magnetomechanical Behavior of Iron Gallium Alloys, Advisor: Dr. Alison Flatau

Richard Luquette, Nonlinear Control Design Techniques for Precision Formation Flying at Lagrange Points, Advisor: Dr. Rob Sanner

Anand M. Radhakrishnan, An Experimental Investigation of Ground Effect on a Quad Tilt Rotor in Hover and Low Speed Forward Flight, Advisor, Dr. Fred Schmitz
Leishman Gives Cierva Lecture

Professor J. Gordon Leishman, Minta Martin Professor, gave the Cierva Lecture to the Royal Aeronautics Society in London. His lecture was titled, “Achieving the Ultimate Potential of the Helicopter: Thinking Forward, Looking Back.”

Flatau Recognized For Contributions

Professor Alison Flatau has been elected as an American Society of Mechanical Engineers Fellow, which recognizes exceptional achievements and contributions to the engineering profession. Dr. Flatau was also an invited speaker at three 2006 events: US-Taiwan Workshop on Smart Structural Technology for Seismic Hazard Mitigation; Los Alamos Dynamic Summer School (LADSS); and the 6th Annual Red Raider Mini-Symposium, a forum for advancing the state of the art of modeling of novel materials and devices.

Shapiro Inducted Into Council

Associate Professor Benjamin Shapiro, was inducted into the Council of Outstanding Young Engineering Alumni at Georgia Tech. Membership in the Council is reserved for those under forty years of age who have already demonstrated outstanding professional achievements.

Hubbard Elected as AIAA Assoc. Fellow

Professor James Hubbard, an NIA Langley Professor, was elected Associate Fellow of the American Institute of Aeronautics and Astronautics for demonstrating a successful practice in the arts, sciences, or technology of aeronautics.

Patricia Baker, a member of the aerospace engineering department since 1998, has accepted a position with the fire protection engineering department. Mrs. Baker graciously worked with both fire protection and aerospace in the four years prior to her full-time post in FPE. “It has been my privilege to work for you and with you over the past years,” says Mrs. Baker, “You made my job a pleasant one and I truly enjoyed work at aerospace engineering.”

Dale Stephenson has left the department as Director of Administration to work in the School of Public Policy at the George Washington University. Dale worked with the department for two years. We wish Dale much continued success.

Otto Fandino has joined the department as Director of Administration. Previously he was the business manager of three departments (Classics, Communication, and Philosophy) in the College of Arts and Humanities at the University of Maryland.

Kirk M. Cantor, BS ’81, wrote the book “Blown Film Extrusion: An Introduction,” which was released in April 2006. The book is published by Hanser Gardner Publications. The publication, which deals with a specialized form of plastics processing, is targeted to professionals in the industry. Cantor wrote the book as part of his work on the Plastics Resources for Educators Program at Pennsylvania College of Technology where he is a faculty member in the department of plastics and polymer technology. Cantor is co-principal investigator for the Educators Program. Cantor’s book is accompanied by a CD that includes a computer-based simulator that he also developed under the PREP grant to teach blown film extrusion equipment operation and processing principles.

John Croft, BS ’84, has joined Flight International as Senior Editor, based in Washington, DC. Croft became an aviation journalist in 2000 after spending nearly two decades working for NASA. Croft worked for Aviation Week & Space Technology, and was a freelance writer for numerous publications, including Air & Space magazine, Air Transport World, Aviation Week’s Show News, Overhaul & Maintenance magazine and C4ISR journal. He has flown light aircraft since 1979, building up more than 1,000h with instrument, commercial and flight instructor ratings, and also holds an MS degree in journalism (’00) from the University of Maryland. At NASA, he helped build several scientific satellites, including the successful Rossi X-Ray Timing Explorer and the Extreme Ultraviolet Explorer.
Lael Rudd, PhD ’06, is currently pursuing a Masters degree in biomedical engineering at USC. He is a part-time lecturer at UCLA and a Technical Specialist Engineer with Northrup Grumman.

Patrick Haynes, BS ’06, has joined Orbital Sciences.

Sara Corbitt, BS ’06, has joined Lockheed Martin.

Donald Mackey, BS ’06, has the Johns Hopkins Applied Physics Lab as a mission controller on MESSENGER in their space department.

Benjamin Wagner, BS ’06, has joined Piasecki Aircraft Corporation in Essington, PA.

Jason Hendrickson, BS ’06, has joined Honeywell Technology Solutions Inc. as a Satellite Specialist.

Korkegi and Anderson Attend 50th Anniversary of VKI

Dr. Robert Korkegi and Dr. John Anderson were invited to attend the 50th anniversary celebrations October 18th - 21st of the von Karman Institute for Fluid Dynamics (VKI) just south of Brussels, Belgium. The Institute was founded by Dr. Theodore Von Karman in 1956 as the Training Center for Experimental Aerodynamics. Its name was changed to VKI upon its founder’s death in 1963.

The von Karman Institute has grown to a renown centre of excellence in fluid dynamics with a large variety of important and unique experimental facilities and computational means, providing quality post-graduate training and research in theoretical, experimental and computational fluid dynamics in the field of aeronautics and aerospace, turbomachinery and propulsion, environmental and industrial processes.

The anniversary program included a visit to the Institute by the King of Belgium, Albert II. An academic session was held on October 18th at the Palace of the Academies in Brussels at which speeches were given by the Secretary-General of NATO, the Director General of the European Space Agency, the Belgian Minister of Science Policy, and the Chairman of the VKI Board of Directors and a former student on “Impact of the VKI Training on the Professional Career of a US Citizen”. The following day an alumni symposium was held at which Dr. Ginoux, former Director of VKI, gave a history of the Institute, and Dr. John Anderson, Emeritus Professor at the University of Maryland, gave a biographical sketch of von Karman with photos of him at various stages of his life. That evening an alumni dinner party was celebrated, and on the 20th of October, the Institute was open to visitors from schools and industry, the 21st to the general public.

Dr. Korkegi was Technical Director and Professor at VKI from 1957 to 1964, the Institute’s formative years, and is still a member of its General Assembly.
Recipients of the Fourney Scholarship must have a minimum 3.2 G.P.A. in order to be considered for an award. To date, four students have received scholarships from this endowed fund. Donations are still being accepted and can be submitted online at https://advancement.usmd.edu/OnlineGiving/umd.html or by contacting Radka Z. Nebesky, Associate Director of Development, e-mail: radka@umd.edu

The aerospace engineering department would like to again congratulate and thank Dr. Fourney for his service to the department, its students, faculty, staff, alumni, and friends.

Deeply honored by the fact that Dr. Young wishes to acknowledge the education that his father, Willis Young, received with the significant gift of a named faculty endowment,” said Darryll Pines, chair of the aerospace engineering department.

With this gift, Dr. Young and his wife ensure rich educational opportunities for future generations, and have assisted the Clark School in raising more than $100 million of its $185 million Great Expectations campaign goal. The Young’s generous commitment reflects their wide-ranging interests in the arts, sciences and student development. Strongly advocating that students broaden their educational and life experiences, the Youngs are also supporting research and teaching opportunities to engage students with the “Restoration of Ancient Stabiae” project. The School of Architecture, Planning, and Preservation is part of an international team that is restoring the elegant architectural structures of this ancient seaside town of Roman villas covered by volcanic ash in the first century, A.D.

This desire is also reflected in the various awards he has garnered over the years, including UMCP Outstanding Contributions to Seniors (1995), UMCP Outstanding Teacher Award (1996), and aerospace Engineering Professor of the Year Award (2001). “Bill Fourney’s distinguished career and his many contributions to campus make him more than qualified for the President’s Medal,” says William Destler, senior vice president for academic affairs and provost. “His selection rewards an exemplary career.”

(Timothy Lee, AE senior, contributed to this article.)

Dr. Fourney is presented with a celebratory check in the amount of $6,800 which was raised over the summer and early fall of 2006 to honor his dedication to the department and the School of Engineering.

**Major Department Events Taking Place in Fall 2007**

This fall, the department will be celebrating the 25th anniversary of the Alfred Gessow Rotorcraft Center on November 30, and inducting a third class to our Academy of Distinguished Alumni on November 3. Mailings will be sent to alumni and friends of the department regarding both of these events, and information will be posted on our website: www.aero.umd.edu

**Fourney Celebration**

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**President’s Medal**

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Jeremy Shidner, Ph.D. candidate, National Institute of Aerospace, and research partner Ben Raiszadeh (NASA), received the NASA 2006 Inventions and Contributions Board Action Award. This award was officially given at the Langley Research Center Inventors Awards Luncheon in the Reid Conference Center. The name of the technology submitted by Jeremy and Ben Raiszadeh (the original inventor of the technology) is “POST II Trajectory Animation Tool using MATLAB”. The benefit of this animation tool is generating videos strictly from scientific measurements and analysis. This tool provided assistance in the development of Version 2 which is included in the Mars MOLA terrain mapping, CAD model interpreting, and body frame camera placement.

Jamie Meeroff, BS’06, Ph.D. student, received the National Science Foundation’s Louis Stokes Alliance for Minority Participation Bridge to the Doctorate Fellowship for the 2006-2007 and 2007-2008 academic years. Meeroff’s research interests include boundary layer transitions in hypersonics. His faculty advisor is Mark J. Lewis.

The Clark School’s chapter of Tau Beta Pi, the nation’s engineering honor society, won the 2005-06 R.C. Matthews Award for Most Outstanding Chapter, beating more than 300 chapters nationwide for the honor. Last year, the chapter sent students to the Gulf states to help with recovery efforts after Hurricane Katrina. Ashley Korzun, B.S. ’06 AE, served as chapter president during the ‘05–’06 school year.

Aerospace engineering senior Timothy Lee was presented with the university’s Spirit of Maryland award during halftime of the Oct. 21 Homecoming football game. The Spirit of Maryland Award is presented annually in lieu of a traditional Homecoming King or Queen honoree. The award is presented to a male and female member of the senior class who through their achievements has most exemplified the “spirit” of the University of Maryland. Criteria for the award include outstanding scholarship, leadership, campus involvement, community service, and communication skills.

Sega Visits Department

On Monday, October 16, Dr. Ron Sega, Undersecretary of the United States Air Force, visited the Department. Dr. Sega, pictured below with faculty and students, was a guest of Dr. Mark Lewis and came to hear about the latest developments in research in the department’s Space Vehicle Technology Institute (SVTI). The SVTI is jointly funded by NASA and the Air Force to develop enabling technology for NASA’s space exploration missions. Dr. Sega was given a brief overview of the program by Dr. Ken Yü, who is the current director of the center. Several graduate students also presented the latest findings in their research including Adam Diesel, Joshua Johnson and Josh Clough.
Several individuals spoke at the celebration (clockwise): Dr. Inder Chopra gave a mock faculty meeting presentation on department statistics during Dr. Fourney’s tenure; Dr. Jymn Hubbard showed off his new hat similar to Dr. Fourney’s infamous one and talked of his admiration of Dr. Fourney; Justin Richeson, BS’03, MS’06 presented his drawing that signifies several characteristics of Dr. Fourney; and Matthew Fourney spoke on behalf of the family.
Above, Dr. Fourney meets his long-lost cousin Maybell who then led her band and the audience in the song “You Are My Sunshine”; left, University of Maryland Provost and former Engineering Dean, Dr. Bill Destler, also provided musical entertainment in addition to his duties as emcee for the evening. Below left, artwork based on and including sections of Dr. Fourney’s research was given to him on behalf of the alumni, and below right, Dr. Fourney enjoys the evening’s events with his family.
AEROCONTACT is published twice 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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Visit our Web site at www.aero.umd.edu

Department Chair:
Dr. Darryl Pines
Director, Undergraduate Program:
Dr. Alison Flatau
Associate Director, Graduate Program:
Dr. Mary Bowden

Calendar of Events

- Classes Start 8/29/07 (Wednesday)
- Labor Day Holiday 9/3/07 (Monday)
- Engineering Alumni Reunion, classes of 1947, 1957, 1967; 10/18/07 (Thursday)
- Homecoming 10/19-20/07
- Thanksgiving Holiday 11/22/07 (Thursday) through 11/23/07 (Friday)
- Last Class 12/11/07 (Tuesday)
- Final Exams Start 12/13/07 (Thursday)
- Final Exams End 12/19/07 (Wednesday)
- Main Winter Commencement Ceremony 12/19/07 (Wednesday Evening)
- College Commencement Ceremonies 12/20/07 (Thursday)