



*Mrs. Jo Stillwell and Kara Huffman admire the portrait of Prof. "Shel" Stillwell, the department's founder.*



*Mrs. Stillwell and Artha Chamberlain, a former editor at Aerospace Engineering, converse with Diane Jeffers, Tom Krenzke, and Kara Huffman.*

and one from the university's Center for Nanoscale Science and Technology. Therriault joined the Department of Mechanical Engineering at École Polytechnique de Montréal, Canada, as an assistant professor in January 2004.

## **Margerum Memorial Award**

**Kristyn N. Nesteikis**, a junior from Oak Forest, Illinois, was honored for her leadership qualities with this year's Margerum award. Prof. Eric Loth, who presented the award to Nesteikis, characterized her as a "real dynamo." As further testament to these qualities, she also won the William R. Schowalter Award this year. Recipients are selected based on their leadership skills, creativity, encouragement of others, and dedication to the College of Engineering. Nestei-



Harry Zanotti pictures

*Ann Beddini receives the AIAA Teacher of the Year award given posthumously to her husband, faculty member Bob Beddini. Presenting the award are Gina Miller (center) and Kristyn Nesteikis.*

kis, who chairs the department's Undergraduate Advisory Board, "is considered to be one of the most effective student leaders on campus," according to copy written for the College of Engineering awards' ceremony.

As board chair, Nesteikis created the Aerospace Mentoring Program. "(This) will be a program for incoming freshmen to talk directly with an aero student. Currently, faculty members call the household and usually only end up talking to parents. I thought it would be a good way for students to get any questions answered or address any fears or concerns they may have coming into college or into the Aero Department," she said. Her extracurricular activities have not impeded her in academics, however: Nesteikis already has senior standing although she is not expected to graduate until 2006.

Her leadership experience includes being treasurer, secretary, and now president for the student chapter of the American Institute of Aeronautics and Astronautics; a member of the Society of Women Engineers and Float'n Illini; being on the Boeing Mentor Program; a volunteer for Engineering Open House, and most recently, assistant director and vice president of the Illinois Space Society. She continues to work at Engineering Career Services, teaches as an Engineering Learning Assistant, and continues to co-op at Rolls-Royce in Indianapolis.

In her spare time, Nesteikis sings in the University Choir and has found time to earn a black belt in tae kwon do.



*Geoff Bower and his parents at the awards ceremony.*



*Kristyn Nesteikis receives the Margerum award from Eric Loth.*

---

## Kittell Joins Young Space Professionals Attending Vancouver Congress

**Kirk Kittell**, '03, was one of about 200 delegates who attended the Space Generation Congress (SGC) in Vancouver, Canada, in October 2004. The SGC is a venue where international young professionals can meet to develop and implement a vision for the future exploration and utilization of space.

The event is organized in support of the United Nation's Program on Space Applications, which allows the views of students and young professionals to be represented to the U.N. Committee on the Peaceful Uses of Outer Space. The one-week meeting was held in conjunction with the annual meeting of the International Astronautical Congress (IAC).

Kittell will be an organizer for the next congress, which will take place in Fukuoka, Japan, in October 2005.

He was the only delegate selected from the University of Illinois. "In fact, the only other Americans I knew who went were from MIT, Carnegie Mellon, Embry Riddle, University of Hawaii, and Caltech," he said. "There were many students there supported by JAXA (Japan Aerospace Exploration Agency) and ESA (European Space Agency). I talked to Katie Blanding from NASA when I was there, and she hinted that NASA may try to fund some students from the United States to go to the next SGC in Japan in October 2005. That would help me attend the Japan SGC, especially since I will be one of next year's organizers."

At the meeting, Kittell said he met "lots of interesting people from across the world. In my small working group alone, there were students from Japan, Bahrain, Canada, and Australia. A group

of eight of us (including students from Ireland, Australia, and the UK) flew from Vancouver to attend the second X PRIZE launch (October 4, 2004). Since one of the eight worked for the X PRIZE team, we got to get on the runway after the successful landing and shake hands with Burt Rutan (research aircraft developer), Mike Melvill (pilot of the first X PRIZE flight), Brian Binnie (pilot for second X PRIZE flight), Anousheh Ansari (co-sponsor of the Ansari contribution to the X PRIZE), and Peter Diamandis (head of the X PRIZE Foundation)."

*Read more about Kittell and his involvement in the X PRIZE launches elsewhere in this issue.*

# AE Offers New Freshman Spacecraft Design Course

In fall 2004, Aerospace Engineering introduced a new course, "Introduction to Applied Space Design," to first-year students. "The goal is to increase the involvement of AE students in design activities early in their curriculum," explained Philippe Geubelle, an AE faculty member and one of the three instructors in the course. The other two teachers are faculty member **Victoria Coverstone** ('85, MS '86, PhD '92) and AE doctoral student **William Mason** ('96, MS '01). The course is supported by a NASA Workforce Development Grant through the Illinois Space Grant Consortium.

In its first offering, the course involved about half of the freshman class (60 students), who were organized into 10 teams. The primary objective of the course was to design and build 10 soda can-sized satellites, each containing a set of sensors (accelerometers, altimeters, pressure sensors, digital cameras or magnetometers). The teams also paired off to build five model rockets that

were three inches in diameter and five feet tall. Each rocket had to house two satellites and had to fly to an altitude of about 2,500 feet. With the help of the local model rocket club, Central Illinois Aerospace, the rockets were launched successfully on November 6, 2004, from a field

10 miles northeast of Champaign.

After the launch, the students were asked to analyze the data collected during the flight and, when applicable, to compare with flight predictions obtained with a Matlab rocket trajectory code they had written during the first part of the course. In addition to rocketry and Matlab programming, the students were introduced to other topics such as satellite



*Students successfully recover a rocket after launch.*

components, soldering, creating simple electronic circuits, solid propellant rockets, and report writing.

"Plans for 2005 include installing a GPS system in the rockets to allow higher altitude flights, and opening an aircraft design section to accommodate the other half of the AE freshman class," Geubelle said.

*Prof. Geubelle contributed to this story.*

---

## AE Students Participate in SpaceShipOne Launches

On September 29, 2004, 34 student members of the Illinois Space Society (ISS), many of them from the Department of Aerospace Engineering, bore witness to history as volunteers at the SpaceShipOne launch in Mojave, California. Eight students made the trek to the desert launch site five days later for the second launching. Graduate student **Kirk Kittell** ('03) explained just how Aerospace Engineering students came to be in the Mojave at dawn, watching the privately financed rocket streak upwards to space in its bid for the \$10 million Ansari X

PRIZE. "Last semester, we invited Gregg Maryniak, the executive director of the Ansari X PRIZE Foundation, to give a presentation on campus, and afterwards, we asked if we could help out," he said. "The biggest thing we will get out of this is to be part of history, expand our network and meet other people in the space industry." Kittell founded the Illinois Space Society with AE undergrad Derek Meyer in 2003 and is the society's director.

Mark Schaffer, a junior in aerospace engineering and chief coordinator for the September

trip, said the majority of what the volunteers did was working in the VIP section, "which is really close to the launch site. Primarily, we handed out information and answered questions (for the likes of James Cameron, director of the film *Titanic*, and Sean O'Keefe, NASA administrator)." The ISS group's initial trip was partially funded through the Student Organization Resource fee and the Engineering Council at the university.

To win the X PRIZE, SpaceShipOne (a partnership between Paul Allen of Microsoft and Burt

# Undergraduates Take Advantage of Research Internship in New Program

Engineering undergraduate students at the University of Illinois at Urbana-Champaign were introduced to the flavor of research this summer when they worked side by side with faculty researchers in their labs. About 140 students applied for the chance to be research interns in the inaugural Undergraduate Research Opportunities Program (UROP). Seventeen juniors and seniors were selected and worked with faculty from the College of Engineering and Department of Geology on NASA-related research.

Project examples included modeling damage in solid propellant, analyzing thermal barrier coatings used in jet engines, analyzing the fluid mechanics of gas behavior in Martian fractures, and analyzing aircraft icing using computers. Students also participated in extracurricular activities such as field trips to the Rolls-Royce plant in Indianapolis and to Fermilab to attend a lecture given by a member of the commission on the *Columbia* Space Shuttle accident. At the end of the summer, each student wrote a four-page extended abstract of his or her research work and made a presentation in front of their peers

and faculty advisers. The three students with the best presentations showcased their work at the poster session at the Great Midwest Space Grant conference in November 2004 in Chicago.

"The Illinois Space Grant Consortium, based in Aerospace Engineering, received a Workforce Development Grant in 2004 from NASA's Space Grant program," said Diane Jeffers, AE's coordinator for external relations. "The money enabled us to offer this UROP program, a new freshman spacecraft design course (see story in this issue), and helped to provide scholarships for under-represented high school students to the Illinois Aerospace Institute (AE's summer camp)." The faculty members participating in the UROP endeavor also provided matching funds from their research programs.

According to Jeffers, this is the inaugural year for the UROP program, and there are plans to offer it again next summer. "In 2005, funding will be provided to offer a freshman course in aircraft design. The Boeing Company also contributed \$20,000 in scholarship money for UROP in 2005. This is a clear indication of industry's



*Ahsan Alvi, an undergraduate in Civil Engineering, looks over controls in the Flight Simulation Lab at the Beckman Institute for Advanced Science and Technology. He was a research intern in the UROP program. Instructing him is Jonathan Sivier, a research programmer with the Aviation Human Factors Division of the Institute of Aviation.*

support for this program." In addition to Jeffers, other AE staff members administering the program included faculty members Philippe Geubelle and Victoria Coverstone, and graduate student and alumna **Jennifer Hargens-Rysanek** ('97, MS '01).

*continued from page 8*

Rutan and his team at Scaled Composites) needed to make two flights within two weeks. The partnership, named Mojave Aerospace Ventures, made history by launching a privately financed, manned spaceship to 100 km altitude. On June 21, 2004, Mike Melvill, a pilot for Mojave Aerospace Ventures, became the first commercial pilot to enter sub-orbital space, earning astronaut

wings and a spot in the *Guinness Book of World Records*.

The Illinois Space Society was created to develop a network of students and members from the surrounding community who are interested in space exploration and development. Currently, according to Kittell, the society is working on a high-altitude rocket with scientific and video payload, a space math/science textbook for grade school students, and Illi-

nois Space Day, an outreach day for local grade school students. Other alumni involved with this trip include **Julia Laystrom** ('99, MS '04), **Surjeet Paintal** (MS '04), **Shane Wake** ('04), **Kevin Welch** ('03) and **Brian Woodard** ('02, MS '04). Find out more about ISS at [www.ae.uiuc.edu/iss](http://www.ae.uiuc.edu/iss).

*Rick Kubetz, College of Engineering Office of Engineering Communications, contributed to this story.*

# CLASS NOTES

## 1950s

**Earl Dowell**, '59, MS '61, was named an Honorary Fellow of the American Institute of Aeronautics and Astronautics in 2004. He is the J.A. Jones Professor at Duke University. Four other AE alumni were named AIAA Fellows: AE Department Head **Michael Bragg** ('76, MS '77); **Robert Farquhar** ('59), a mission director at the Applied Physics Lab at Johns Hopkins University; **Robert Spitzer** ('61, MS '62), vice president of technical affiliations for The Boeing Company and AE Distinguished Alumnus for 2003, and **Anthony Springer** ('91), of the Office of Aeronautics at NASA headquarters.

## 1960s

**Allen Chen**, MS '69, PhD '72, wrote to reminisce about his time as a student at Aerospace Engineering, brought on by seeing photos in the alumni newsletter of Mrs. Jo Stillwell and Prof. Shee-Mang Yen. Chen came to the United States from Taiwan in 1966 to study at AE for his doctorate. He remembers that he shared an office in 1967 with **Rudy Yurkovich** ('67, MS '68) in the basement of the Transportation Building. Profs. Harry Hilton and Yen were on his PhD committee.

**James Hudson**, '63, retired in 2002 from Lockheed Martin Aeronautics in Fort Worth, Texas, where he was a senior staff specialist and project engineer. He worked for more than 39 years in airframe design, on the F-111, YF-16, F-16, YF-22, F-22, F-35 and other aircraft programs, and in research and development for advanced composites.

**Thomas Tobey**, '69, returned to campus in March to speak at the department's seminar series. Tobey is director for manufacturing, research, and development for Boeing and a member of AE's advisory board.

## 1970s

**Larry Nazimek**, '71, MS '72, wrote an article for *Air Line Pilot* magazine about his experiences as an aviation technical adviser in the movie "Unconditional Love." He played first officer in a scene with actress Julie Andrews, who played a passenger in the movie. In 2002, Nazimek was selected as an Olympic torchbearer for the Winter Olympics. He is also on the board of directors for LifeLine Pilots, a private, nonprofit organization founded in 1981 by a Champaign, Illinois woman. Volunteer pilots fly for this humanitarian air care organization, which provides free flights for medical emergencies.

# IN MEMORIAM

**Col. Kenneth Herman** (USAF, Ret.), '57 (Division of Special Services for War Veterans) died on April 2, 2004. He was 81. He was a resident of Arlington, Texas, and formerly of Scott County, Iowa. Graveside military honors were conducted at the Rock Island National Cemetery.

Herman founded the Berlin Airlift Veterans' Association and was one of its past presidents. He was one of seven Allied Air Force veterans honored with the Eric M. Warburg Prize in 1998, on the occasion of the 50th anniversary of the Berlin Airlift. The prize honors a scion of a well-known Hamburg family who worked to create a bond between Germany and the United States. Herman flew 190 trips from West Germany to Berlin, carrying coal for Berliners.

He was born in Pleasant Valley, Iowa, on September 4, 1922. He graduated from Davenport High School and the University of Illinois. Herman retired after serving 24 years with the Air Force, and then worked in the aerospace industry and as a municipal airport manager. He was active in numerous military and aviation organizations.

## AE Advisory Board 2004

Scott D. Altman '81  
Lee J. Archambault '82, MS '84  
Kenneth Atkins PhD '74  
Craig R. Bolt '73  
Earl Dowell '59, MS '61  
Steve V. Drum '56  
Shirley Dyke '91  
Steven J. D'Urso MS '89  
Bruce T. Goodwin MS '77, PhD '82  
Richard L. Grant '61  
Allen T. Green '56  
Eugene G. Hill '57  
Stephen J. Hoffman '78, MS '80, PhD '84  
Gail Jonkouski '80  
Alan B. Kehlet '51  
Michael F. Lembeck '80, MS '81, PhD '91  
Jerry L. Lundry '58, MS '59  
Robert H. Meixner, Jr. '70  
Michael Miller '76  
George Muellner '67  
Steven R. Nagel '69  
Paul A. Nus '78, MS '79  
John N. Rice '81  
David Riley '77  
Thomas J. Tobey '69  
James Xerikos '53, MS '56, PhD '59  
Rudolph N. Yurkovich '67, MS '68