May 5  
**VEF Awards Luncheon**  
Recognition of Gregory H. Olsen and Professor Doris Kuhlmann-Wilsdorf  
*Newcomb Hall, South Meeting Room*

May 15  
**Retiring Faculty Reception**  
Honoring Professors R. Edward Barker, Jr.; Furman W. Barton; Lois E. Mansfield; Dahlard L. Lukes; James P. Ignizio; Jeffrey B. Morton  
*Thornton Hall, Rodman Room*

May 16  
**TJ Society Reunion Luncheon**  
*Alumni Hall*

June 1  
**U.Va. Reunion Weekend Seminars**  
*Olsson Hall, Room 120*

June 2  
**Engineering Reunion Luncheon**  
*Thornton Hall, Darden Court*

October 5-6  
**VEF Fall Board Meeting**  
*Zehmer Hall*

October 5  
**Thornton Society Dinner**  
*Farmington*

December 3  
**Richmond Alumni Reception**  
*Virginia Museum of Fine Arts*

January 24  
**VEF Winter Board Meeting**  
*Call 804.924.1382 for information*
features

Engineering School Capital Campaign:
The People Behind the Story / 8
Successful campaigns are about more than charts, graphs, dollars and cents. Campaigns are also about the professor whose work is made possible thanks to the generosity of a donor and the people honored by donations in their names.

Undergraduate Engineers
Launch Real-World NASA Project / 10
Students in a U.Va. undergraduate Mechanical and Aerospace Engineering Design class and James Madison University students worked for three years to design a payload in a NASA sponsored project. In April they watched their payload reach the edge of the atmosphere during a rocket launch.

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Biomedical Engineering

Dr. Brian Helmke joined the department in March 2001 from the Institute for Medicine and Engineering and the Department of Bioengineering at the University of Pennsylvania.

John A. Hossack received a gift of equipment valued at approximately $100,000 from the Office of Naval Research.

Dr. Yuqing Huo received the New Investigator Award of the American Heart Association in recognition of his work on Chemokines.

Drs. Klaus F. Ley and Unsu Jung received the Wiederhielm Award of 2000 for a journal article they published in “Microcirculation.”

Richard J. Price received a prestigious four-year NIH grant to study the mechanisms of new blood vessel development.

“Klaus Ley and Tom Skalak have been instrumental in making the Department of Biomedical Engineering one of the best in the nation … They are both tireless researchers and inspiring teachers.”

RICHARD MIKSAD, DEAN

Chemical Engineering

Robert J. Davis was invited to speak at an NSF sponsored workshop in Pretoria, South Africa, to promote collaborative research in catalysis between that nation and the United States.

Robert J. Davis and John L. Hudson delivered invited talks at the Pacificchem 2000 meeting in Hawaii.

Ramon L. Espino was appointed the Brenton S. Halsey Visiting Professor of Chemical Engineering.

Roseanne M. Ford presented the keynote address at the American Chemical Society’s national meeting in Washington, D.C., in August 2000. She also was one of 40 women engineers to attend the first Women’s Engineering Leadership conference. Dr. Ford is a founding member of the Women’s Engineering Leadership Institute.

Computer Science

Rarek Abdelzaher received a National Science Foundation Career Award.

David E. Evans won an NSF Career Award in support of his research on programs that execute on large collections of computing devices. He also won a University of Virginia Teaching Fellowship.

Zhong Li won a University of Virginia Teaching and Technology Initiative Fellowship for 2001.

Civil Engineering

Susan E. Burns received the 2001 Alumni Board of Trustees Teaching Award.

Nicholas J. Garber and his students co-authored two papers presented at the annual meeting of the Transportation Research Board (TRB). He also presented a paper at an international conference in Pretoria, South Africa.

Carl T. Herakovich was elected a vice president of the American Society of Mechanical Engineers (ASME).

Cornelius O. Horgan co-organized and co-chaired a four-session symposium at a meeting of the Society of Engineering Science. Dr. Horgan also presented the opening lecture of the symposium.

Brian L. Smith presented four papers at the annual meeting of the Transportation Research Board (TRB). He also was invited to join the TRB Committee on Information Systems and Technology and received a University of Virginia Teaching Fellowship for 2001-2002.

Civil Engineering

Drs. Thomas C. Skalak and Klaus F. Ley were elected Fellows of the American Institute of Medicine and Biomedical Engineering.

Civil Engineering


Civil Engineering

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Dr. Thomas C. Skalak has been appointed as the chair of the Biomedical Engineering Department, effective July 1, 2001. He also is president of the Biomedical Engineering Society. Skalak and Richard J. Price won the Gerritsen Award, given for writing the most highly cited review article of the past five years in “Microcirculation.”

Civil Engineering

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“Klaus Ley and Tom Skalak have been instrumental in making the Department of Biomedical Engineering one of the best in the nation … They are both tireless researchers and inspiring teachers.”

RICHARD MIKSAD, DEAN
David P. Luebke won an NSF Career Award in support of his research on computer graphics. He also was awarded a University of Virginia Teaching and Technology Initiative Fellowship for 2001.

John A. Stankovic’s Network Virtual Machine for Real-Time Coordination Services Project received a $600,000 DARPA grant. His Quality of Surveillance and Control in Network Centric Warfare Project received a $942,000 portion of a $5 million MURI award. His Control Theoretic Approach to Performance Guarantees in Performance Critical Systems received a $410,000 NSF grant. He was a keynote speaker at the IEEE 21st International Conference on Distributed Computing Systems, held in April 2001.

Kevin Sullivan was appointed to the National Academy of Science Computer Science and Telecommunications Board Committee on the Fundamentals of Computer Science.

Alfred C. Weaver received a NATO fellowship to teach electronic commerce at Bogazici University in Istanbul, Turkey, last summer. He taught a tutorial on electronic commerce and factory automation at IECON 2000 in Nagoya, Japan. He also taught a tutorial on the Internet and electronic commerce to citizens of Nagoya Prefecture. He was named a “Distinguished Lecturer” by IEEE Industrial Electronics Society for 2000-2001.

**Electrical & Computer Engineering**

James H. Aylor received the 1999 Richard E. Merwin Award for Distinguished Service from the IEEE Computer Society. He gave a Birck Distinguished Lecture at Purdue University in April.

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**FACULTY NOTES, page 4**

**dean’s message**

**THIS HAS BEEN AN EXTRAORDINARY YEAR FOR OUR SCHOOL** — a year that’s included unprecedented generosity on the part of our supporters, and nationwide recognition of our talented faculty and students.

I’ve been gratified by the loyalty and support for our school exhibited during the campaign, a five-year effort led by Hudnall Christopher (’55) that concluded at $75.4 million in December, over twice our initial goal. These funds will enable us to continue moving forward at the frontiers of knowledge now and in the future, and provide new buildings, labs, teaching spaces, funded professorships and, most critically, much-needed student support.

The dedication of our alumni was exemplified by Greg Olsen’s contribution of $15 million to the Materials Science Department. Greg’s gift will assure the construction of Wilsdorf Hall, a state-of-the-art Materials Science and Engineering building named in honor of Professor Doris Kuhlman-Wilsdorf and her late husband, Heinz. Greg studied with and later worked collaboratively with both Doris and Heinz, as well as with materials science professor Bill Jesser.

Doris was recently honored at a Board of Visitors reception to commemorate the naming of Wilsdorf Hall. This honor was soon followed by notification that she was named the U.Va. Inventor of the Year for her work in fiber brushes technology. She is a superb educator and scientist and embodies the best of what an institution such as ours has to offer.

There are many others among our faculty who’ve been honored for their research and teaching this year. Tom Skalak and Klaus Ley of Biomedical Engineering were recently elected Fellows of the American Institute of Medicine and Biomedical Engineering. Anita Jones of Computer Science was elected a Fellow of the American Association for the Advancement of Science, and Garrick Louis of Systems and Information Engineering won the Presidential Early Career Award for Scientists and Engineers. In addition, four of our faculty members won National Science Foundation Career Awards, four won U.Va. Teaching Fellowships, and three won U.Va. Teaching Awards.

One of the strengths of our program is the opportunities we provide for our students to learn beyond the confines of the classroom and lab. Sometimes this leads to experiences that allow students to contribute fundamentally to the future of society. The transportation project, under the direction of Brian Smith of Civil Engineering, which involves faculty, staff, and students in the Smart Travel Lab working with the Virginia Transportation Research Council, is one example. The graduate student project under William Walker of Biomedical Engineering to develop a syringe disposal device is yet another.

The opportunity to build knowledge and to apply that knowledge to the betterment of society is what a U.Va. Engineering School degree means to the young women and men who study here. We work to give students the ability to recognize a need, and the vision and skill to create a solution. We do this with dedication and we do it well, thanks to the talents of our world-class faculty and the generous support of our alumni and friends.

Yes, it’s been an extraordinary year in the life of our school.

—DEAN RICHARD MIKSAD
Lloyd Harriott was selected as a member of the Board of Directors of NIST.


Barry W. Johnson was general chair of the IEEE International Workshop on Embedded Fault-Tolerant Systems, held in September 2000. He participated on a panel of experts at the Nuclear Regulatory Commission’s Water Reactor Safety meeting in Rockville, Md., in October 2000. He presented a paper at the international meeting of the American Nuclear Society in November 2000. He gave two presentations to a working group of the International Atomic Energy Agency.

John Lach received a University of Virginia Teaching Fellowship.

Robert M. Weikle II received one of this year’s All-University Outstanding Teaching Awards.

Ronald D. Williams and Mircea R. Stan are leading three student design teams in an IEEE Computer Society-sponsored competition aimed at promoting student design and creative applications of Bluetooth technology.

Ronald D. Williams and Stephen G. Wilson presented an overview of Bluetooth technology to a forum of engineers at an event co-sponsored by the Virginia Center for Innovative Technology and GE/Fanuc.


Robert Kelly received the Robert T. Foley Award of the National Capital Section of the Electrochemical Society for contributions to the advancement of electrochemical science and technology and excellence in teaching.

Doris Kuhlman-Wilsdorf, University Professor, was awarded the University of Virginia Inventor of the Year Award for her work in fiber brushes technology.

Mechanical and Aerospace Engineering


Joseph Humphrey, F.G. Barth (University of Vienna) and K. Voss (Bucknell University) have co-authored a chapter in The Ecology of Sensing (Barth, F.G. and Schmid, A., eds.) Springer, Berlin Heidelberg etc., 2001.

Materials Science & Engineering

Raul A. Baragiola gave a plenary talk and also the conference summary at the International Workshop on Inelastic Ion Surface Collisions, held in Bariloche, Argentina.

Systems and Information Engineering

Peter A. Beling’s Financial Engineering Research Group is working with M-CAM Inc., a Charlottesville company, on models for the valuation of intellectual property. An award from Virginia’s Center for Innovative Technology (CIT) funded the initial phase of this project. CIT recently honored this work as the Best University Research and Development Project funded by CIT in the year 2000.

Donald E. Brown was elected a Fellow of the IEEE for contributions to the design and development of data fusion systems used for national security, law enforcement and public safety.

Stephanie A. Guerlain received an NSF Career Award to study team communication and coordination in the operating room (OR), and to develop and test a surgical decision-making computer-based training package. She also received a National Patient Safety Foundation grant to study the effectiveness of checklists for improving team communication and coordination in the OR.

Yacov Haimes was commissioned by the U.S. Department of Defense to conduct studies on protecting critical infrastructures.

Division of Technology, Culture & Communication

Edmund Russell will serve on the U.S. National Committee for the International Union of the History and Philosophy of Science by the National Academy of Sciences.
The Smart Travel Van Ready to Roll

Left to Right: Michael Pack, Robert Doty and Kendall Drummand show off the Smart Travel Van.

“Faculty, students and staff in the Smart Travel Lab worked together to create an instrument unique to transportation research facilities in this country,” according to Brian Smith, co-director of the Smart Travel Lab.

The van, a state-of-the-art mobile traffic data collection system, allows the lab to collect highly detailed data at any location—heavily traveled freeways, busy intersections, work zones or remote rural locations. The van’s data collection capabilities complement the Smart Travel Laboratory’s extensive permanent data collection locations (obtained via VDOT Smart Traffic Centers).

The Smart Travel Laboratory is a joint transportation research facility of Civil Engineering and the Virginia Transportation Research Council. “The design and development of the Smart Travel Van was an educational experience for everyone involved,” Smith said.

Considered the nation’s most sophisticated mobile traffic data collection system designed and developed by a university, the Smart Travel Van will support statewide research projects done by U.Va. students and professors.

U.Va. and PVCC Collaborate on Scholarships for Students

The National Science Foundation Scholars Program has awarded $262,000 to the University of Virginia to support a collaborative scholarship fund for technology and math students at U.Va. and Piedmont Virginia Community College.

The program is designed to increase the number of talented but financially disadvantaged students who wish to complete associate’s, bachelor’s and graduate degrees. The program is open to prospective and currently enrolled technology and math students at U.Va. and PVCC.

“This is a wonderful opportunity for students who wish either to enter the technology work force or to continue their technology education up to graduate school,” says Carolyn Vallas, director of U.Va.’s Office of Minority Programs in the Engineering School. “The NSF Scholars Program is designed to help financially disadvantaged students achieve their greatest goals.”

Biomedical Engineering Student Invents Mechanical Leech

Patrick S. Cottler, a doctoral candidate in biomedical engineering, has invented a mechanical leech that is superior in effect to the medicinal leeches used for more than 3,000 years.

Cottler’s invention is an adaptation of an actuator developed by NASA to supply the suction otherwise supplied by hirudo medicinalis. The actuator creates negative pressure by sending electrical voltage through a thin sheet of a chemical compound.

Cottler won the Virginia Engineering Foundation 1999 award for biomimicry. He has since founded Cottler Technologies to pursue this project.
Wilsdorf Hall Building Funded by Alum

Gregory H. Olsen, president and CEO of Sensors Unlimited Inc., a fiber optics firm based in Princeton, N.J., pledged $15 million to the University of Virginia.

Benefiting the Department of Materials Science and Engineering, where Olsen received a Ph.D. degree in 1971 working under the direction of Professor William Jesser, the gift is the largest ever received by the University’s Engineering School. It complements a significant effort under way to expand engineering research activities at the University, particularly in the area of new materials.

The gift will assure the construction of a new $14 million building that will greatly expand the department’s research and teaching space, and also will provide new conference rooms and faculty offices, among other facilities. The building will be named Wilsdorf Hall in honor of the late Heinz Wilsdorf, first chair of the department, and his wife, Doris Kuhlmann-Wilsdorf, University Professor of Applied Science.

Olsen’s gift also will provide discretionary funds that the department can use where the need is greatest. According to Richard W. Miksad, dean of the Engineering School, the contribution will enable an already highly ranked program to move into new areas of advanced materials research.

“The additional space provided by this building will allow for new collaborative projects between various departments and schools at the University,” Miksad said. “Such collaborations are important to our school’s leadership in emerging technologies.”

As a U.Va. student, Olsen conducted research on phase transformations in epitaxial thin films of iron. Eventually shifting his focus from metals to semiconductors to fiber optics, he worked with RCA labs in Princeton before founding Epitaxx in 1984 and Sensors Unlimited in 1991.

“It is with great pride that I’ve watched Greg’s successes over the years. I’m delighted that he has chosen to contribute such an important gift in support of our department,” said Jesser, now chair of the Department of Materials Science and Engineering.

Olsen speaks highly of the depth and breadth of the training he received in the Engineering School. “The principles are the same, whether we’re talking metals, semiconductors, or plastics,” he said. “Twenty-four years later, I am still using the background I got in materials science. I’m very high on Virginia that way.”

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Engineering School Departments Awarded Over $11 Million in MURI Awards

Grants from the Department of Defense will provide three Engineering School projects more than $11 million to be disbursed over the next five years.

Thomas W. Crowe (PI), $6 million
The Science and Technology of Chemical and Biological Sensing at Terahertz Frequencies
Team members: Tatiana Globus, Boris Gelmont, Jeffrey L. Hesler, Robert M. Weikle II, Maria Bykhovskaia (Physiology)

Shelton R. Taylor (PI), $5 million
Development of an Environmentally Compliant, Multi-Functional Coating for Aerospace Using Molecular and Nano-Engineering Methods
Team members: John R. Scully, Robert G. Kelly, Gary J. Shiflet

John A Stankovic (U.Va. PI), $940,000
Quality of Surveillance and Control in Network Centric Warfare
The main PI is at the University of Illinois
U.Va. team member: Tarek F. Abdelzaher
**Fund in Honor of Retiring Professor Grows**

The Furman Barton Endowment Fund, named in honor of Furman W. Barton (’54), former chair and retiring professor of Civil Engineering, topped $50,000—half the $100,000 required for a “named” University of Virginia Endowment. The fund was initiated in 1999 to honor Barton, who has been mentor, professor, colleague and friend to many civil engineers and Engineering School students for more than 30 years. The annual income from the fund will enhance the educational experience of future civil engineering students.

To date, more than 60 gifts and pledges have been received from Barton’s former students, faculty colleagues and graduates. The ultimate goal for the endowment is $200,000. It is hoped that now that the ball is rolling, many additional former students and friends of Barton will feel encouraged to support Barton and the Civil Engineering Department. Barton has touched the lives of literally hundreds of Engineering School students, and a contribution to his endowment fund is a wonderful way to thank him for all he has done for the Engineering School.

To make a contribution to the Barton Fund, please send your check and/or pledge to the Furman Barton Fund, c/o the Virginia Engineering Foundation, P.O. 400256, Charlottesville, Va. 22904-4256.

**Syringe Disposal Team Hosted by Smithsonian**

The Syringe Disposal Design Team attended the Creativity & Innovation in Higher Education Conference in Washington, D.C. They were invited by the Smithsonian Institution to present their designs at the National Museum of American History in March. The team developed two prototypes of equipment designed to prevent accidental needle sticks.

**John Matthews Funds a Lab in Wilsdorf Hall**

The family of the late John W. Matthews, a former postdoctoral researcher at the University of Virginia and a groundbreaking materials researcher, has pledged $500,000 in his memory to the Engineering School. Matthews, whose son is the rock musician Dave Matthews, was an IBM Corp. research scientist who had a long-term research affiliation with the Engineering School.

The gift will support the construction of a 1,000-square-foot laboratory in Wilsdorf Hall. Matthews’ relationship with the University began in 1964 when he came to U.Va. as a researcher working with Doris Kuhlmann-Wilsdorf. Matthews later guided William A. Jesser, now chair of the Department of Materials Science, in his Ph.D. research on epitaxy, thereby establishing this important research area at the University. Matthews’ many contributions to the science of epitaxy are still fundamental to computer chip manufacture.

“John was a very creative scientist with deep insight into how nature works,” Jesser says. “He came up with a number of groundbreaking ideas that are still fresh and in use today. He was a very caring person, and a good friend.”

Kuhlmann-Wilsdorf remembers both Matthews and Gregory Olsen [see “Wilsdorf Hall Building Funded by Alum’] with admiration. “We did some extraordinary work together in those days, both in labs here at the University and in South Africa,” she says. “I am moved that the Matthews family would choose to honor John in this manner.”

**Free Software Products Produced by CS Faculty**

The Computer Science Department Internet Commerce Group launched three free software products:

*SurveySuite*, a program that allows users to create, manage, and tally electronic surveys using the Web, [www.intercom.virginia.edu/SurveySuite/](http://www.intercom.virginia.edu/SurveySuite/)

*MatchMaker*, a searchable database of high-technology companies [www.intercom.virginia.edu/MatchMaker](http://www.intercom.virginia.edu/MatchMaker)


Kim Jones, Sun Microsystems’ vice president for global education and research, receives a plaque from Dean Miksad in recognition of Sun’s gift of $544,000 in equipment to the Engineering School.
“ENGINEERING SCHOOL REACHES ITS GOAL. Just Four Years Into the Campaign.” “Engineering School Doubles Its Campaign Goal.” “$75.4 Million Raised in Engineering School Capital Campaign.” These headlines spread the news of a terrifically successful campaign, measured in goals reached and surpassed, buildings funded, equipment donated, scholarships and professorships endowed. Charts, graphs, dollars and cents tell only part of the story. The other part of the story is about the people of the campaign. Those who were able to study thanks to the campaign or those who were honored by a donation made in their name. Or the new and visionary work made possible thanks to the generosity of an alum, a friend, or a corporate partner. This is the real story of the campaign, the one that speaks to the question of why people give and how we, as an institution, are enriched by these acts of giving.

People give for a variety of reasons, we know. Perhaps they give because they were students here once and they believe in the excellence of the Engineering School student. Or perhaps they give because they know our faculty and students are involved in cutting-edge research that has and will continue to transform our world.

Perhaps they give to honor one who believed all that and more about this school. Such a case is the contribution of L.A. “Chip” Lacy Jr. (’67), who contributed over $1 million to establish the Engineering School’s first Distinguished Professorship in honor of his father, L.A. “Bub” Lacy. Bub was a student in the Engineering School when he was called to serve in World War II. A Marine fighter pilot who flew 53 night combat missions in the Pacific, Bub was a leader and a courageous man then and later in his life. After the war, he returned to the area and joined the family’s mechanical contracting business, ultimately building L.A. Lacy Plumbing, Heating, and Air Conditioning into the successful enterprise it is today. He was active in the community throughout his life, serving on building boards, the airport commission, and the Albemarle Service Authority, and he was a lifelong supporter of the Engineering School.

Chip’s donation was used to establish the L.A. Lacy Distinguished Professorship. It was awarded in 1999 to Civil Engineering Professor Lester A. Hoel, a man of international renown as an engineer and educator. Hoel is a pioneer in the field of engineering planning and design of surface transportation, with emphasis on integration of car, bus, rail and other modes of transport into a more seamless, multifaceted transportation system.

Anyone who has experienced rush hour traffic in a typical American city understands the importance of Hoel’s work. Awarding him the Lacy Professorship was a fitting tribute to Bub Lacy, a man who...
believed in facing challenges and in making a difference in the world around him.

Jean Holliday is another person honored by campaign contributions, and in a form that perfectly matches her affection for Engineering School students. Jean was secretary to the deans at the Engineering School from 1944 to 1981 and was in many ways the force in the front office throughout those years. Jean counseled students on classes to take, life decisions to make, and all manner of other things. In 1997, a scholarship was endowed in her name to support children of Engineering School faculty and staff who choose to study at the University of Virginia. The endowment’s current value is $175,000, and 14 students have been awarded scholarships to date.

MCI/WorldCom and Cisco Systems’ contribution in 1998 of over $1 million of Internet equipment to the Computer Science Department led to the creation of the Virginia Internet Teaching Lab (VINT-Lab), the first university-based Internet lab in the nation. The grant came to the school in large part thanks to the efforts of Kevin Thompson (’87) of WorldCom. During a ceremony to commemorate the opening of the VINTLab, WorldCom Vice President Vinton C. Cerf noted that “MCI/WorldCom is proud to deliver state-of-the-art Internet products to the University of Virginia. This new program should contribute to the State of Virginia’s reputation as a technology hotbed by turning out techno-savvy students who one day will contribute to the work force.”

And so it has. Students in the lab study Internet technology through a hands-on course in Internet engineering, under the leadership of lab director Jörg Liebeherr. The success of the program is such that the National Science Foundation recently provided funding to establish similar Internet labs in 15 major universities in the country, including the University of Massachusetts and the University of Southern California.

Sometimes the person behind the gift wishes to remain anonymous, as is the case with the $3.5 million charitable remainder trust the school received in 1999. Roughly 20 percent of the campaign came in the form of planned gifts, often to benefit a specific purpose such as a program, a department, a lab, or a named scholarship. This gift was particularly gratifying in that it represented not only a long-term commitment to the school but also a faith in the school’s leadership. This gift eventually will fund a distinguished professorship in any department in the school at the discretion of the dean in place when the gift becomes available.

More than 7,800 alumni and friends (including faculty and staff), and 295 corporations contributed to the Engineering School campaign. Whatever specific reasons they had for giving, the underlining motivation was faith in the school’s programs, mission and goals. The Engineering School is more than buildings, classrooms, faculty, and students. It is a community that counts among its members all of its alumni, friends, and corporate sponsors, working together toward a shared vision. People who believe in the Engineering School make it what it is and what it will become. That’s the real story of the capital campaign.
TO HEAR AEROSPACE ENGINEERING PROFESSOR Gabriel Laufer talk about U.Va.’s Infrared Sensing Experiment, you’d think he discovered a terrific new toy. Actually, he did — a NASA Orion rocket just launched his undergraduate-designed experiment, a payload of sensors to provide temperature measurements of the land and ocean.

“This was a most exciting opportunity for both me and my students,” Laufer says. “It is not everyday that undergrads get to design instruments for an experiment that is launched to the edge of space by NASA.”

Students in Laufer’s undergraduate Mechanical and Aerospace Engineering Design class watched a 16-foot rocket carry their 214-pound payload to the very edge of the atmosphere during a morning launch in April from the NASA Wallops Flight Facility on the Eastern Shore.

Their payload is a cylindrical package of instruments comprising an infrared sensing detector, a video camera, a VCR, three light detectors, temperature and pressure monitors, an on-board data logger, a multiplexer with a data transmitter, a beacon and batteries. The whole payload, which included the instruments, nose cone, antenna, aluminum skin, parachute, and pyrotechnics for separation of a heat shield and the rocket, was designed and assembled by students at U.Va. and James Madison University during a three-year period.

“The flight lasted only 20 minutes but it accomplished a great deal,” Laufer says. “It proved to the students that they are capable of handling a major engineering problem with a terrific out-of-this-world application. It also demonstrated the capabilities of the new infrared sensing package for future atmospheric research projects.”

The purpose of U.Va.’s Infrared Sensing Experiment (UVIRSE) is education and research, and eventually to provide a source of highly skilled young engineers for the Commonwealth’s booming space industry.

“Students are our most worthwhile investment,” says Jan Jackson, on-site representative at Wallops Flight Facility for Litton PRC, an engineering corporation with NASA contracts. Litton PRC has provided more than $100,000 for UVIRSE in direct support, student salaries, equipment, parts, time and advice.

The Orion rocket took the students’ payload up about 31 miles, or 50 kilometers, in less than two minutes before separating from the rocket engine. The student-designed sensors in the cone made temperature measurements of land and water during a nearly four-minute free fall through the atmosphere before parachuting into the ocean. After the flight,
the students brought their project back to U.Va. and began analyzing their data and preparing and refining their instruments for next year’s flight.

“We worked so hard for so long preparing for the launch date,” says Sarah Armstrong, a third-year aerospace engineering major. Armstrong has been with the project from the beginning and spent all of last summer at Wallops learning all she could about instrumentation. “We made mistakes, learned, tested and retested everything until we were ready,” she says.

“It’s been a roller coaster ride from the start,” says Jeff Dawson, a fourth year aerospace engineering major and the project’s team leader. “It’s been fast and thrilling, with high moments and low. There have been times when we didn’t think we could do it, and times when we were overconfident. This was an invaluable experience for future engineers.”

UVIRSE is an ongoing project supported in the last three years by nearly $600,000 from Litton PRC, the Virginia Space Grant Consortium, NASA Wallops Flight Facility, NASA Langley, and Orbital Sciences Corporation.

Thirty-four students have been involved with various aspects of the project, 18 currently. The majority are aerospace majors, though mechanical, electrical and computer science engineering majors are also involved.

Laufer worked hard to convince sponsors that undergraduates could engineer a payload that would be viable in space and says it was worth the effort. “I knew we could succeed at both getting funding and proving that undergrads can handle research and complex engineering problems. Our sponsors, and hopefully additional future sponsors, understand that this is a great opportunity to prepare future engineers for outstanding careers in government, academia and industry.”

The Virginia Space Grant Consortium agrees. “This is exactly the kind of real-world engineering and research project that we look for to help fund,” says Mary Sandy, director of the Consortium. “Our goal is to get more undergraduates involved in research, in real space missions,” Sandy says. “There’s nothing more exciting to an educator than to see a student experience the thrill of discovery. This project is an adventure for the students and for those of us who get to sponsor them.”

The students agree it was all plenty exciting. But nobody, it seems, was more excited about lift off than Laufer, their teacher. “When I was a kid, I had model airplanes to feed my imagination,” he says. “Now, my students have their own rocket. I helped them get it. What can be more exciting than that?”
1950s

Robert L. Sackheim (CHE ’59) is assistant director and chief engineer for propulsion at NASA’s Marshall Space Flight Center. He also was elected to the National Academy of Engineering.

Stafford E. Thornton (CE ’59, ’62) was reappointed to the Accreditation Board for Engineering & Technology.

1960s

Dr. David Kettler (EE ’67, ’70, ’71) retired as vice president and chief architect for Bell South. He has joined H.I.G. Capital in Atlanta as managing director and partner.

John D. Pavlovsky (ME ’69) is the recipient of the U.S. Army Legion of Merit.

1970s

Kenneth L. Ginader (AE ’76) is a captain in the U.S. Navy.

David A. Heacock (NE ’79) is site vice president for the North Anna Power Station.

1980s

Steven P. Nesbit (NE ’80, ’82) and his wife had their third child, Rebecca Elizabeth, in June 2000. Nesbit is an engineer with Duke Energy Corp.

Martha J. Averso (CE ’81) is leader of structural engineering services with Gannett Fleming.

Mary T. Glancy Houghton (EE ’81) earned a master of divinity degree from Baptist Theological Seminary in Richmond, Va.

Penny A. Newsome (APMA ’81) and her husband had their fourth child, Jacqueline L. Slomski, in July 2000. She is principal engineer for Global Science & Technology Inc.

April F. Heinze (ME ’82) is a military assistant to the deputy undersecretary of defense for environmental security in Virginia.

Richard A. Gramann (AE ’83) is director of the environmental sciences laboratory of the Applied Research Laboratories at the University of Texas, in Austin.

Barbara R. Durham (SE ’84) and her husband, Mark Thorpe, had their second child, Elizabeth

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Alan W. Hansford (EE ’84) is vice president of marketing at SigmaTel in Austin, Texas.

Christine E. Marron (AE ’84) and her husband, Martin, had their first child, Dara Monahan, in June 2000. Marron is assistant vice president of financial planning for Norfolk Southern Corp.

Howard C. Simmons II (CHE ’84) is vice president of solution delivery for Essential Technologies Inc.

Michael B. Russell (CE ’87) gave the keynote address at the 2001 Holland Scholars Program at U.Va. He heads the construction division of H.J. Russell & Co. in Atlanta.

Doug Hyman (CE ’88) is employed with the Florida Department of Environmental Protection. He received the 1999

The Tcheng Family of Engineers

Ping Tcheng and his family have made study at the Engineering School a 32-year family affair. Tcheng received his doctorate in mechanical engineering in 1968. Years later, all three of his children elected to attend U.Va., where each of them earned BS degrees in systems engineering.

“We only pointed them toward the Engineering School,” the elder Tcheng said, “and never twisted their arms for any specific field. But my wife and I are pleased nonetheless.”

Tcheng reports a special fondness for the professors who helped him during his study at U.Va. “There are many, but in particular I want to thank Frederick Morse, G.G. Fornes and James W. Moore. They were truly gentlemen and professors.”

Left to right: Ping Tcheng (MAE ’68), Jane Tcheng, Wayne Tcheng (SE ’92), Erene Tcheng (SE ’96), and Layne G. Tcheng (SE ’00).
Unsung Heroes of Education award designating him as one of the top 100 math-science teachers in the nation.

Phillip Yen (CE ’88, ’92) won the Federal Highway Administration’s Engineering Excellence award for 1999 based on his work in earthquake research.

Patrick G. Forrester (ME ’89) is a NASA mission specialist and is part of the team of astronauts scheduled to take off in the space shuttle Discovery in July.

1990

Clinton S. Church (AE ’90) and his wife had their first child, Oliver Fremont, in December 1999. Church is a structures engineer with Aurora Flight Sciences in Manassas, Va.

John H. Gruninger (SE ’90, ’92) and his wife, Wendi Couch Gruninger (ES ’92), had their first child, Jacob Andrew, in April 2000. Gruninger is the CIO at Brainbench.

Kevin Gruver (AE ’90, ’92) is manager of financial analysis and telecommunications programs for TRW’s space and electronics group in Redondo Beach, Calif.

Dan Sherlock (SE ’90) is vice president of marketing for Disney Online.

Karen K. Aspelin (CE ’91) and her husband, Erik Aspelin, had their first child, Klara Paige, in March 2000. Aspelin is a transportation engineer with Parsons Brinckerhoff in Albuquerque.

Scott Ferber (SE ’91) is CEO and co-founder of Advertising.com, located in Baltimore.

Anne M. Nahas Collins (ME ’92) and her husband had their second child, Jack Stephen, in June 2000.

Tim Miller (CE ’92) is vice president of Rivanna Engineering & Surveying Inc., located in Palmyra, Va.

Marcy D. Daniel (SE ’93) and her husband are relocating to Sofia, Bulgaria, for 15 months as she joins MBA Enterprise Corp.

Todd D. Wood (CE ’93) is the branch manager of TRIAD Engineering’s Harrisonburg, Va., office.

2000

Billy Brian Bardin (CHE ’00) is a senior engineer with Union Carbide.

Carmen M. Boelte (ME ’00) is an engineer at Newport News Shipbuilding.

Kristin Clapp (CHE ’00) is an engineer with Eastern Research Group in Sterling, Va.

David Clarke (SE ’00) is an associate with Boston Consulting Group in Atlanta.

Jessica Dante (CE ’00) is an engineer with Goodkind & O’Dea Inc.

Suzanne O. Delong (SE ’00) is a U.S. Army instructor at West Point.
1940s

George Griffith Edwards (CHE ’40) of Portsmouth, Va., died in August 2000.

Alwyn Cowles Lapsley (EE ’41, ’47) of Charlottesville died in September 2000.


Carl R. Morris (EE ’49) of Erie, Pa., died in August 2000.

1950s

Louis L. Williams III (EE ’49) of Rockville, Md., died in September 2000.

Fred H. Tolbert (ES ’56) of Chincoteague, Va., died in September 2000.

Otis Updike


He received his bachelor’s degree in 1941 from U.Va. and his doctorate in 1944 from the University of Illinois. He joined the U.Va. faculty in 1946. In the early ’60s, Dr. Updike collaborated with U.Va. medical faculty to develop techniques for heart monitoring, leading to the coronary care units in today’s hospitals.
AS WE CELEBRATE THE CONCLUSION OF THE Campaign for the University of Virginia Engineering School, I’d especially like to thank you—the alumni, friends, corporate and foundation donors—for helping to make the campaign such a success.

What began as an act of faith five years ago ended last December in an impressive outpouring of support for our school. At the start of the campaign in 1995, our hopes of raising a total of $37.5 million seemed ambitious indeed. In December 1999 we raised our goal to $50 million, prepared to be more than delighted to reach that impressive amount. In closing the campaign with a grand total of $75.4 million raised, we are moved and fortified by the confidence in our school that this outpouring of support represents.

During the course of this campaign, the Foundation transferred more than $48 million to the Engineering School in support of the school’s academic programs. Thirty-five scholarships were endowed, providing support for more than 70 students. Five professorships were endowed, helping us to attract and retain top quality engineering faculty. New facilities for Biomedical Engineering, Materials Science, and Chemical Engineering were made possible. And state-of-the-art facilities such as the Virginia Institute for Microelectronics and the Virginia Internet Teaching Lab (VINT-Lab) were established.

The campaign has been a wonderful experience for all involved and would not have been possible without the vision provided by Dean Richard Miksd and campaign chair Hudnall Christopher (’55), as well as the diligence of members of our campaign committee and VEF staff. As a group, and especially as a school, we thank the 7,847 alumni and friends and 295 corporations for their generosity and continued faith in the work we do here to educate the engineer of tomorrow—an individual with an excellent foundation in technology and leadership skills and a firm basis in the liberal arts.

Although we have come a long way, the continued growth and advancement of our school requires further attention to our fund-raising efforts. The percentage of state dollars in our budget has slipped, in a downward trend we expect to continue, to a mere 14 percent. This is far from enough to support us as a school of rising excellence. Private dollars and corporate support have made a critical difference in our programs over the last five years and will continue to do so well into our future. We thank you in advance for your continued commitment to our school.

Thomas N. Connors
Vice President for Development

Campaign facts

- The campaign doubled its original goal of $37.5 million to $75.4 million.
- Gifts and pledges amounted to $64.5 million, and deferred gifts equaled $10.9 million, or 15 percent of the total.
- Thirty-five (35) scholarships were endowed, providing scholarships for more than twice that number of students.
- Five (5) professorships were endowed, enabling us to attract and retain top quality engineering faculty.
- New facilities for Biomedical Engineering, Materials Science and Chemical Engineering were made possible.
- Some 7,847 Engineering School alumni, constituting more than half of that constituency, made a gift to the campaign.
- Deferred gifts raised during the campaign will eventually bring one Distinguished Professorship, several more endowed scholarships and several million dollars of unrestricted funds.
- Equipment worth almost $7 million was donated during the campaign by our corporate partners and donors.
- Annual Fund donations increased from below $500,000 annually at the beginning of the campaign to an anticipated $1 million by the end of this fiscal year.
- From 1990 to 2000, the portion of the University’s budget funded by the state dropped from 27 percent to 14 percent, and the downward trend continues.
- Major continuing needs for the Engineering School are the funding cost of a new Information Technology Building, additional scholarship funds, and academic support.
Nature intended me for the tranquil pursuits of science, by rendering them my supreme delight.

THOMAS JEFFERSON
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