

UNIVERSITY of VIRGINIA  
SCHOOL of ENGINEERING & APPLIED SCIENCE

# Opportunity

THE IMPACT OF GENEROSITY

VOLUME 4, SUMMER 2010

## FUNDING EXCELLENCE IN EDUCATION:

### Rodman Scholarships Help Attract the Best of the Best

Attracting students who are in the top 5 percent of their high school class, National Achievement Scholars, authors, robot designers, software developers and more got a little easier this year thanks to the generosity of three donors. Gifts from **Prudence M. Webb, Jonathan W. Old, Jr.** (pictured here) and **Richard L. and Ann Ramsey** for scholarships to the Rodman Scholars Program will help the Engineering School successfully compete for the nation's best undergraduate students.

*continued on page 5 >>*



DEVELOPING LEADERS of INNOVATION



**JAMES H. AYLOR**

Louis T. Rader Professor of Electrical Engineering  
Dean, School of Engineering & Applied Science  
University of Virginia

## LETTER FROM THE DEAN

A school is an institution built around a body of knowledge. While this definition is certainly correct, it misses the point. In my view, a school flourishes only when this knowledge goes beyond textbooks and circulates from person to person. The exchange of ideas, information and insight makes schools engines for progress, measured in terms of outstanding graduates and research achievements.

Seen in this light, the Engineering School performs its core mission well, even in the face of major cuts in state funding. Our students are exceptional by any standards. The Class of 2010 included several finalists for Rhodes and Marshall Scholarships and a Truman Scholar. And the Class coming behind them is equally talented. Of the four Goldwater Scholarships awarded to third-year U.Va. students for the 2010 —11 school year, three were for students in the Engineering School. Certainly, our students show great promise when they are admitted, but it is our faculty's ability to convey not just knowledge but a love for knowledge that enables our students to realize their promise.

At the same time, faculty research is highly regarded. Four of our faculty members — Hilary Bart-Smith, John Knight, Pam Norris and Haydn Wadley — head Multidisciplinary University Research Initiatives funded by the Department of Defense, Jim McDaniel has a \$10 million grant to create analytical techniques needed to build hypersonic aircraft, and John Scully, Rob Kelly and Rick Gangloff are receiving \$1 million in annual funding from the Department of Defense for their work on corrosion. Our newer faculty members are also doing well. This year, Sudhanva Gurumurthi, an assistant professor of computer science, received a \$1 million Google Research Award to study energy efficiency in data centers.

There is, however, a third group of people who sustain this institution as it continues to meet its aspirations: our alumni and friends. This School benefits immensely from all those who give generously of their time, resources and expertise. Your contributions truly animate this School. ■

Cover Image: Jonathan W. Old, Jr. ('47)  
created the first Rodman Scholarship.

## Unrestricted Gift Supports Strategic Plans for the Engineering School's Future

**Steve Jarvis** (CE '65) considers himself fortunate to have attended U.Va. on a basketball scholarship during the 1960s. The quality of his education, which served as the foundation for his success in the construction industry, inspired him to give back to the School in significant ways. Earlier this year he made an unrestricted \$50,000 gift to the School and for the last three years has served as a member of the SEAS Trustees. He is also a generous supporter of the U.Va. Athletic Foundation.

Jarvis made his gift to help Dean James H. Aylor, Engineering School faculty and Trustees implement a strategic plan for the future of the School.



**STEVE JARVIS**

Supported the Engineering School  
with an unrestricted gift

"I saw the importance of making an unrestricted gift that the dean could use at his discretion for the School's highest priorities," Jarvis says.

In addition to recognizing the importance of financial support by U.Va. Engineering School alumni and friends, Jarvis considers the SEAS Trustees an invaluable resource for School administration and faculty. His service as a Trustee allows him to lend his executive experience and expertise to helping the School plan for its future.

"I consider it a privilege and honor to be a member of the SEAS Trustees," Jarvis says. "When I was asked to join, the obvious answer was yes." ■



# RICE HALL:

The Rice Hall Information Technology Engineering Building, a six-story, 100,000-gross-square-foot, \$70 million building, will open in fall 2011. It will help U.Va. engineers to learn, teach and research at the leading edge of the field. The building will also be the new home for the Department of Computer Science and function as a "Living Laboratory" on energy use.

## CHARTING THE FUTURE OF INFORMATION TECHNOLOGY ENGINEERING

Paul (EE '75) and Gina Rice's vision to create a place where U.Va. Engineers could research, teach and learn at the leading edge of information technology engineering was launched in 2005 with their lead gift of \$10 million to build Rice Hall. The building is on schedule for a fall 2011 opening and funding is now being secured to outfit the building with the very latest technologies to study fields including alternative energy, distance education and high-performance computing.


In addition to the Rices' lead gift, significant support has come from **Marguerite Cash Davis** (SE '85) and the **Davis Family**, who provided \$1 million for a cyber café, **Linwood A. "Chip" Lacy, Jr.** (ChE '67, Darden '69) and **A. Thomas Young** (Aero '61), who each provided \$1 million toward the building, and the **Olsson Family**, who provided \$1 million for the building's technology needs. Other early contributors to the Rice Hall project include **Lee Ainslie** (SE '86), **Michael Pausic** (SE '86), **Richard L. "Rocket" Ramsey** (Applied Math '76), **Chip Owen** (ME '79, Darden '84) and the **Raber Family**. Support also came from the late **David Kettler** (EE '67, '71) a long-time supporter of the School and a dedicated trustee.

"We are now turning our focus toward funding the latest technology that will be housed inside the building," says James H. Aylor, dean of the Engineering School. "It is reassuring to see many of our alumni, friends and corporate partners stepping up to help make that happen, but there is still work to be done."

In order for Rice Hall to offer the very latest in information technology engineering, every room, hallway and common area will need to be equipped with technology that facilitates interaction among faculty, students, staff and researchers around the world.

For example, Rice Hall's auditorium will feature advanced audiovisual technologies and reconfigurable seating that will allow occupants to listen to a lecture, collaborate on group projects or teleconference with colleagues at remote locations.

This same technology, in various degrees, will be a part of each classroom, student Capstone research room and faculty office. Student and faculty researchers could collaborate on a project while corporate sponsors contribute via full-scale telepresence monitors. Or, alumni could tune into their favorite professors lecturing on the latest trends in cloud computing.

The building will also function as a "Living Laboratory," supported by Trane, on energy use with sophisticated technologies for heating, cooling and lighting and energy recovery systems. Rice Hall will allow researchers to learn how to optimize the latest energy technologies for large buildings by studying the building and its occupants' daily energy-use patterns. 

### Naming Opportunities in Rice Hall

Naming opportunities at a variety of giving levels are available. In addition to custom plaques connected to the space, donors will be recognized on the building's Donor Recognition Board.

\$500,000: Dean's Board Room

\$250,000: Entrance Lobby & Student Lounge Areas

\$150,000 to \$400,000: Research Space & Labs

\$100,000: Capstone Study Rooms

\$50,000: Faculty Offices

\$25,000: Student Study Nooks & Break Areas

Contact Davies Bisset ([dwb2b@virginia.edu](mailto:dwb2b@virginia.edu))

to find out how to add your support to this remarkable building. Keep up with construction through the webcam at

[www.seas.virginia.edu/enews.rice.php](http://www.seas.virginia.edu/enews.rice.php).



CHRISTOPHER BELYEA



IAN CZEKALA

## RODMAN SCHOLARS MAKING A DIFFERENCE

The Class of 2014 includes 35 new members of the Rodman Scholars Program. They include an author, a robot designer, a filmmaker, several Eagle Scouts, a National Achievement Scholar, a cross-country track captain, a college student tutor, and an IT intern for a state attorney general.


Amazing individuals? Yes. Standouts among their peers? Yes. And yet, they are typical of the excellence that abounds at the U.Va. Engineering School and, in particular, in the Rodman Scholars Program.

**Christopher Belyea** (ChE, Pre-Med '10) and **Ian Czekala** (Aero, Astronomy '10) were members of the Class of 2010 Rodman Scholars Program who definitely put their time here to good use and left behind a legacy that will benefit the School for years to come.

Key among their achievements was launching and successfully publishing *The Spectra: The Virginia Engineering and Science Research Journal*, a student-published, peer-reviewed academic journal. Chris served as editor-in-chief; Ian was on the editorial team and contributed an article to the publication. They also helped to secure a \$50,000 grant from Lockheed Martin to launch the Sustainability Grant Program which will provide money for teams of student researchers.

Both students managed to do significant research while they were undergraduates. Chris was involved in cardiovascular research in Denmark and conducted biochemical engineering research as a Merck Engineering and Technology Scholar. Ian's research on the Atacama Large Millimeter Array Telescope in Chile focused on issues that arise in high-stakes international collaborations. He also led a student advisory committee that helped revamp the labs in the Department of Mechanical and Aerospace Engineering. Chris and Ian are creatively gifted as well. Chris's drawings and

paintings were featured in a solo show in the Thornton Hall Art Gallery ([www.seas.virginia.edu/about/gallery.php](http://www.seas.virginia.edu/about/gallery.php)). Ian helped create a video on life at the Engineering School ([www.seas.virginia.edu/about/videos](http://www.seas.virginia.edu/about/videos)).

Read more: [www.rodmanscholars.org](http://www.rodmanscholars.org). 

### Lockheed Martin – An Exemplary Corporate Supporter



Mary Ramsey, campus relations manager for Lockheed Martin (left), and Vicki Schmanske (far right), former president of the SEAS Trustees and vice president of Lockheed Martin's DoD Systems, present a \$92,000 check to Dean James H. Aylor. Also pictured are Rodman Scholars and Tony Kinn, director of Corporate and Foundation Relations.

For more than 20 years, Lockheed Martin Corporation has been an important ally of the Engineering School, with generous financial support and the recruitment of many graduating students. Lockheed Martin is now supporting a variety of School initiatives, including a Sustainability Research & Design Grants Program led by Rodman Scholars, the Engineering in Context program, and programs run by the Center for Diversity in Engineering and the Center for Engineering Career Development. 

# FUNDING EXCELLENCE IN EDUCATION:



JONATHAN W. OLDS, JR., JAMES H. AYLOR, DEAN,  
JONATHAN W. OLDS III

Each year, Rodman Scholars, who represent the top 5 percent of Engineering School students, are selected on the basis of their scholastic abilities and potential for leadership. They think broadly and seek creative solutions to problems, they are well-versed in the issues at the intersection of science and technology and they are innovative, entrepreneurial and engaged scholars. The program includes coursework and extensive experiential opportunities, special projects, seminars and hands-on courses that involve developing solutions to societal problems.

It has been difficult, until recently, to offer prospective Rodman Scholars a financial incentive to accept U.Va.'s offer of admission.

"The students we select as Rodmans are the best of the best and we all too often lose them to schools that are able to offer financial scholarships, along with the offer of admission to an honors program," says Dana Elzey, director of the Rodman Scholars Program.

"Gifts of this sort transform what the Engineering School is able to do," says James H. Aylor, dean of the Engineering School (see list below).

"They make a big difference in the life of the School and in the life of the students who benefit from the support."

## The Gifts:

The Donald R. and Edward Webb Scholarship Fund was established by **Prudence M. Webb** in honor of her late husband, **Donald Webb** (Engr Sci '39), and his brother Edward, who was a practicing engineer.

The Jonathan W. Old, Jr. Rodman Scholarship was established by **Jonathan Old, Jr.** (ME '47) in honor of his experience here.

The Priscilla and Lyle Ramsey Scholarship was established by **Richard L.** (Applied Math '76) and **Ann Ramsey** in honor of his parents. ■

## Planned Giving: Alumni, Friends & Faculty Making a Difference

Planned Giving — including bequests, gift annuities or trusts — are gift arrangements that offer alumni and friends an opportunity to make significant gifts to the School while also meeting their own personal financial needs. This was the case for **Kevin Thompson** (CS '87), **Elizabeth Anderson** (Col '64), a member of the SEAS Trustees; and **Brian Coupe** (Aero '72), who all recently made planned gifts that will benefit the Engineering School well into the future.



ELIZABETH ANDERSON & RAMON ESPINO

Planned Giving also was an attractive option for faculty member **Ramon Espino**, research professor in the Department of Chemical Engineering. He recently made a gift to the department's charitable trust.

Espino has taught classes and conducted research at the Engineering School for the past decade and previously worked for ExxonMobil from 1973 to 1998. His research on heterogeneous catalysis and reaction engineering is helping to advance fields such as electric power, clean fuel and chemical products.

"I have been surrounded by great students and faculty in the chemical engineering department for the past decade," Espino said. "Giving to the department's charitable trust was an opportunity to show my appreciation for a wonderful 10 years. The department will be able to use these additional resources to continue its excellence in both education and research."

## Types of Planned Gifts

Retirement Plans	Charitable Gift Annuities
Wills, Living Trusts	Charitable Remainder Trusts
Life Insurance	Charitable Lead Trusts

Learn about Planned Giving at [www.seas.virginia.edu/dev/planned\\_giving\\_impact.php](http://www.seas.virginia.edu/dev/planned_giving_impact.php). ■

# TEACHING ENGINEERS TO COMMERCIALIZE INNOVATION

The U.Va. Engineering School — with its setting in a top-ranked, comprehensive university and its robust Department of Science, Technology, and Society — is well-positioned to provide specialized education in entrepreneurship and innovation to its technically savvy engineering students. School leaders are now working to advance this unique engineering education.

The School's faculty, administrators, the Office of the Vice President for Research, and members of the SEAS Trustees, led by **Gene Lockhart** (ME '72, Darden '74), are discussing aspects of a commercialization-focused curriculum, and the possible creation of a new Program/Center for Commercialization of Innovation. Lockhart, the former CEO of MasterCard and an active venture capitalist, introduced the concept for this program enhancement to Engineering School leaders during the SEAS Trustees' spring 2010 meeting. The proposed program would provide business-focused classes specifically

created for engineers to students interested in entrepreneurial activities in new and existing companies. Helping undergraduate students understand how to move from innovative ideas to implementation and ultimately commercialization would be an essential framework for the courses.

The program also would likely include lessons around the concept of "intrapreneurship" — in which one advances one's ideas within an organization as opposed to launching a startup company. "We've had a long history of being a school that produces well-rounded engineers," Lockhart said. "To supplement the School's efforts in enhancing business-focused curriculum, and to meet student demand, courses need to be developed specifically for engineers so they can understand the basics of how to take an idea to a successful commercial conclusion."

Curriculum and resource planning with senior faculty is still under way. Among the ideas



GENE LOCKHART

under consideration are to have the curriculum emphasize case studies in commercialization, as well as networking and mentorships with leaders in the business community. There are also plans for establishing an innovation lab that would allow for the rapid prototyping of ideas. ☐

## WITH YOUR SUPPORT, OUR STUDENTS ARE ABLE TO DO THE MOST AMAZING THINGS.



At the U.Va. School of Engineering and Applied Science, we're not just training engineers — we're developing leaders of innovation.

There's something YOU can do this year, too. Please make a gift to the Annual Fund. Your contribution, especially in times like these, will help us provide students and faculty the freedom they need to develop their own innovative ideas.

To make your gift securely online, visit [www.seas.virginia.edu/support](http://www.seas.virginia.edu/support).  
To donate by phone, or for more information, please contact Truin Huntley at 434.924.3551.

*"It is wonderful how much may be done if we are always doing." —Thomas Jefferson, 1787*

# JOSEPH L. VAUGHAN PROFESSORSHIP: FUNDING A LEGACY

Joseph L. Vaughan was a University alumnus (College '26, '27, '40) and faculty member of the School of Arts & Sciences when he came to the Engineering School in 1936 to teach humanities to engineering students. He became a legend around Grounds for his keen wit, dedication and determination to make communicators out of engineers who often wished to be anything but.

He was revered and respected by his students over the years. **Howard C. Ligon** (ME '62) recently noted, "Without confirmation, I am as certain as I can be that he was single-handedly responsible for my graduating." Another recollection from **T. Bert Whitt** (EE '75) shows Professor Vaughan's wit as well as his lasting impact: "As a first-year man from the western mountains of Virginia, let's just say that my ability to speak publicly was lacking. I have never forgotten and often remind myself when speaking in professional settings not to speak as though my mouth was full of potatoes — a chastisement that Professor Vaughan gave me in his first-year humanities class."

The Joseph L. Vaughan Professorship was established in his honor by an anonymous donor in 1970 and Professor Vaughan held that chaired position until his retirement in 1975. He was also the University's first provost and first chancellor of the Virginia Community College System.

The professorship resides in the Department of Science, Technology, and Society, which is a new name for the humanities department Professor Vaughan founded on his arrival in 1936. Although the name has changed over the years, the core mission of the department that Professor Vaughan created has remained the same. The department continues to ensure that engineering students understand the social implications of technology and are able to thoughtfully consider the ethical issues inherent in their profession. The department remains dedicated to educating engineers who can effectively communicate orally and in writing.

The endowment is not yet sufficient to hire a faculty member to engage the students the way Professor Vaughan did throughout his teaching career. With this in mind, the Engineering School continues to seek funds to grow the endowment. In the global, interconnected world in which engineers

"Every student I've ever taught was important to me. I never taught a student I didn't like, and it was a personal responsibility and engagement for me to help this young lady or young man flower in their own terms."

—Professor Joseph L. Vaughan (1905-1999)



work today, SEAS students need that influence more than ever. Support for the Joseph Vaughan chair will help the Engineering School provide the kind of education that is essential for engineering students to succeed in the 21st century. ■



"The Engineering School had such an impact on me. It fostered my passion for learning and leadership. In these difficult economic times, giving to the Thornton Society was the best way I could think to make sure current students are afforded the same opportunities I was as a student."

—Elizabeth Berg (ChE '09),  
Young Thornton Society member

Berg (left), is a facilities engineer for BP America based in Durango, Colo. She's shown here with James Rome (ChE '09) and Ann Deakyne (ChE '09).

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P.O. Box 400256  
Charlottesville, VA 22904-4256

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## Campaign Leadership

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# THE THORNTON SOCIETY & LEADERSHIP DINNER

## Come & Party with Us in Fall 2010



## Join Us for the Fall 2010 Thornton Society & Leadership Weekend

Friday, October 1, 2010

Gala Black Tie Dinner

6 p.m. at the Boar's Head Pavilion

Saturday, October 2, 2010

Hard-hat Tour of Rice Hall | Football Tailgate

Kathy Thornton, former astronaut:

"More Than the Score" pre-game lecture

Celebrate with us as we honor winners of our distinguished faculty, alumni, young alumni and service awards and hear about the latest news of the School.

For information about joining the Thornton Society, contact Truin Huntley,  
Director of Annual Giving and Alumni Relations, [tls4m@virginia.edu](mailto:tls4m@virginia.edu).

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