

the Trend

Autumn 2005: Volume 55, Issue 2

in engineering



**Guggenheim Hall
Restoring a Treasure...** Page 8

In This Issue

Dean's Message	2
News Spotlight	3
Innovators	4
Alumni News	6
Restoring a Treasure	8
Creating Futures	10
Events Calendar	16

Transitions, Beginnings, Recognitions

The leaves are turning, the days grow shorter, our spectacular Pacific Northwest summer is a warm memory, and winter rains are coming.

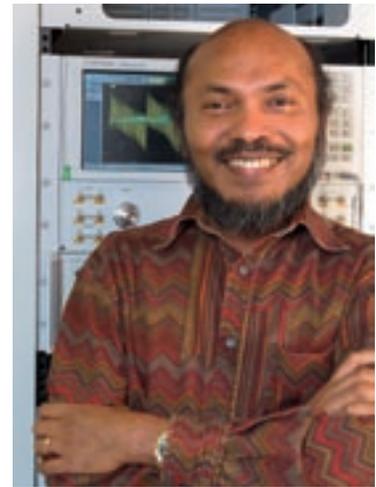
Fortunately, these changes do not generate melancholy at the UW. Fall marks the start of the academic year, a busy and exciting time, with returning students and an influx of freshmen eager to begin a journey that will set the course of the rest of their lives and help decide how they will affect society when they leave our sphere. The campus is charged with energy and activity.

At the College of Engineering, this fall also brings us several steps closer to the start of a fresh chapter in the college's history. In the nation-

premier research university drives regional economies and enhances our nation's competitiveness in the international arena.

The money from the endowment is discretionary. The new dean can assign it as he or she sees fit: fellowships, research initiatives, recruiting efforts — wherever the need is greatest. The Jungers' generous gift will undoubtedly help us find the best person, a leader who can take one of the country's top engineering colleges to even higher levels.

Also of note is a major transition in one of our departments. Raj Bordia is stepping down after more than nine years of outstanding service as chair of Materials Science



Mani Soma, Acting Dean

Award for Excellence in Science, Mathematics and Engineering Mentoring. Our former dean, Denice Denton, won the award last year.

Two of our assistant professors, Radha Poovendran in Electrical Engineering and Wei Li in Mechanical Engineering, are among 58 of the country's most promising young scientists and engineers to receive this year's Presidential Early Career Award in Science and Engineering. Two winners from other institutions are UW grads.

These three pillars of our success — support from friends, strong leadership, and award-winning faculty — greatly benefit our students. Our mission is to give them the guidance and learning opportunities they need to become tomorrow's industry and academic leaders. We have a long history of success in doing so. For evidence, read "Students Explore Challenge of Taking an Invention to the Marketplace" on page 4.

We remain steadfast in our commitment to this mission. ■

These three pillars of our success — support from friends, strong leadership, and award-winning faculty — greatly benefit our students.

wide search for a new dean we are looking for the right person to lead the college at a time when success in engineering is increasingly defined by the ability to pull from multiple disciplines in answering complex problems. To effectively do that, a leader must have flexibility to innovate and fill needs as they arise.

That's where some of our good friends have stepped in to help. Our thanks go to Frank Jungers and his wife, Julie, who have given \$4 million to establish an endowed deanship for UW Engineering, the first major deanship endowment at the UW. Their gift is bolstered with \$1 million from a matching fund established by supporters who understand that solid footing for a

& Engineering. We thank Raj for his willingness to lead for so long and his talent in doing it so well. We look forward to working with him as a cutting-edge materials engineer as he dives back into teaching and research. I am pleased that Professor Alex Jen has agreed to serve as acting chair during the search for a successor to Raj.

Finally, I am delighted to shine a spotlight on several faculty members. The college was well represented in this year's presidential awards administered by the National Science Foundation. Richard Ladner in Computer Science & Engineering is one of nine individuals nationwide honored last spring with a Presidential

Engineering Creates UW's First Major Endowed Deanship

A \$4 million gift from Frank and Julie Jungers, boosted by \$1 million in UW matching funds, will create an endowed deanship in the College of Engineering, the first major endowment of this kind at the UW.

"This wonderful gift comes at a propitious moment, as we search for the college's next dean," said UW President Mark A. Emmert. "This endowment will enable us to offer a more competitive salary and also provide the new dean additional funds for innovation in education and research. Most private funding is designated for specific purposes. This gift will give us another tool in attracting the very best individual for this key position. We'd like to thank Frank and Julie Jungers for their generosity."



Frank and Julie Jungers

Frank Jungers graduated from the UW in 1947 with a degree in mechanical engineering. He spent most of his career in Saudi Arabia, and rose to chairman and CEO of Aramco, the Arabian American Oil Company.

"It's my hope that this gift will ensure that the College of Engineering is able to obtain the very best leadership available," Jungers said.

For many years Jungers has been a generous donor to the University and an active volunteer, particularly in the College of Engineering. In 1987 he established the Frank Jungers Endowed Professorship in the college. With additional gifts, he increased that professorship to a chair.

Jungers and his wife are Oregon residents and divide their time between Portland and Bend.

UW Responds to Katrina

More than 100 students from Tulane, Loyola, and other universities in hurricane-ravaged New Orleans are enrolled at UW for fall quarter, with tuition going to their home institutions. Members of the UW community have responded with an outpouring of support, from opening their homes to students, to donating clothing and other items, and contributing to a Katrina Scholarship Fund. See page 5 for a story on UW research and engineering projects related to the hurricane.

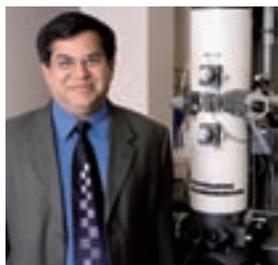
On the Rankings Radar: UW Reputation Grows

From the *The Economist* to the *Washington Monthly*, the University of Washington's profile is rising as a top academic institution, not just in the United States, but in the world.

In a September 8 article on higher education, *The Economist* published the list of the world's top 20 universities (the UW is #20) based on the extensive study by Shanghai Jiao Tong University.

Also in September, *The Washington Monthly College Guide* ranked the UW 14th in a listing of the top 30 national universities.

Transition in the Chair's Seat in Materials Science

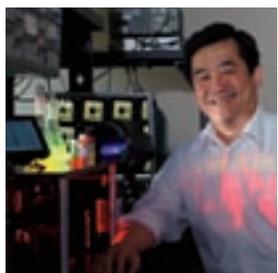


Thank you Raj!

Professor **Raj Bordia** has led Materials Science & Engineering for nine years, seven as chair and two as acting chair, a tenure beyond the norm. A desire to refocus on teaching and research spurred him to step out of the chair role, effective September 16.

He leaves the department in a strong position that includes accomplishing all objectives of its strategic plan, significantly broading the research portfolio, and combining several programs into a single undergraduate degree in MSE, which has been a resounding success. A faculty member since 1991, Bordia's research focuses on ceramics, composites, biomaterials, and electro-optic and magnetic materials.

Professor **Alex Jen**, a faculty member since late 1999, has been named acting chair. He is an expert in the synthesis of organic materials and polymers with novel optical, electrical, and biological properties. His research goal is to tap the power of the photon and evaluate these materials for deep-tissue imaging, photodynamic therapy, and opto-electronic devices. Jen holds the Boeing-Johnson Endowed Chair in Materials Science & Engineering. He earned his PhD at the University of Pennsylvania and worked in industry for 10 years.



Welcome Alex!

Bioengineering Research Will Have Global Impact Through a \$15 Million Gates Foundation Grant

Professor Paul Yager's research team has set its sights on a goal that could save the lives of millions of people in the poorest places on earth. They are developing a pocket-size device that promises to bring the technological power of modern medical diagnostics to remote regions with scant health care services.

As the lead partner in a regional consortium, the University of Washington has been awarded a \$15.4 million grant to develop and test prototypes of a device that will allow health care workers to do on-the-spot tests for diseases such as malaria and typhoid fever and provide results in minutes.

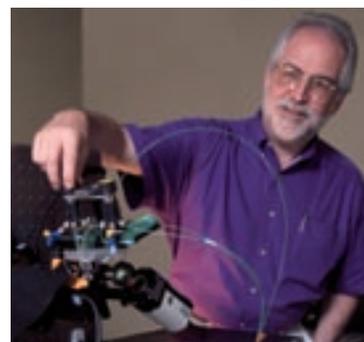
The award is one of 43 research projects to improve health in devel-

oping countries, supported by \$436 million from the Grand Challenges in Global Health initiative, led by the Bill & Melinda Gates Foundation.

The UW-led consortium is a collaboration of academic, industry and nonprofit partners, including PATH, Micronics Inc., and Nanogen Inc., all with facilities in this state.

"This is a formidable group," said Paul Yager, professor and vice chair of the Department of Bioengineering and principal investigator. "Each partner brings vital skills and experience to the mix and it's what will make our efforts successful."

The Grand Challenges in Global Health initiative is a major international effort to achieve scientific breakthroughs against diseases that



Professor Paul Yager

kill millions of people each year in the world's poorest countries.

The Bill & Melinda Gates Foundation is the lead funder with a commitment of \$450 million. The Foundation for the National Institutes of Health received and manages \$200 million. Other donors are the Wellcome Trust at \$27 million and the Canadian Institutes of Health Research at \$4.5 million. ■

Students Explore Challenge of Taking an Invention to the Marketplace

Many inventions never survive the perilous path (called the "valley of death") from great idea to practical use due to the challenges of funding, manufacturing, and marketing. Three engineering students spent the summer exploring these challenges and hope the lessons learned will help put a revolutionary new diagnostic tool into the hands of health care practitioners.

Siddhartha Sikdar, Ian Blanch, and Leonard Teo are excited about the commercial potential of an ultrasound device that non-invasively detects the unique vibrations associated with coronary artery blockage, one of the leading causes of death.

Sikdar, a postdoctoral fellow in bioengineering who received his PhD in electrical engineering last June, co-invented the technology and developed a working system with Professor Kirk Beach in the Department of Surgery and Professor Yongmin Kim, chair of the Department of Bioengineering. Blanch is a mechanical engineering doctoral student interested in product design. Teo earned a BS in bioengineering in June and aspires to work at the nexus of business, engineering, and medicine.



From left: Siddhartha Sikdar, Ian Blanch, and Leonard Teo

Their path to learning about real-world product development is the Program on Technology Commercialization (PTC) administered by Bioengineering. The year-long course, with lectures by industry leaders, entrepreneurs, and venture funders, covers market analysis, business plans, venture capital, intellectual property, and more.

Sikdar, Blanch, and Teo were awarded paid summer fellowships to explore the market analysis and funding required for a start-up venture for the ultrasound device. They presented a detailed business plan to PTC faculty, community mentors, and UW technology transfer officials. Their polished presentation drew praise, incisive questions, and suggestions for next steps. The UW Tech Transfer office has already filed for patents.

"This course has been invaluable," Sikdar notes. "Now I look at my research in a whole new light."

"The PTC has exceeded our educational expectations," says Kim. "Students have seen what it takes to bring technology from the laboratory to the marketplace. It's a win for the students and for the UW, and also for our community of instructors and industry partners." ■

Learning from Hurricane Katrina Engineering Faculty Plan Research Studies

In the aftermath of the Gulf Coast hurricane disaster, the National Science Foundation put out a call for proposals for small-scale, high-risk research whose results may enable our country to better prepare for, respond to, and recover from catastrophic events. UW faculty across a dozen departments and disciplines including engineering, public health, public affairs, law, and social work moved into high gear to coordinate and submit 10 interdisciplinary research proposals.

Engineering faculty submitting proposals include Mark Haselkorn and Beth Kolko from Technical Communication and Scott Rutherford, Charles Roeder, Dawn Lehman, and Anne Goodchild of Civil & Environmental Engineering. Projects range from studying ways to improve communication and coordination systems in disaster response to the use of public vehicles for emergency evacuations.

Haselkorn is research director for the UW's Interdisciplinary Program in Humanitarian Relief and helped coordinate the faculty effort to develop NSF proposals.



Professor Mark Haselkorn

New Grants Fund Major Collaborations

NSF Grant for Genetic Engineering

The National Science Foundation has awarded the UW a 6-year, \$6.48 million grant to establish a new interdisciplinary center to investigate genetically engineered molecular building blocks based on proteins. They will be used to create nanostructured hybrid materials with novel photonic, electronic, or chemical properties. Three engineering departments — chemical, electrical, and materials science — and the UW chemistry and microbiology departments, are partnering with industry and national laboratories. Professors Mehmet Sarikaya (Materials Science & Engineering) and François Baneyx (Chemical Engineering) direct the project. This renewable grant is one of just two awarded this year by the NSF.

Multi-University Effort for Molecular Microscope

Professors Joseph Garbini (Mechanical Engineering) and John Sidles (Orthopaedics and ME) have received a 5-year, \$5 million grant from the Army Research Office to lead a multi-university research collaboration with the University of Michigan and Cornell. They are developing a revolutionary technology for a “molecular microscope” that promises to transform scientific research.

◆ Winners ◆

◆ Student Honors

Two Computer Science & Engineering doctoral students, **Rick Cox** and **Tapan Parikh**, have won Intel Foundation fellowships. Cox will research systems security support for new applications usage models. Parikh will design accessible user interfaces and computing devices that span disciplinary boundaries in education, economy, geography, and language.

Electrical Engineering graduate student **Xiaodan Song** was one of eight students from top universities invited to the first annual IBM “Emerging Leaders in Multimedia” seminar series at IBM's research center in New York.

Berkin Tokas, who received his PhD from Industrial Engineering in June, took second place in the Dantzig Dissertation Award competition for operations research sponsored by the Institute of Industrial Engineers.

Sigma Gama Tau, the national honor society for aeronautics, recognized **Toru Yamasaki** (BSAA '05) as one of the top seven aeronautics students in the country.

◆ Faculty Honors

Richard Ladner, Boeing Professor of Computer Science & Engineering, was honored at the White House on May 16 with a 2004 Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring.

Two assistant professors, **Radha Poovendran** (Electrical Engineering) and **Wei Li** (Mechanical Engineering) won 2005 Presidential Early Career Awards in Science and Engineering. They were honored at the White House.

Assistant Professor **Venkat Guruswami**, Computer Science & Engineering, has won a 2005 Packard Fellowship, considered among the most prestigious awards for young science and engineering faculty.

Professor **Gerald Pollack**, Bioengineering, has been inducted as an honorary professor in the Russian Academy of Sciences for his contributions to molecular biomechanics, cell function, and interfacial science.

◆ Staff Honors

Patricia MacGowan, MESA state director, will receive a 2005 Golden Apple Award for Excellence in Education, sponsored by KCTS Television, in a ceremony to be broadcast statewide in February. MESA (Mathematics, Engineering, Science Achievement) annually serves more than 5000 underrepresented students and 350 teachers in 80 K-12 schools to encourage interest in science and engineering careers. MacGowan helped found MESA in 1982. The program is based at UW Engineering.

Explore the UW Engineering website for more news:
<http://www.engr.washington.edu>

Seattle's Icon Bears Rod Kirkwood's Imprint

With the centennial for Mechanical Engineering approaching in 2006, The Trend profiles a UW-trained engineer who had a major hand in defining Seattle's skyline.

Growing up in Minnesota and Montana during the Depression, Rod Kirkwood had no inkling of a future working with Seattle movers and shakers to transform a provincial Northwest outpost into one of the nation's showcase cities. Now his contribution is recorded for posterity in a 2002 book, *The Space Needle: Symbol of Seattle*, which quotes him on the engineering feats that ensured the 605-foot structure would stand firmly in place through earthquakes and gale-force winds.

Kirkwood exerted a major hand in the Needle's design and construction as director of engineering for

John Graham & Co. Architects and Engineers. For this work he was honored as the 1963 "Engineer of the Year" by the Washington Society of Professional Engineers and the Puget Sound Engineering Council.

Over his 46-year career at Graham & Co., Kirkwood rode the elevator to the top management levels as director of operations, partner, and president. In the process, he has left his imprint all over Seattle: The Westin Hotel & Tower, Bank of California Building, Henry M. Jackson Federal Building, Northgate Mall, and projects for Boeing and Nordstrom. He also worked on shopping malls, office buildings, and other facilities from New York to Alaska, Hawaii, and across Canada.



Another notable achievement was Kirkwood's national leadership role in promoting building design standards aimed at conserving energy. As the 1974 president of the American

Society of Heating, Refrigerating and Air-Conditioning Engineers, he led the development of standards that resulted in a 50% reduction in building energy usage and emissions in the United States.

Kirkwood had been on his way to completing his ME degree at the UW when World War II sent him into the Army. By war's end he had married and started a family. Returning to the UW full-time was not an option, so he enrolled part time at Seattle University to complete his BS degree.

Two decades after leaving the UW, his road led back to campus when a 6-foot model of the Space Needle was tested in the Aero-nautics & Astronautics wind tunnel. "The top house rotated with high winds, so we made design changes," he says. He is a long-time member of the ME Visiting Committee and also serves on the ME Centennial History and Program Committee.

In reflecting on his career, Kirkwood says that his greatest satisfaction is not the Space Needle, or any other edifice, but simply doing a good job for the client.

"There are a lot of unfortunate buildings that don't do the job effectively because the aesthetics take over. Do a building right and it works well for people," asserts this engineer best known for the icon that turns all eyes skyward. ■

Noteworthy ~ Newsworthy

Materials Science & Engineering alumna **Bonnie Dunbar** (BS '71, MS '75) is the new president and CEO of the Museum of Flight in Seattle. A former astronaut, Dunbar flew on five Space Shuttle missions and most recently was NASA's deputy director in the Space and Life Sciences Directorate.

Industrial Engineering alumna **Kristen Lenci** (BSIE '96) is a senior associate with Point B Solutions in Seattle. The company provides project leadership services across a wide range of industries including technology companies, health care institutions, retailers, manufacturers, and government agencies.

Technical Communication alumna **Yina Shin** (BSTC '02) is a technical writer and software spec designer at Haansoft, Korea's leading developer of office software, based in Seoul. She reports that the exceptional skills and knowledge she gained from the UWTC program is allowing her to build a stable career in the rapidly growing technical communications sector in Korea.

Mechanical Engineering alumnus **Jay (Jiou) Zeng** (BSME '88) received the Waterjet Technology Association's 2005 "Technology Award" for career achievements and development of an abrasive waterjet cutting model widely used in industry and research. Dr. Zhou was an engineer at Ingersoll-Rand from 1992-98 and is now a senior scientist at OMAX Corporation.

We welcome your news!

Send by email to trend@enr.washington.edu or by mail to:
The Editor, The Trend in Engineering, UW Box 352180, Seattle WA 98195-2180.

Dean's Club Members Explore Wind Tunnel

What do a Boeing 737, the Space Needle, and Lance Armstrong have in common? They, or models of them (Lance was real), all were tested in the UW's Kirsten Wind Tunnel. Dean's Club members and their guests learned the facility's fascinating history during a special program and guided tour on July 6.

Led by Aeronautics & Astronautics Chair Adam Bruckner and tunnel staff and research engineers, the visitors climbed into the recesses of the tunnel and also checked out old generators and vintage equipment from the early days. A video of seven-time Tour de France champion Lance Armstrong testing his bike in early 2004 was another highlight. Dean's Club members also chatted with Acting Dean Mani Soma at a pretour reception.

For information on Dean's Club membership, contact Jan Labyak, 206-543-8779.

Olympic Gold Rowing Team Loses McMillin, a CE Alum

Civil Engineering alumnus Jim McMillin (BSCE '38), who rowed to gold in the UW's celebrated eight-oar team at the 1936 Olympics in Berlin, died on August 22 at the age of 91. He requested that his ashes be scattered in Lake Washington in front of the UW crewhouse.

At 6 feet 7, McMillin was the tallest man on the Husky crew and one of six engineering students. See *The Trend*, Fall 2004 at www.engr.washington.edu/news for details of the Olympic gold victory. After graduating, McMillin coached for a time at MIT and then returned to the Seattle area to work for Boeing.



From top, clockwise: Participants watch a video of a wind tunnel test, check out an old generator, examine a test model of a cycloidal propeller, and see the inside of the tunnel.

◆ Alumni Events ~ Mark Your Calendar

COE 2005 Fall Lecture Series ~ Tickets now available. Details on page 16.

Saturday Seminar: "Seattle: 150 Years in Traffic" ~ November 5

10–Noon (prior to Husky football), *Electrical Engineering 105*
Professors Joe Mahoney and Steve Muench, Civil Engineering, discuss the roads, bridges, vehicles, and other transport from the Denny party to Denny Way. Come by foot, bus, boat, or car and be fascinated.

Mechanical Engineering Reception at ASME Meeting, Orlando ~ November 9

5:30–7 pm, *Three Bay Hospitality Suite, Swan & Dolphin Disney Resort*
Meet ME Chair Mark Tuttle; brief program begins at 6 pm.

**Celebrate
100
Years**

Electrical Engineering ~ April 29, 2006
Information: www.ee.washington.edu, 206-616-1763

Mechanical Engineering ~ September 15, 2006
Information: www.me.washington.edu, 206-685-6993



Restoring a Treasure

A New Incarnation for Guggenheim Hall

Four weather-worn oak doors crowned by arched, leaded glass windows open into the airy, light-infused entrance hall. Sixteen steps steeply rise to the top of the grand staircase. On either side, carved in stone high on the walls, are the names of aviation visionaries — Cayley, LeBris, Stringfellow, Langley, Montgolfier, Lilienthal, Wright, Zeppelin, and others. They dreamed of soaring in the clouds and looking down on the earth.

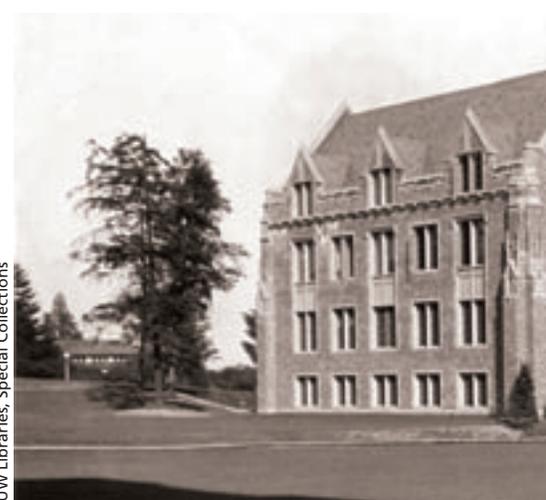
Walking up those steps for the first time in 53 years, George Jeffs' dreams as a UW undergraduate flooded back to him. In Guggenheim Hall he began the studies that

launched his aerospace career leading the design and engineering of the Apollo craft that carried astronauts to the moon and development of the Space Shuttle, the orbital workhorse for two and a half decades.

"Guggenheim symbolizes aerospace accomplishment," says Jeffs (BSAE '45, MSAE '48). "As students we faced formidable courses and tough professors, challenges that laid the foundation for our careers."

More than 2500 Aeronautics & Astronautics students have walked up those steps since Guggenheim Hall opened in 1929. A&A graduates trained in its classrooms and laboratories have helped build every Boeing aircraft from the monoplanes of the early 1930s through the 787 Dreamliner in development today. They have worked for Lockheed Martin and other manufacturers on nearly every type of commercial and military plane. They include airline pilots and astronauts, and NASA engineers sending rovers to Mars and space probes through the solar system and beyond. They include the academic researchers and innovators and the educators for future generations of aerospace pioneers.

Stately Guggenheim Hall, in its prime location on the east side of Drumheller Fountain (also known as Frosh Pond), admirably served



UW Libraries, Special Collections

generations of A&A students and faculty. That is no longer the case today. The era of calculation by slide rule has long vanished and the tradition of learning only through lectures is rapidly changing.

Hands-on, project-focused, team-centered learning is transforming A&A education, but the old lecture halls won't easily accommodate this approach. Electrical outlets dating to the 1930s can't support new educational technology. Outmoded, cramped laboratories and building infrastructure are inadequate for the high-tech equipment essential for cutting-edge research. For example, researchers must watch the clock to avoid using water-cooled lasers during class breaks. Water pipes are so corroded that flushing toilets decreases water pressure and hinders the flow of water to the lasers.

Restoration Plans

Guggenheim Hall has creaked into the twenty-first century with venerable charm, but in a condition that hinders learning and research innovation. Fortunately for history and tradition, the solution is not to raze Guggenheim. Much of the beauty



Each year, senior undergraduate students work with Professor Eli Livne to design and build small unmanned aerial vehicles (UAVs) in Guggenheim's laboratories. They test the plane in the wind tunnel. This team designed a carbon-fiber composite plane for nonstop crossing of the Pacific.



In its prime location east of Drumheller Fountain, Guggenheim Hall offered sweeping vistas of Mt. Rainier and the central campus in 1929.

and distinction of the UW campus derives from the late nineteenth and early twentieth-century buildings of great character — Denny and Parrington Halls, Suzzallo Library, those on the quad, and others.

Guggenheim is next in line for restoration that will preserve the gracious, Tudor-Gothic exterior while upgrading the infrastructure and interior space to meet the high-tech needs of our world-class A&A program. The State Legislature has appropriated \$27.8 million, which covers 85% of the renovation cost.

“Our department has trained a host of outstanding aerospace leaders such as Ed Bock, Scott Crossfield, Pete Drummond, Dick FitzSimmons, Lloyd Frisbee, Robert Hage, George Jeffs, Rose Lunn, George Martin, Dale Myers, Maynard Pennell, Jerry Rising, Jack Steiner, Joe Sutter, George Snyder, and on and on,” says A&A Chair Adam Bruckner. “Our great incubator, Guggenheim Hall, will produce even more legendary engineers when we bring the educational and research spaces into the twenty-first century.” ■

A Snapshot of Guggenheim History

Construction began in 1928 with a gift of \$290,000 from the Daniel Guggenheim Fund for the Promotion of Aeronautics, prompted in no small part by a letter of support and endorsement from Bill Boeing. The UW was among an elite group of seven institutions to receive such early Guggenheim grants, which gave an enormous boost to aeronautic education and research throughout the country. The State Legislature also provided funds. Guggenheim Hall opened in 1929, the year the fledgling UW program attained department status, and was dedicated in 1930, when A&A granted its first baccalaureate degree. Guggenheim also served as a hub for the college by housing the Engineering Library and the Dean’s Office until 1967, and it offered classroom space for other engineering disciplines. Still in the basement are lockers and a shower. According to department lore, the Husky football team used them in the 1930s.

Furthering the Vision

Renovation plans call for preserving Guggenheim’s exterior and detailing. The building’s footprint will not change. Interior upgrades will further A&A’s world-class program through these elements:

- **Learning Centers/Laboratories:** Strengthen hands-on learning with three large, multifocused instructional labs to support team-based project work.
- **High-tech Instruction:** Upgrade classrooms/labs to incorporate the latest in learning technologies.
- **Multidisciplinary Research Labs:** Expand collaboration among faculty and students by redesigning labs and creating state-of-the-art facilities for innovation.
- **Airplane and Space Systems Research:** Expand laboratories in structural mechanics, fluid and gas dynamics, and composite materials to support this work.
- **Access for All Students:** Add an elevator and improve disability/mobility access.
- **Earthquake Protection:** Reinforce building to meet standards.

You Can Be Part of Creating A&A’s Future

The Challenge: The effort to restore Guggenheim Hall is a public-private partnership. In addition to the State Legislature’s contribution, private funding is needed.

State Funding 85% = \$27.8 Million
Private Funding Need = \$5 Million

You can help preserve history and create the future of Aeronautics & Astronautics at the University of Washington. To learn how you can make a difference, please contact Paul Julin, 206-685-1927 or julin@engr.washington.edu.





Potential of "Out of this World" Technology Spurs Creation of Endowed Professorship

"The book on protein chemistry is a lot bigger than it was during my student days," says Charles Matthaiei (ChemE '43), chairman of Roman Meal Bread Company in Tacoma.

He is delighted that the first holder of the Charles W.H. Matthaiei Endowed Professorship in Chemical Engineering is Professor François Baneux, who is adding new chapters to the protein book of knowledge. Baneux's research focuses on protein technology and how certain proteins help others fold in precise conformations. An ability to understand and direct this process will be key to producing high levels of recombinant proteins for commercial or therapeutic purposes and to treating neurodegenerative conditions such as Parkinson and Alzheimer disease.

Another major interest lies in the applications of molecular biology and protein engineering to nanotechnology. "In the biological world, nanoscale materials contain enormous amounts of information," says Baneux, who is acting director of

the UW Center for Nanotechnology. "Nanostructures composed of proteins and inorganic or synthetic compounds hold great promise for the building materials and devices of tomorrow such as nanocircuits, photonic devices, and biosensors with diverse applications."

Matthaiei established a endowed professorship because innovative research holds tremendous potential for benefiting people and society in areas such as health, protecting the environment, and energy efficiency. "The technology today is just out of this world," he says.

Benefiting people has been Matthaiei's driving goal for nearly 60 years as he built the family company into a nationwide pioneer in producing and marketing healthful, wholegrain breads. He maintained close contact with UW Chemical Engineering over the years and sought advice from faculty experts in cellulose technology for evaluating the many potential sources of fiber suitable for bread production.



Professor François Baneux discusses his research with Charles Matthaiei.

Descended from a lineage of German bakers dating back more than 300 years, Matthaiei has passed day-to-day operations of Roman Meal to his son William, but remains active in the business, in civic organizations in Tacoma, and with a group of World War II Navy veterans who saw battle in the Pacific on the *USS Missouri*. Chemical Engineering honored him with its Distinguished Alumnus Award in 2003.

Since his initial gift of \$500,000 in 2001, Matthaiei has contributed another \$400,000. "I wanted to keep building the endowment," he says. The Campaign UW matching initiative boosted his recent support by \$200,000, which elevated the total endowment to \$1.1 million.

"It is a great honor to hold the Matthaiei Professorship," Baneux says. "In a time of tight resources, this support will allow graduate students to explore a new idea or approach that may contribute to our research goals."

A faculty member since 1992, Baneux also is an adjunct professor of bioengineering. He completed his undergraduate education in his native France and received his doctorate in chemical engineering at the University of Texas. ■

Campaign UW Highlights

- Support for the University topped **\$1.46 billion** by August 31, 2005. The campaign goal is \$2 billion by 2008.
- The **College of Engineering** is on target with more than 70% raised toward our goal of **\$250 million** for student scholarships, fellowships, professorships, capital projects, and programs.
- The Campaign **UW Matching Initiative** has been a huge success. The \$36.6 million in matching funds have magnified the power of donor contributions. Supporters of the College of Engineering have established 25 endowments for student scholarships and fellowships and faculty chairs and professorships.

We invite you to help *create futures* in engineering. Contact Jan Labyak at 206.543.8779 or labyak@enr.washington.edu

Fries Family Takes “Honor Your Mother” to Heart

Little did Marilyn Fries know, as a UW Computer Science & Engineering graduate student in the mid-1970s, that she was the vanguard of a Fries family computer science dynasty. All three of her children — oldest son Bob and twins Ed and Karen — forged careers in the field, and at one time all four family members worked at Microsoft. To honor their mother’s accomplishments and her role model status, the Fries siblings have established the Marilyn Fries Endowed Regental Fellowship in Computer Science & Engineering. The Campaign UW Matching Initiative bolstered the \$500,000 endowment by another \$250,000. It will support outstanding graduate students, with preference given to women.

Always ahead of the curve, Fries was the first female graduate in chemical engineering at Bucknell University. After moving to Seattle with husband Jim, an electrical engineer, she worked at Boeing testing heat shield tiles for space vehicles, then an unusual job for woman. The desire to try a new field with fewer barriers to advancement led her to CSE.

After earning her master’s degree, Fries worked at Digital Equipment Corporation’s Bellevue office providing technical support for customers. That led to a position at DECwest Engineering, a group that was developing the first microprocessor VAX. There she worked

on a new operating system and later managed a group building networks. After retiring, she worked for a time at Microsoft as a contract technical writer.

All three Fries siblings caught the computer bug — Ed in high school when he got hooked on programming, Bob as a UW electrical engineering major taking CSE courses, and Karen somewhat later, after earning UW degrees in psychology and business.

Bob has worked at Microsoft since 1988 and now manages a group that develops software for servers and for data protection. Karen was a recruiter, then a product marketer who evolved into software design. She now works on search, online help, and speech-recognition projects. Ed joined Microsoft in 1985, became one of the first programmers for Windows Excel, then managed the Word and Excel groups. Next he led the MS Games Studios and co-developed the

X-Box project. Since leaving Microsoft in early 2004 he has helped form several startup game companies.

Clearly, anyone who uses a computer has benefited from the work of the Fries family. “Our mother is always giving to others,” Ed says. “She fought for women in engineering her whole career, and was president of the Society of Women Engineers, so the fellowship furthers something she believes in.” ■



Marilyn Fries (center) holds the endowment plaque given to her last Christmas by her children. Ed (far left) holds son Jasper. Bob and Karen stand by their mom.

Emon’s Living Trust to Fulfill Passion for Helping Students

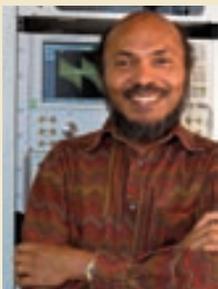
Don Emon (BSME '60) did not want to replace his crude high school slide rule during his freshman year at the UW because money was tight and he was not sure he would make it to the second year. “One professor even deducted points from my exams because I could only calculate to two decimal places,” Emon recalls. Later he received a \$200 scholarship, “big money at the time.” He purchased a new slide rule and went on to earn his BS in mechanical engineering. That assistance and a fellowship that opened the door to graduate school inspired a life-long passion to help students needing a boost. Emon, who holds a PhD in nuclear engineering, managed several nuclear energy research and development programs for the U.S. Department of Energy. He and his wife,

Diane, a former teacher and a specialist in early childhood development, are retired in North Carolina. They have allocated \$500,000 from their estate as a living trust that will fund UW mechanical engineering scholarships after their deaths. “I’ve always had a soft spot for the UW, and my student years were a treasured time in my life,” Emon notes.

If you would like to consider how your vision and values can be carried into the future through an estate gift or life income gift to the UW, please contact us at 800-284-3679, 206-685-1001, or giftplan@u.washington.edu.



Diane and Don Emon



As the College of Engineering's acting dean, I am pleased to acknowledge the many alumni, friends, corporations, and foundations who have supported our students and faculty over the 2004–05 fiscal year. The resources provided through these generous commitments have created a wide range of innovative and important educational and research opportunities. The partnerships represented here are clear indicators of the vital community that has come together to advance engineering education at the UW. Private contributions continue to be key to our success.

MANI SOMA, ACTING DEAN
College of Engineering

Honor Roll of Donors 2004~2005

This honor roll and its giving categories reflect annual support. The next issue of The Trend will recognize donors creating endowments through multi-year gifts.

Individuals and Family Foundations

\$1,000,000 and above

Paul B. (Bao-Ho) and Mei-Yea Chiou Liao
The Wissner-Slivka Foundation

\$100,000 to \$999,999

Tom A. Alberg
Wilma Bradley
Donald E. and Diane Emon
David Habib and Cathy Volta Habib
Jeremy Jaech
Charles W.H. and Helen B. Matthaedi
Beverly Morgan
Anthony and Elizabeth Naughtin
Henry T. Schatz
Jean Schuler
Robert Short and Emer Dooley
Charles Simonyi
Andy Studebaker
Flora Winter
Brian and Debora Yamasaki

\$10,000 to \$99,999

Christopher D. and Mary E. Allard
Tony and Michelle Audino
Jagjeet S. and Janice E. Bindra
Winslow H. and Linda H. Buxton
Duane and Anita Campbell
Chi-Chuen Chan and Lionel Ng
Doug and Jill Crow
Robert A. and Claribel Davis
Tom H. and Jeannette Delimitros
Dr. Clark Research Association
Cornelius R. Duffie
Max E. Gellert
Melissa and Kirk Glerum
Paul Goodrich and Shannon Sperry
Nicholas M. and Mary W. Graves
Mark and Carolyn Guidry
Carl M. Hansen Foundation, Inc.

Biz Hertzberg
Eleanor R. Hertzberg
Paul E. Hertzberg
Chuck and Carol Hirsch
Allan S. Hoffman
Satoru Izawa
George W. Jeffs
H. William and Barbara A. Kirschner
Janet Gelb Koplowitz
Scot and Diana Land
Todd Laney
Paul Leach and Susan Winokur
Rebecca J. Liebman
Daniel Ling and Lee Obrzut
Bill and Colleen McAleer
Matthew S. McIlwain
A. Pat and C. Beverly Miller
Peter Model
Cameron and Linda Myhrvold
Allison J. Myrick
Alan C. Nelson
David Notkin and Cathy Tuttle
Allan F. and Inger S. Osberg
Russell and Whitney Paul-Jones
Pedrizetti Family
Barbara Robinson
Frank Robinson
Gary R. Sager
Donna Sakson and Jonathan Mark
Theodore H. Sarchin
Smith Barney Charitable Trust, Inc.
Snell Memorial Foundation
Charles Stephens
Adam C. Stone
Arthur A. Thue
John Q. and Patricia M. Torode
Mark E. and Lisa M. Tuttle
Frank E. and Jane D. Wagstaff
David and Marsha Weil
Clark Zentrum

“Thanks to the many alumni and friends who have given so generously, the College of Engineering is making great progress toward meeting the needs of students and advancing the outstanding teaching and research of faculty. Such support is gratifying.”

STEVEN R. ROGEL, CHAIR, COE Campaign Executive Committee
Chairman & CEO, Weyerhaeuser Company





\$5,000 to \$9,999

Arnold E. and Ellen M. Andersen
Lyle I. and Marsha E. Asplin
Samuel J. and Ardis M. Beard
Mark M. and Judith D. Benjamin
The Borman Family Foundation
Robert L. and Nancy J. Burr
David Cutler and Debbie Girdler
Richard and Martha Moran Draves
Daniel J. and Nancy A. Evans
Peter C. Farrell
Jake T. Ferderer
Jennifer A. Flexman
Bruce Forstall and Linda Plato
Harry S. and Lynn F. Glaze
Peter and Beth Golde
Keith Grochow
Michael and Molly Hanlon
James M. and Suzanne B. Hewitt
Warren C. and Sally Jewell
Pavel Khijniak
Mike and Debbie Koss
Agnes S. Kwan
Ed Lazowska and Lyndsay Downs
Shun-Tak A. Leung
Donald R. and Sally S. Mack
Philip Cooper Magnusson
Joseph and Marian Mullally
Bard and Julie Richmond
Jane E. Shafer
Jonathan Shakes
Olga R. Shen
H. David and Victoria L. Stensel
Mary L. Tecklenburg
Michael Templeman and Lin Holley
Anthony C. Wiederkehr
Jo-Anne F. Wisniewski

\$2,500 to \$4,999

Jean-Loup and Diane Baer
Jay F. and Mary L. Berkman
Stephen J. and Sylvia E. Burges
Arlan E. Collins
Damon V. and Anna Danieli
Christopher H. D'Hondt and
Theresa Avanti-D'Hondt
Gregory C. D'Hondt
Daniel W. Frech
Rolf-Dietrich and Beate Fromm
Anita E. Gale
Charles V. and Jean C. Gibbs
Hellmut and Marcy J. Golde
Michael J. and Hannelore Gresser
Keith D. Grinstein
Neil M. and S. Ann Hawkins
Brian W. and Lee Ann Horman
Wendell P. and Carrilou Hurlbut
Melody Ivory-Ndiaye and Allum Ndiaye
Chris W. and Lisa A. Kenworthy
Karl Nevin Kirker
Alex Knight
Jesse B. and Sharon L. Krider
A. Gudrun LeRose
Clifford F. and Betty B. McNeal

(D) = deceased

Richard Y. and Grace Y. Okita
Wayne M. Olson
Lois H. Rathvon
Rao and Satya Remala
Richard J. Ryan
Christopher P. and Aniko M. Somogyi
John E. and Martha J. Swanson
Gerry J. Tolentino
Daniel Weld and Margaret Rosenfeld
Raymond H. West
Douglas E. and R. Ann Williams
Daniel A. and Joann K. Wilson

\$1000 to \$2,499

Robert L. and Phyllis A. H. Addington
Kenneth E. and Marian Allender
Peter N. Allison
David J. and Vickie G. Allstot
Jim and Kelly Anable
Einar Andersen
Mrs. Arthur R. Anderson
Brian and Jane Andrew
Anonymous Gifts-Friends
Frederick C. Bachmann
W. Peter and Mona Bailey
Leonard W. and Dorothy J. Barlow
Lois M. Baugh
Emilio Beltran
John C. Berg
Ted J. Biggerstaff and Patricia M. Downey
Byron and Sheila Bishop
Edward H. and Wanda R. Bock
David M. Bosi
Suzanne G. Brainard
Aaron J. Bregel
Lauren Bricker and Ruben Ortega
Charles C. Brown
George L. and Inge M. Buley
Kenneth J. and Joanne Burkhardt
Douglas J. and Nancy J. Calkins
J. Bradley Chen and Nilla Conti
Ark and Winifred Chin
Stephen T. and Robin Ching
Richard D. Christie, Jr.
Alan B. and Mary E. Christopherson
Sung T. Chung
James L. and Susan F. Claypool
Robert Cochran and Lauri McNeal
Addison D. and Ann B. Cole
Daniel T. and Sheila Dahlgren
Eric Dao
Denice D. Denton
Wesley B. and Evelyn A. Dickson
David A. Dion
Dempster D. and Sylvia M. Drowley
Robert J. and Gretchen R. Dwinell
Larry D. and Virginia B. Erickson
Clifford Evans
Bruce A. and Patricia H. Finlayson
Patricia A. Foley
Eric T. Forbes
Alvin C. Formo (D)
Bob A. and Janet L. Gabbert

Howard W. and Margaret G. Gardner
Joseph N. Gerberg
John B. and Derenda J. Gray
James W. and Betty J. Gustafson
Jeremy M. and Kathryn L. Hales
Charles S. and Dolores H. Harbert
Terry J. Hartman
Bruce Heydlauff and Janis Lindgren
Kevin T. and Diane L. Hodgson
Stanley N. and May E. Holm
Allen Kirby Holmes
Frank R. & Lynda L. Holmstrom
Roderick B. and Patricia L. Howard
Allen D. and Nettie C. J. Israel
Larry and Naomi Johnson
Sung-Hwan Jung
John F. and Gloria G. Kasonic
Yasuhiro and Tazuko Kawabata
Fred A. and Anita E. Keire
Heng-Pin and Shirley E. Kiang
Alan V. and Carolyn B. King
William F. Kipple
Michael C. and Nancy L. Kirk
S. G. Kleine and G. Van Dusen
Albert S. and Elizabeth M. Kobayashi
Edward L. and Arlene Koetje
Richard and Linda A. Koffenberger
Leonard D. and Carolyn K. Kosonen
Alan I. and Sue A. Lampson
David N. Larson
Judy Mahoney and Phil Wood
Mark A. Lawrence
Dennis and Jean Lee
Walter J. and Heather Lee
Jason Yi-Bing Lin and Sherry Wang
Ronald L. and Sheila Litzinger
Henry R. and Fayne S. Loew
Michael J. and Vanessa A. Lorengo
Judy and Norm Maleng
Udi and Rachel Manber
J. Manferdelli and C. Stricklin
Erik A. Mattson
James F. and Patricia M. McManus
Diane Melde and William Joyce
Edwin T. and Grace E. Merrill
Emmett R. Miller
John I. and Diane S. Milton
Richard and Kathryn Miyauchi
Wilmarth O. and Josephine Mootz
Cricket Morgan and Robert Holtz
Peter C. and Wendy Mullen
Mark K. Murray
Steven W. Mylroie
Gary L. and Mary T. Nadeau
Mahlon P. and Jeanne E. Nichols
Warren E. and Ellen A. Nielsen
Bud and La Vey M. Norquist
Donald L. Oates
M. Lynn and Marcella L. Olason Family Trust
Steven S. Omoto
Eugene A. Onishi

Continued on page 14

\$1000 to \$2,499 (cont.)

Mylene B. Padolina
 U-Sun and Haijoo Chung Park
 Richard L. and Patti Partington
 William G. and Becky E. Parzybok
 Christopher T. Pearo
 Arthur and Linda Pederson
 George J. Petersen
 Loren R. and Charlene Pickart
 James C. and Millie Pluntze
 Ernest C. and Emma E. Pogge
 Allen B. Potvin
 Judith A. Ramey
 James A. Ramsey (D)
 Paul M. and Sharon S. Reeves
 Luise E. Reichel
 Neil L. and Beverly C. Ricker
 Andris and Inara Rogainis
 Samuel C. and Josephine B. Roskin
 Patrick J. Russell
 Gerald D. and Sylvia S. Rutledge
 David R. and Barbara E. Sando
 Richard and Ruth (D) Scherrer
 Friedrich W. and Roberta L. Scholz
 Gary and Judith Schweikhardt
 Paul A. Skoglund
 George A. Soli
 W. Steven Spear
 Thomas G. and Janet D. Stoebe
 Joseph F. Sutter
 Jim and Yuri Suzuki
 Hilmer S. Swanson
 Donald and Nancy Swikert
 Ritchie and Lorna Tilson
 James K. and Estelle M. Truitt
 Rodney J. and Patricia S. Vance
 S. Rao and Usha S. Varanasi
 James R. and Carole N. Walker
 Vernon D. and Jean C. Warmbo
 Cathy J. Wasem
 J. William and Joan Whitaker
 Andre M. Williams
 Alec and Yvonne Wolman
 Victor M. and Mildred M. Yamada
 Craig E. Yamane
 Curtis G. Yamane and Juliette Dong
 Jeffrey M. and Susan K. Yamane
 Ukio Yorioka
 Jimmy and Gloria Yoshinaka
 John Zahorjan

Estate Gifts

Estate of Mitchell Taylor Bowie
 Estate of Clayton Emida Danner
 Estate of Evelyn S. Egtvedt
 Estate of Ruth S. Ellerbeck
 Estate of John H. Goldie
 Estate of Louise Graves
 Estate of Abraham Hertzberg
 Estate of Edward E. Johnson
 Estate of Richard Carl Outsen
 Estate of Suparb Putnam
 Estate of Frances I. Stulle
 Estate of Henrik Valle

Corporations and Foundations

Abbott Hospital Products Division
 Acucela Inc.
 Advanced Technology Institute
 AeroMech Incorporated
 The Agilent Technologies Foundation
 Agilent Technologies, Inc.
 ALCOA Intalco Works
 Alcon Laboratories, Inc.
 Alliance for Cancer Gene Therapy
 Altera Corporation
 Amazon.com, Inc.
 American Heart Association
 Amgen, Inc.
 ARCH Venture Partners
 Archer OpTx, Inc.
 Archus Orthopedics, Inc.
 Areva T&D
 ASCE Seattle Section Geotechnical Group
 Bader Architecture, Inc.
 Barlow Scientific, Inc.
 Bausch & Lomb
 Bechtel Foundation
 Bechtel Hanford, Inc.
 Bechtel National, Inc.
 Becton Dickinson Research Center
 BioMedical Strategies, LLC
 The Boeing Company
 Boston Scientific Corporation
 Cambridge Systematics, Inc.
 Carollo Engineers, P.C.
 CellVitro Technologies, Inc.
 CESI-Centro Elettrotecnico Sperimentale
 CH2M Hill
 Chevron Corporation
 Chongqing Holley Holdings
 Cisco Systems, Inc.
 The Laurie Clayton Foundation
 CollinsWoerman Architecture
 The Community Foundation of New Jersey
 Community Foundation Silicon Valley
 Cray, Inc.
 DaimlerChrysler AG
 DiMeMa, Inc.
 The Dow Chemical Company
 Eastman Kodak Company
 Electronic Arts, Inc.
 EnerG2, LLC
 enterpriseSeattle
 Envair
 Envision Telephony, Inc.
 EPIX Pharmaceuticals, Inc.
 ERC, Inc.
 ESPE America, Inc.
 Ewing Technology Associates
 Extrude Hone Corporation
 Exxon Mobil Corporation
 C. Felice & Company, LLC
 FM Global
 Ford Motor Company
 Fordham Street Foundation
 Foster-Miller, Inc.
 Bill & Melinda Gates Foundation
 GE Foundation
 Genie Industries, Inc.
 Genomatica, Inc.
 Genzyme Corporation
 Google, Inc.
 W. L. Gore & Associates, Inc.
 The Grainger Foundation, Inc.
 The Greater Cincinnati Foundation
 Guidant Corporation
 Hanlon Foundation
 Hart Crowser, Inc.
 Hewlett-Packard Company
 High Performance Technologies, Inc.
 Honeywell Foundation
 Howard Hughes Medical Institute
 Hutchison Whampoa Americas Limited
 IBM Canada Ltd.
 IBM Corporation
 Impulse Accelerated Technologies, Inc.
 Industrial Technology Research Institute
 Information Storage Industry Consortium
 Information Systems Laboratory, Inc.
 The Insitu Group, Inc.
 Institute for Responsible Management
 Intel Corporation
 Intel Foundation
 International Computer Science Institute
 ITT Industries, Inc.
 Jewish Federation
 Kenworth Truck Company
 Kiewit Companies Foundation
 Kimberly-Clark Corporation
 Kronos Advanced Technologies, Inc.
 Kronos Air Technologies, Inc.
 Laird Norton Tye Trust Company
 Lockheed Martin Corporation
 The Henry Luce Foundation, Inc.
 Madrona Venture Group
 Magic Wheels, Inc.
 Manifest Destiny
 The Martin Luther King Jr. Scholarship Fund
 Massachusetts Institute of Technology
 Materials Resources International
 Matsushita Electric Works, Ltd.
 McAfee, Inc.
 Medtronic, Inc.
 MER Corporation
 Merck & Co., Inc.
 MicroConnex Corporation
 MicroGREEN Polymers, Inc.
 Microsoft Corporation
 MikroMasch USA
 The Molecular Sciences Institute
 M.A. Mortenson Company

Donors acknowledged here have made cumulative contributions of \$1000 or more between July 1, 2004 and June 30, 2005. We have made every effort to be thorough and to represent each name accurately. If an error or omission has occurred, please contact the College of Engineering donor relations office at 206-616-5949 so that we can correct our records.



Motorola Inc.
NACME, Inc.
Nanonis GmbH
National Hemophilia Foundation
National Instruments Corporation
National Semiconductor Corporation
NEC Laboratories America, Inc.
Nelson Scientific Explorations LLC
New Energy and Industrial Technology
Development Organization
Nintendo of America, Inc.
Nippon Telegraph and Telephone Corporation
Novint Technologies, Inc.
Ordinary People Foundation
Otteman Farm Account
PATH
Pixar, Inc.
PJM Interconnection, L.L.C.
PortalPlayer, Inc.
Portland State University Foundation
Prime Construction Co., Inc.
Procter & Gamble
PSIA Inc.
Puget Sound Energy
RHK Technology, Inc.
Roche Laboratories, Inc.
Schwab Fund for Charitable Giving
Scripps Institute of Oceanography
Seattle City Light
The Seattle Foundation
Semiconductor Research Corporation
Sequoia Scientific, Inc.
Shell Oil Company Foundation
Siemens Building Technologies, Inc.
Siemens Corporate Research, Inc.
Alfred P. Sloan Foundation
Smith & Nephew Inc.
Social Venture Partners
Society of Automotive Engineers
Solar Turbines, Inc.
Sony-Kihara Research Center, Inc.
SRI International Library
Stelco Chemicals Pty. Ltd.
Sun Microsystems, Inc.
SunPlus Technology Co., Ltd.
Susan G. Komen Foundation
Tektronix, Inc.
Telairity Semiconductor, Inc.
Telcordia Technologies, Inc.
Tides Foundation
T-Mobile USA, Inc.
Toyo Kohan Co., Ltd.
The Suquamish Tribe
United Way of King County
Utilika Foundation
Valleylab, Inc.
Vanguard Charitable Endowment Program
Verizon Foundation
Village Pharmacy, Inc.
VillageReach
VisionGate, Inc.
Wagstaff, Inc.
Washington Research Foundation
Wells Fargo Bank
Western Digital Corporation
Weyerhaeuser Company
The Whitaker Foundation

University of Washington Laureates

The College of Engineering is extraordinarily grateful for the generous support of Laureates whose lifetime contributions total \$1 million or more.

Individuals & Family Foundations

Tom A. Alberg
Paul G. Allen
Greg Amadon and
Linden Rhoads Amadon
David C. Auth
William and Elizabeth Baxter
M. Taylor and Dorothee N. Bowie (D)
Wilma Bradley
Robert J. Campbell (D)
Clairmont and Evelyn Egtvedt (D)
Albert and Pat DeAtley
John M. (D) and Lyla A. Fluke
Bill and Melinda Gates
Jeremy Jaech
Frank and Julie W. Jungers
John E. and Frances H. Krezak (D)
Paul B. (Bao-Ho) and
Mei-Yea Chiou Liao
Metta R. Rehnberg (D)
Barbara Robinson
Frank Robinson
Henry T. Schatz
Jean Schuler
Rob Short and Emer Dooley
Charles Simonyi
Karsten (D) and Louise Solheim
Henrik and Ellen Valle (D)
James A. Weiberg (D)
The Wissner-Slivka Foundation

(D) = deceased

Corporations

American Heart Association
Battelle
The Boeing Company
Canon, Inc.
CASCADE Design Automation
Digital Equipment Corporation
DuPont
Eastman Kodak Company
Edison International
Electric Power Research Institute
Ford Motor Company Fund
Fujitsu Laboratories, Ltd.
Bill & Melinda Gates Foundation
The Grainger Foundation
Hewlett-Packard Company
Hitachi, Ltd.
IBM Corporation
Industrial Technology Research Institute
Intel Corporation
W. M. Keck Foundation
Kyocera Corporation
The Mathers Charitable Foundation
Microsoft Corporation
Microvision, Inc.
M. J. Murdock Charitable Trust
The David & Lucile Packard Foundation
Nestlé S.A.
Pentax Corporation
Qwest Foundation
The Seattle Foundation
Shell Oil Company Foundation
Siemens
Silicon Graphics, Inc.
Alfred P. Sloan Foundation
SRI International Library
Sun Microsystems
Tektronix Foundation
Texas Instruments Inc.
Utilika Foundation
Washington Research Foundation
Weyerhaeuser Company Foundation
The Whitaker Foundation
Xerox Corporation

Thank you!

Order Your Tickets!
www.UWalum.com or
206.543.0540

2005 Engineering Lecture Series: **Engineering the Unexpected**

Tuesday evenings, 7–8:30 pm, UW Kane Hall 110



November 1 ~ Engineering Disaster Relief

Hurricanes and disasters such as the Southeast Asian tsunami and chronic problems such as African famines devastate communities. Engineering has a role in the logistics of rescue and relief efforts. Presented by Technical Communication Professor Mark Haselkorn and UW Alumna Kate Hulpke.



November 8 ~ Engineering Detectives: Uncovering the Causes of Catastrophe

From the World Trade Center collapse to the Bellingham pipeline fire, to the Seattle Monorail, Engineering alumnus Larry Anderson's team is often called to the scene to determine why failure occurred and how to engineer solutions. Presented by Larry W. Anderson (UW ME PhD '66), group vice president, Exponent (San Francisco).



November 15 ~ Saving Soldiers: Robots to the Rescue

In the not-so-distant future, robot pods directed remotely by surgeons will save the lives of injured soldiers on the battlefield, and they will have civilian uses too. Presented by Electrical Engineering Professor Blake Hannaford and Surgery Professor Mika Sinahan.

TICKETS: \$20 series UWAA member, \$28 nonmember
Single Lecture, \$8 UWAA member, \$12 nonmember, \$5 student

FOR RESERVATIONS: UW Alumni Association, www.UWalum.com, or 206.543.0540

COVER PHOTO CREDITS: Top L to R: NASA/JPL, The Boeing Company, UW Photography, Eli Livne, NASA/JPL; Guggenheim Hall lantern by Mary Levin, UW Photography

<http://www.engr.washington.edu> • Tel: 206.543.0340 • Fax: 206.685.0666

The Trend in Engineering

Mani Soma, PhD
Acting Dean

Judy Mahoney
Assistant Dean for External Relations

Tricia Thompson
Director of Communications

Sandy Marvinney
Editor

Rob Harrill
Contributing Writer

Mary Levin
UW Photography

Send address comments or corrections to:
Editor, *The Trend*
trend@engr.washington.edu

UNIVERSITY OF WASHINGTON
COLLEGE of ENGINEERING
A Community of Innovators

371 Loew Hall, Box 352180
Seattle, Washington 98195-2180