Mechanical Engineering

Autumn 2009

The MEssenger

UNIVERSITY OF WASHINGTON
COLLEGE of ENGINEERING
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Dara Farrell with algae sample generated in the lab.

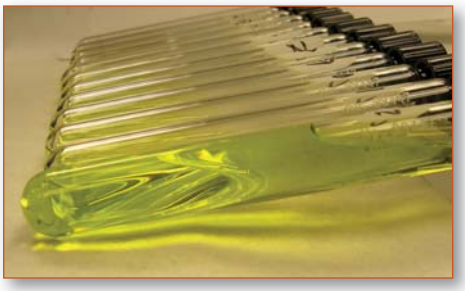
Algae-based Aviation Fuel: Will It Fly?

Liquid hydrocarbon fuels are extraordinarily valuable because of their high energy density and ease of use. For this reason they are the fuel of choice in much of the modern world's transportation infrastructure. The petroleum used to make these fuels is, however, finite and non-renewable, and the use of these fuels contributes CO_2 to the atmosphere. While viable alternatives are available for ground-based transportation such as batteries, fuel cells, and hybrids, it is likely aviation will remain bound to liquid hydrocarbon fuels. The challenge is to develop *alternative renewable low-cost fuels* in *sufficient volumes* to replace much of our reliance on petrofuels for aviation.

With Boeing funding, Professors Ann Mescher and John Kramlich have been working on using micro-algae as a fuel source. Micro-algae have been engineered by nature for rapid growth rates (to compete with rivals) and high oil production (to provide fuel for rapid cell division). These features make them good candidates for bio-based liquid hydrocarbon fuels. "These organisms have the potential to far outgrow and out produce other rivals, such as corn or soybeans, in terms of the oil produced per acre per year," says Kramlich. They can also be grown in places not viable for food crops, and some strains thrive in salt water.

"None of this comes easily," says Mescher. "You need to select algae strains that outgrow their wild rivals, grow well in the conditions available, and produce a large amount of oil. Even at full grow-out, the ponds will be around 3,000 parts water to 1 part algae, so separating the algae from the water can be expensive and difficult." The oil then needs to be extracted from the dried algae, and the raw oil processed chemically to produce biodiesel or biojet fuel. Each step needs to be done for very low cost, or the resulting fuel will be far too expensive to compete with petrofuels.

One major concern for biojet fuels is meeting the stringent fuel property specifications required for jet fuel, such as the freezing point. "Jet fuel must tolerate wing tank temperatures at 30,000 feet without becoming a solid or gel," says Kramlich.



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Algae fuel samples prepared in the lab.

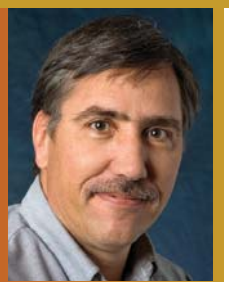
Graduate student James Barker developed the initial protocol for growing algae samples in the laboratory of UW biology professor Rose Ann Cattolico. The algae was then dried and subjected to solvent extraction to recover the oil. This was converted to biofuel and analyzed to determine the carbon chain length and degree of saturation, a major focus of the work for Boeing. While the results suggest that the chain length is longer than is optimum for biojet, it is evident that oil from algae solids is much more easily and quickly extracted than is that from soybeans or corn. "The algae organism does not need to create a robust envelope for the oil since it survives only a short time. Oil seeds need to survive in the ground intact over a winter and still be viable for sprouting in the spring," says Kramlich.

Continued on page 2.

In this issue

Chair's Corner

ME Chair



Mark Tuttle

As is true for most of Washington State (indeed, for most of the nation), the ME department is dealing with significant budget issues. We absorbed a 10% cut in state funding during the first year of the 2009–11 biennium, and an additional cut to higher education may be included in a supplemental budget expected to be released by Governor Gregoire by December 2009. To accommodate these cuts we have reduced the number of state-supported graduate student teaching assistants, canceled a few upper-level specialty courses, eliminated some of the engineering software packages we make available to our students, and reduced our state-funded staff count by 6.3 FTE. These steps have allowed us to maintain our student enrollment numbers without significantly impacting the quality of the education we provide. This autumn quarter we admitted 112 new undergraduate and 54 new graduate students, which represents a slight increase over the previous academic year.

Conversely, financial support from external sources is increasing. This includes funds from research contracts and grants, philanthropy, and income from our self-sustained distance-learning graduate program. These increases are a testament to the quality and dedication of our faculty and staff, and to the generosity of our alumni and friends. I am confident that the ME department will weather the current economic storm and emerge from this recession stronger than ever.

In this issue of *The MEssenger* we highlight two of the research centers housed within the ME department: the center for Advanced Materials in Transport Aircraft Structures (AMTAS), and the Center for Intelligent Materials (CIMS). A listing of additional centers led by the ME department is available on our website (www.me.washington.edu/research/labs/). These will be highlighted in future issues of our newsletter.

I invite those within the greater Puget Sound region to participate in the 2009 College of Engineering Lecture Series (see inset). By the way, all CoE lectures can be downloaded from the web (a few weeks after the event) in case you cannot attend (www.engr.washington.edu/alumcomm/lectures.html).

As always, I hope you will visit the Mechanical Engineering Department in person if you find yourself on or near the UW campus!

2009 Engineering Lecture Series

Engineering Xtreme Challenges: Outer Space to Cyberspace

- All lectures will be held at 7 p.m. in Kane Hall, UW Seattle.
- Lectures are FREE but seating is limited. Please register online at www.UWalum.com or by calling 206-543-0540.

Wednesday, October 21

Cyberspace Data Explosion: Boon or Black Hole?

We are entering a cyber world where millions of sensors continuously collect data, from implanted medical devices to "smart chips" embedded in passports. UW scientists are blazing research trails on the frontiers of cyber security. Presented by Computer Science & Engineering assistant professors Magdalena Balazinska and Tadayoshi Kohno.

Wednesday, November 4

Eye on the Universe: Final Mission to Hubble

In May 2009, UW alumnus Gregory Johnson ('77) piloted the space shuttle Atlantis into orbit for the final service mission to the Hubble Space Telescope. Johnson will share his thrilling journey 350 miles into space to capture the huge telescope and make tricky repairs during five spacewalks.

Tuesday, November 17

Energy Crisis, Smart Solutions

Pacific Northwest National Laboratory (PNNL) is a leading contributor in the nation's billion-dollar push to develop "smart grids" and transform the nation's electric grid into an integrated digital system to meet expanding 21st century power demands. UW scientists are inventing sensors to monitor resource use in real time and encourage efficiency in the home—smarter energy from source to user. Presented by PNNL's Carl Imhoff and Computer Science & Engineering's assistant professor Shwetak Patel.

Renewable Aviation Fuels

Continued from page 1.

This ease of extraction suggests commercial oil extractors can be used much more efficiently on algae than on seed oils, with significant reduction in costs and increase in throughput. Graduate student Damon Frashure extrapolated Barker's data to estimate the performance and costs of a commercial extractor working on algae feedstock. He found that around a factor of five increase in production was possible with a significant reduction in operating cost per unit of fuel produced. This gives hope that processing oil from algae will be relatively inexpensive.

Graduate students Dara Farrell and Amy Chervenak are developing a larger growth facility that will generate sufficient amounts of oil to be able to begin combustion testing. "We hope to soon be in a position to begin understanding how these unique fuels behave in the jet aircraft combustor environment," says Mescher.

Vipin Kumar (L) and Krishna Nadella (R).

A UW Spinout Success Story: Krishna Nadella of Microgreen

John Cook, Executive Editor, TechFlash.com: Puget Sound Business Journal's technology news site.

Microgreen Polymers co-founder Krishna Nadella had heard the horror stories about the University of Washington's TechTransfer Department. Nadella—who arrived at the UW from India in 2000 to study mechanical engineering—was told that it just moved too slow and didn't adapt to the needs of entrepreneurs.

But nine years later, Nadella is building a successful materials science business on the back of patented technology spun out of UW professor Vipin Kumar's lab. How did the 32-year-old do it?

It all started at the 2002 UW business plan competition, where Nadella and some other students won second place by pitching an idea to transform the food packaging business through a new plastic manufacturing process.

The idea was based on patented technology that had been sitting around the UW for seven years, with Nadella and the team receiving a three-month option from the UW TechTransfer department to see what they could do with it.

"After that business competition, we looked at ourselves and said "What do we do now?" said Nadella.

Shortly thereafter, Nadella accepted a summer entrepreneurial fellowship at the UW where he was chosen to mine the UW's TechTransfer department for compelling technologies that could possibly be licensed.

Meanwhile, he continued working on the concept for Microgreen Polymers, and by 2003 the company had been chosen to represent the UW at the business plan competitions at the University of Oregon, Rice University and the UW.

The team—led by Nadella and co-founder Greg Branch—finished in second and third place in the competitions and won about $35,000 in prize money. It then received about $250,000 in research grants to develop products based on the technology in Dr. Kumar's lab, including an insulated eco-friendly coffee cup.

By 2004, the technology was progressing well and Microgreen entered into a formal agreement to license three patents from the UW Tech Transfer department. As part of the deal, the UW reserved the right to receive royalties on revenues that the business generated.

Nadella said he had heard from other people that the TechTransfer department didn't understand the needs of entrepreneurs.

But Nadella—who has worked with the department for more than six years now—said he thinks that mischaracterizes their role.

"The university is not in the business of making money for profit, so entrepreneurs and investors expecting the university to move at the speed of a startup company—let alone just the business world—is an unrealistic expectation to go with in my mind," he said.

It did take time to secure the technology, and there were instances where the negotiations dragged on. But, overall, Nadella's happy with the experience and impressed that the department rolled the dice on students back in 2002 by offering an option on the under utilized technology.

"I am extremely pleased with how the TechTransfer office has improved itself over the last six years and I've been extremely pleased with the way they've always treated Microgreen," he said. "We've had some tough negotiations with them when things seemed bleak, but both parties stayed at it and we both won."

And Microgreen's ties to the UW are starting to pay dividends. Five of the company's 11 employees have degrees from the UW. And the company—which raised a $2.6 million venture round in 2006 and is in the process of closing another oversubscribed round—has started to pay royalties back to the university on the technology.

There are some other less obvious benefits.

For example, Nadella said that because of Microgreen's success, students in Dr. Kumar's lab have continued to work on the technology—filing additional provisional patents. Nadella said that could benefit both the UW and Microgreen, which after receiving venture financing started funding R&D efforts at the lab.

"We have a very good relationship with the state of Washington and the university in general, where we are funding R&D, they are channeling technology to us and we are commercializing technology and as a result we are training students who are becoming our future employees," he said. "In my case, the system worked."

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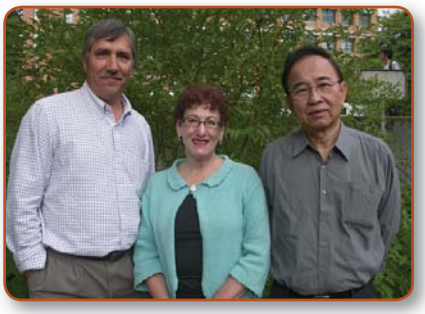

(L to R) Mark Tuttle, Ellen Barker, and Kuen Lin

The Center for Advanced Materials in Transport Aircraft Structures

© Photo by Francesca Paltera

Wind tunnel flutter testing of an airfoil, with composite rudder, built and tested at the UW.

Composites have been much in the news recently, mostly because these structural materials will be used extensively in the new Boeing 787 aircraft. The Federal Aviation Administration (FAA) established the Center for Advanced Materials in Transport Aircraft Structures (AMTAS) in early 2004. Led by the University of Washington, the overall objective of AMTAS is to develop solutions to problems associated with existing, near-, and long-term applications of composites and other advanced materials in large transport commercial aircraft.

Along with AMTAS director Mark Tuttle, the Center is managed by co-director Professor Kuen Lin of the Department of Aeronautics & Astronautics and ME staff member Ellen Barker. In addition to the UW, AMTAS academic partners include Washington State University, Oregon State University, University of Utah, Florida International University, and Edmonds Community College.

All AMTAS-sponsored projects represent a collaborative effort between academia, the FAA, and industry. AMTAS industry partners include A&P Technology, Bell Helicopter, The Boeing Company, C&D Zodiac, Composite Solutions, Cytec Engineered Materials, General Plastics Manufacturing Company, HEATCON Composite Systems, Hexcel, Integrated Technologies (Intec), Toray Composites (America), Inc., and Triumph Composite Systems, Inc.

Says Larry Ilcewicz, one of the FAA's liaisons, "AMTAS has continued to improve its research focus to meet the needs of the FAA and industry each year since it began in 2004." AMTAS meetings are held twice yearly on the UW campus and attract an average of 75 participants, the majority of which are from AMTAS industry partners. The objective of these meetings is to foster a knowledge exchange between academia, industry, and the FAA, and to explore future needs of the aerospace industry related to advanced materials and structures.

Participants of semi-annual AMTAS meeting on UW campus.

© 2009 HEATCON Composite Systems

Heat blanket over composite skin-stringer structure, used in composite repair methodologies study.

At the UW, AMTAS-funded projects are conducted by faculty and students drawn from the Departments of Mechanical Engineering, Aeronautics & Astronautics, and Materials Science & Engineering. Current research projects are related to (a) adhesive bonding of composite structures and components, (b) aeroelastic effects (such as flutter or limit cycle oscillations) in composite structures, (c) damage tolerance and durability, (d) the use of discontinuous composite material forms in primary load-bearing structures, (e) composite energy absorption and crash worthiness, (f) improved methods of composite structural repair, and (g) optimal composite aircraft inspection and maintenance intervals.

UW-AMTAS also developed a 5-day short course intended for practicing engineers who need a focused and in-depth introduction to composite structural design and manufacturing methods. Offered twice yearly since 2006, the course has attracted students from across North America, Europe, and Asia.

AMTAS academic partners have received $4.2 million from the FAA since 2004, $2.75 million of which was awarded to the UW. All AMTAS projects require a 1:1 cost share from non-federal sources. Hence, FAA funding is leveraged by cash and in-kind matching from AMTAS industry partners, and total AMTAS funding since 2004 is nearly $8.5 million.

"The AMTAS Center has allowed us to display and publicize the extensive composite materials research, education, and training provided by the UW and our academic partners to the aerospace industry. I am very proud of our many achievements since 2004," Mark Tuttle says.

More information about AMTAS, including a complete list of research projects, is available at http://depts.washington.edu/amtas/.

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Center for Intelligent Materials

Minoru Taya

The Center for Intelligent Materials and Systems (CIMS) was established in 2000 to accelerate research and educational programs in the areas of design of active and sensing materials, their devices, and bio-inspired design of intelligent materials and systems. Professor Minoru Taya is the CIMS director. The goals of CIMS are: (1) to design a series of active and sensing materials and their devices; (2) to investigate intelligent sensing and actuation mechanisms inherent in biological species, and to use this bio-inspired knowledge to design materials and systems; and (3) to conduct research and develop products compatible with a healthy natural environment.

CIMS members have backgrounds covering mechanical engineering, electrical engineering, polymer chemistry, materials science, bioengineering, and biology. CIMS research focuses on the development and characterization of intelligent materials including metals, polymers, ceramics and their composites, such as shape memory alloys (SMAs), ferromagnetic SMAs, electroactive polymers (EAPs), piezoelectric composites, and metal matrix composites.

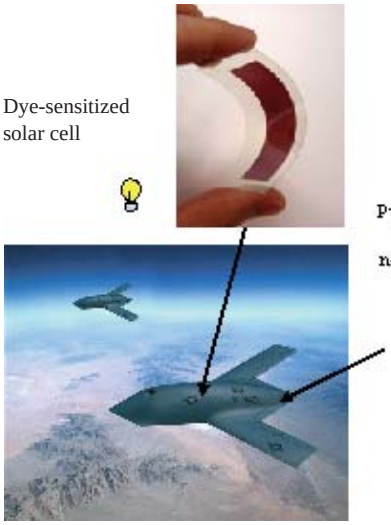
CIMS is developing electrochromic windows based on conjugated polymers that can switch between transparent and colored stages under applied potential. These windows may become a new energy-saving component of office and residential houses in the future. In addition, CIMS research also involves hierarchical modeling of intelligent materials ranging from the nano to macroscale. With this hierarchical modeling, engineers can design devices and systems with optimum microstructure of the intelligent materials while achieving maximum performance.

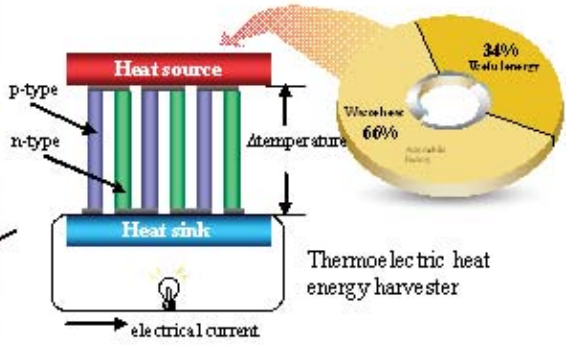
CIMS adapts biological structures and systems into innovative structures and device designs. Biological systems have adapted and perfected the design and functioning of their structures during thousands of years of evolution in a changing and increasingly more complex, competitive, and challenging world. It is therefore instructive to study, understand, and adopt nature's time-tested principles and mechanisms to the design of adaptive structures and intelligent materials.

In May 2006, CIMS was awarded a MURI project from AFOSR entitled "Design of energy harvesting and storage system (EHSS) for future AF aero vehicles." The award was for $6 million for five years. In addition to the University of Washington, this MURI team includes the University of Colorado, UCLA, and Virginia Tech. This project aims at developing a set of new energy harvesting materials based on organics and thermoelectrics, and establishing an energy storage system based on polymers and metal electrodes. The team is working on a lithium-ion thin-film battery that must be both light weight and durable for use in aviation. CIMS is also developing a lightweight and flexible organic solar cell, and thermoelectric devices that convert waste heat energy into useful electrical energy. The results of the MURI project are expected to have a strong impact on future airplane systems.

Artist's conception of a future aircraft employing an EHSS.

Dye-sensitized solar cell





CIMS research has been sponsored by the Defense Advanced Research Projects Agency (DARPA), the Office of Naval Research (ONR), the Air Force Office of Scientific Research (AFOSR), the National Science Foundation, the National Aeronautics and Space Administration, the Boeing Company, Intel, 3M, Honeywell, Honda and Tokyo Electric Power Company.

More information on CIMS is available at http://depts.washington.edu/cims/.

Anders Brown in Hong Kong with son, Aedan, and daughter, Cecilia

Anders Brown: The Art of Keeping Things Simple

Like most engineering students, Anders Brown left the UW (BSME '92, MSME '94) supplied with an arsenal of equations and engineering principles. His masters research under Professor Joe Garbini focused on systems dynamics and electromagnetic processes. While this ME toolkit helped him begin his career in manufacturing engineering, after several years he moved on to Microsoft where he took on management, business strategy, and planning roles, including driving planning and execution of growth initiatives for the Microsoft Office unit. Transitioning from engineering work to a business focus was not a goal as much as a gradual process.

"Engineers are curious people by nature," Brown said. "I took every opportunity to learn more about the business end of the companies I worked for, and one thing led to another. The irony is that the engineering mindset and tools can take you beyond engineering."

Way beyond. Brown is now senior vice president for North American operations with iSoftStone, a global IT company headquartered in Beijing. He left Microsoft in 2004 to co-found Akona Systems, Inc., a consulting, project management, and software development firm that helped Pacific Northwest clients maximize business efficiency. For a time, Brown had his hands in two start-ups. As COO of Digital Music Group, Inc., from autumn 2005 to spring 2007, he helped lead a $38 million IPO for the company, later acquired by The Orchard Enterprises.

In summer 2007, Akona collaborated on some projects with iSoftStone. "It was a good experience," Brown said. "Our companies were doing similar work, but iSoftStone was much bigger, 6,000 employees to our 100. They wanted to expand operations to North America and into new areas such as business outsourcing. We realized we could achieve greater success as a combined company so we sold Akona to iSoftStone in 2008."

Brown travels to China quarterly for business planning and strategy meetings. Many of iSoftStone's Chinese executives did graduate work in the United States and worked for high-profile multinational companies. Although less than 10 years old this year, the fast-growing company won two China "top ten" awards in service provider and ITO categories. Most of its clients are in North America and Europe and it has offices in Seattle, San Francisco, and Boston, and in greater China, Japan, and Korea.

It's no wonder the ME Department invited Brown to talk to students about his career during the 2009 Leadership Seminar Series. As a teaching tool, Brown used familiar formulas for boundary constraints, process models, limits, and heat transfer to reveal how he maps engineering concepts to business practices. For example, Brown explained that boundary constraints are everywhere in business, the most obvious being people and the issue of how a company can produce more product without hiring more people. A video of his presentation and a PowerPoint summary are at http://www.me.washington.edu/about/videos/.

"My personal philosophy is that engineering is all about making complex systems simpler," Brown said. "That also applies to growing a business and enabling people to work well together."

In addition to "the art of keeping things simple," his advice to students and young engineers aiming for a career in the big global economy is: "Keep your eyes open. Search out opportunities in your own company and get on teams that are deploying systems or products in new areas. Work hard and seek varied experiences that will help you learn and prepare for exploring the world."

The *Puget Sound Business Journal* recently recognized Brown with a 2009 "40 Under 40" Award for his business success, leadership, and civic commitments.

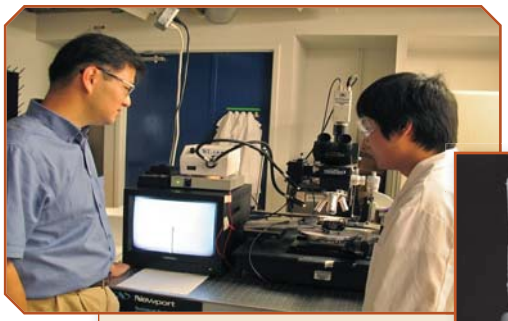
Jim Morrison (R), Albert Kobayashi

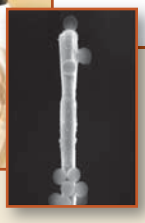
Endowed Lectureship to Honor Kobayashi and Morrison

As the department prepares to celebrate 50 years of accepting and graduating PhD candidates, two alumni, John Roundhill, BSME '67, MSME '73, and Savio Woo, MSME '66, PhD '71, are co-chairing an effort to honor Professors Albert Kobayashi and Jim Morrison, whose distinguished careers benefitted hundreds of undergraduate and graduate students, and the department through teaching and research.

An endowed lectureship will provide resources to recruit leading-edge researchers, academics, and professionals to campus to share ideas and inspire faculty, students, and alumni. Roundhill and Woo plan to raise private financial support to endow this first lectureship in ME and build a permanent resource for the department.

You can participate by making a tax-deductible contribution to the lectureship and by submitting a personal story and photos of an encounter you had with either Professor Kobayashi or Morrison. To submit a story and photos, please visit http://www.engr.washington.edu/giving/me_endowed_lecture.html. To contribute, please contact April Johnson at 206-543-8779, or aprijohn@uw.edu.





Jae Chung (L) and student Woon-Hong Yeo (R) conducting an experiment in the concentration of nanospheres. (Nanostructured tip detail.)

Jae Chung Receives NSF CAREER Award

Jaehyun Chung has received a National Science Foundation CAREER Award to develop a nano-tip sensor for rapid detection of dissolved DNA for environmental monitoring. The award was funded by the Electronics, Photonics and Device Technologies Group of NSF's Electrical, Communications, and Cyber Systems Division. The goal of Professor Chung's research is to demonstrate a nanostructured tip for detecting dissolved DNA without amplification and labeling. The novelty of this project is in the fundamental study of the enhancement of specific and nonspecific binding kinetics of DNA onto a nanotip using an electric field, surface chemistry, and capillary action. Successful completion of this project will enable the rapid screening of bacterial pathogens and viral particles, leading to a new generation of biosensors for environmental monitoring and disease diagnostics. The project will also involve an education program leveraging the existing programs in the Department of Mechanical Engineering and the Center for Nanotechnology at the University of Washington.

ME Professors Receive ARRA Funds

Through the American Recovery and Reinvestment Act (ARRA), four Mechanical Engineering faculty have received funding to answer the challenge to help advance and accelerate research in this country. The $2.1 million in grants will help build the foundation for long-term economic growth in the United States through technology advancements and scientific training for the future workforce.

Eric Seibel's grant entitled "Pixel-Accurate Oncologic Therapy Using Scanning Fiber Endoscope" will be funded by the NIH's National Institute of Biomedical Imaging and Bioengineering. The project will develop a minimally invasive laser therapy endoscope for the detection and treatment of cancer. The total two-year package is $922,497, and will fund one graduate researcher and partially fund three ME faculty.

Nathan Sniadecki's grant entitled "Sub-cellular Platelet Forces and Adhesions" will be funded by the NIH's National Heart, Lung, and Blood Institute. The project will examine the role that nanoscale biomechanics plays in the formation of blood clots that cause heart disease and stroke. The two-year package is $393,640, and will fund two graduate researchers and partially fund two ME faculty.

Jae Chung's grant (see article above).

Joyce Cooper's grant entitled "Alternative/Synthetic Fuel Life Cycle Assessment Research and Case Studies" will be funded by the U.S. Air Force. The support will be used to ensure that the U.S. Air Force is on the correct path to less energy dependence on basic petroleum products and more energy diversity for future operations, both domestically and while in an expeditionary role. The three-year package is $149,895 and will fund one graduate researcher. A partner project funded separately by the U.S. Air Force for $199,628 will fund four graduate researchers over a one-year period for the investigation of coal-derived Fischer-Tropsch jet and soy, algae, and jatropha oil-derived hydrotreated renewable jet fuels.

Honors & Awards

At the June 2009 graduation the following were honored:

Santosh Devasia was recognized as ME Faculty of the Year.

Boyd Fackler was honored as ME Teaching Assistant of the Year.

Kevin Soderlund was named ME Staff Person of the Year.

Dustin Miller (PhD candidate), and a team of four MBA students, won Herbert E. Jones Grand Prize ($25,000) in the UW 2009 Business Plan Competition. Their entry, Nanocel, provides high-performance liquid cooling solutions to electronics markets.

William R. D. Wilson, professor emeritus, was awarded the 2009 S.M. Wu Research Award by the North American Manufacturing Research Institution of the Society of Manufacturing Engineers. The award recognized significant commercial and societal impact of his research on friction and metal forming.

Per G. Reinhall, Eric J. Seibel and W. Jong Yoon received the Outstanding Paper Award at the Engineering & Urology Society annual meeting. Their paper was entitled "In Vitro Test of an Automated Cystoscopic Procedure for Bladder Surveillance."

In Memoriam

George Kosaly, professor emeritus, passed away June 8. He retired in 2007. During his UW career he held appointments in both Mechanical Engineering (1983–2007) and Nuclear Engineering (1980–88).

Roger Morris, BSME '38, passed away July 22. He manned the bow position in the UW eight-oared crew that won the gold medal at the 1936 Berlin Olympics, and was the last surviving member of that crew.

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ME 2009 Graduation

ME celebrated the graduating class with family and friends in Kane Hall. John Roundhill, BSME '67, MSME '73, gave the graduation address, challenging this class to consider the creed of Japan Airlines to appreciate each and every customer, be open to change, and to establish a good rapport with your colleagues. Megan Karalus, BSME '07, MSME '09, delivered the student address with humor and wisdom. In 2009, ME granted 17 PhD, 37 MSME, and 112 BSME degrees.

(L-R) Heechang Bae, Simon Chen, Tom Huang, Woon Jong Yoon, Onur Namli, Matt Kundrat.

Top: (L) Mark Tuttle
(R) John Roundhill

Center: (L) Megan Karalus
(R) John Kramlich

Bottom: Samuel LaCroix

Pension Protection Act to Expire December 2009

The Pension Protection Act of 2006 will expire on 12/31/2009. This law provides that the owner of a traditional or Roth IRA may instruct the trustee to distribute directly to a public charity up to $100,000, without the distribution included as taxable income, and that the distribution apply toward the IRA owner's mandatory withdrawal amount.

To qualify:
- Donors must be 70½ on the date of the gift.
- Funds must be transferred directly to the UW from an IRA or Roth IRA.
- Up to $100,000 per donor may be contributed in 2009.

ME benefitted from this unique giving opportunity with gifts to the ME Discretionary Fund as well as newly endowed fellowships. For more information about making a gift through your IRA, please contact April Johnson at 206-543-8779 or by e-mail at aprijohn@uw.edu.