

Innovations

THE NEWSLETTER OF THE FRANKLIN W. OLIN COLLEGE OF ENGINEERING

Planning, Teamwork led to Successful ABET effort

LAST AUGUST, Olin College reached a key milestone in its development when its three degree programs—electrical and computer engineering, mechanical engineering and engineering—received accreditation from ABET, Inc., the accreditor of college and university programs in engineering and related fields. The successful effort—Olin received accreditation at the first possible opportunity after its founding—was a result of teamwork and planning that stretched back several years.

Although ABET accreditation was on Olin's agenda from the earliest years, concerted efforts to engage with the accreditation process began in 2003. Vice President (then Dean of Faculty) Michael

Moody, who was responsible for pushing the effort along, distributed copies of the ABET criteria to faculty and created "program evaluation sheets" to guide the efforts. He also appointed program chairs and a program group for each degree program—a key move, given Olin's non-departmental academic structure.

Crucial to the successful effort were two visits by a group of consultants with a knowledge of ABET and its standards and procedures. The second visit consisted of a thorough mock evaluation of Olin's programs. The Olin program groups learned a great deal from these evaluations.

"ABET accreditation of our degree programs is a major accomplishment for Olin College," said Moody. "Our success so soon after graduating our first class shows that our efforts over a period of several years to understand the intent of ABET and ensure that our programs met their criteria really paid off."

Moody noted that all the members of the faculty participated in the data collection effort that led up to the "Self Study" assessment of each program. He singled out Professors Gill Pratt, Brian Storey, Mark Somerville, Debbie Chachra and Jon Stolk as instrumental in producing the Self Studies for each program, which were used by the ABET visiting team in the evaluations. Ann Schaffner, director of institutional research and improvement, and Sherra Kerns, then VP for Innovation and Research, also played key roles in the successful effort.

"With ABET accreditation, Olin's programs gain important external recognition from the engineering community," said Kerns. "We're very pleased to achieve accreditation for each of our degree programs at the first opportunity after the founding of this entirely new institution."

Accreditation by ABET is a voluntary, peer-review process that requires programs to undergo comprehensive, periodic evaluations. The evaluations, conducted by teams of volunteer professionals working in industry, government, academe and private practice within the ABET disciplines, focus on program curricula, faculty, students, facilities, institutional support and other important areas. Olin is scheduled for its next general review in six years.



(left to right) Dr. Sherra Kerns, Dr. Michael Moody and Ann Schaffner spearheaded the ABET effort, aided by contributions from the faculty and other members of the Olin community.

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— Dr. Sherra Kerns



J. Thomas Krimmel

J. Thomas Krimmel Joins Olin as Vice President for Development

On April 1, J. Thomas Krimmel joined Olin College as vice president for development. He came to Olin from the National Foundation for Teaching Entrepreneurship (NFTE) in New York City, where he served as chief development officer.

Since 2005 Mr. Krimmel led the NFTE development team, which increased gifts received by 58 percent over a two-year period to \$12.2 million while increasing the number of donors by 33 percent.

Additionally, he has been the chief development officer at four different institutions over the last 26 years, including serving as vice president of development and alumni relations at Babson College from 1990 to 2005. During the 1990s, he guided Babson's \$122 million fundraising campaign. Babson has been an educational partner with NFTE since 1994, and Mr. Krimmel served as the Babson representative in this partnership for many years. He was a member of the Executive Committee at Babson when the decision was made in the mid-1990s to collaborate with the F. W. Olin Foundation to create Olin College, an independent college of engineering adjacent to the Babson campus.

"We are very pleased that Tom Krimmel will be leading the development effort here at Olin," said Olin President Richard K. Miller. "His background and judgment will be critical in the next phase of Olin's growth. Tom brings not only years of senior leadership experience in development, but also a deep appreciation of entrepreneurial thinking and a thorough understanding of Olin's mission."



James J. Duderstadt

James J. Duderstadt to Address Class of 2008 at Commencement

Dr. James J. Duderstadt will deliver the Commencement address to Olin's Class of 2008 graduates. Dr. Duderstadt is President Emeritus and University Professor of Science and Engineering at the University of Michigan, an international leader in engineering education, and a member of the Olin College President's

Council. A recipient of the National Medal of Technology, former Chair of the National Science Board, and a member of US Education Secretary Spellings' Commission on the Future of Higher Education, he has served on numerous other national boards and has received many awards. A graduate of Yale and Caltech, his teaching and research activities include nuclear science and engineering, applied physics, computer simulation, science policy and higher education. At the University of Michigan, he currently directs the program on Science, Technology and Public Policy in the Gerald R. Ford School of Public Policy, the Michigan Energy Research Council and the Millennium Project. "Special thanks to the 23 members of the Olin community for their suggestions of 30 potential speakers," said Dean of Student Life, Rod Crafts on behalf of The Commencement Steering Committee.

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PRESIDENT'S MESSAGE



An integral part of the Olin mission, from the college's inception, was for the institution to be a model for the revitalization of engineering education. This lofty goal has been expressed in different

ways throughout Olin's short history. The current version of Olin's mission statement says "the College is dedicated to the discovery and development of the most effective educational approaches and aspires to serve as a model for others."

Here's the funny thing about serving as a model for others: they serve as a model for you, too. We have learned a tremendous amount from the exchanges we have had with other institutions struggling with the same challenge as we are: how to make engineering education exciting and relevant to the issues facing society today. Out of the accreditation process, the many visits we get from other institutions, and the trips and presentations I and other Olin representatives make on behalf of the College, we have set up a lively dialog about improving the preparation of engineers and gaining an understanding for engineering's crucial role in solving the world's problems.

In just the last six months, we have had visits from the Singapore Education Ministry, Fundacao Armando Alvares Penteado in Brazil, the Kanazawa Institute of Technology in Japan, The Samsung Advanced Institute of Technology in Korea, Vedanta University in India, and others. In addition, I have made numerous trips, both domestically and abroad, to present what we are doing here to audiences eager to learn about Olin. My most recent trip was to South Korea to make a presentation to a major conference on the future of engineering, at the request of the South Korean Education Ministry.

All these visits, and the contacts I have with academics, industry representatives and government leaders, not to mention parents and students, have confirmed for me that Olin has something special to offer. I hope we continue to break new ground in engineering education and connect up with others interested in doing the same. Indeed, the future depends on it.

Richard K. Miller,
President



(left to right) Rick Miller, Larry Milas and Bill Norden, outside the newly dedicated and renamed Milas Hall.

Olin Celebrates 10th Anniversary

On Monday, November 12, with the Board of Trustees and President's Council members on campus, Franklin W. Olin College of Engineering celebrated its 10th anniversary. It was ten years before, November 18, 1997, that the College received its educational charter from the Commonwealth of Massachusetts, the same year the F.W. Olin Foundation announced its ambitious plans for the college.

A small celebration was arranged in the Olin Auditorium, where Lawrence Milas, Olin Trustee and President of the Foundation, recounted the strategic planning process that led him to the "crazy" idea of starting a brand-new engineering college. He credits his wife, Marjorie, as his muse who urged him to "build your own damn college" and got him thinking about the best way to maximize the impact of the foundation's assets. There were many people along the way who had a hand in helping to make the idea become reality, but it was Mr. Milas who had the courage to present the idea to the Foundation board and advocate for it. At the conclusion of his

speech, Mr. Milas presented a final, generous gift of more than \$12.8 million to President Miller and William Norden, chairman of the Board of Trustees. The gift marks the official handing over of the final assets of the F.W. Olin Foundation to the College.

Following Mr. Milas's presentation, President Miller invited everyone present to join Mr. Norden and himself outside of the Olin Center for a surprise announcement. Mr. Norden spoke fondly of Mr. Milas, a friend and mentor, and announced that the school would rename the Olin Center, the college's administrative hub, as Milas Hall. He noted that, under Mr. Milas's direction, the F.W. Olin Foundation had awarded 42 building grants totaling more than \$200 million to colleges and universities around the country. It was fitting, said Norden, that a man who, on behalf of the Foundation, had carried out so many philanthropic acts should be honored on Olin's campus.

"Olin College is here today because of the philanthropy of two men—Franklin W. Olin and Lawrence W. Milas," said Norden.

(left to right) Students Amy Gao '10 and Jennifer Keene '10 present the 10th Anniversary ice sculpture.



"Olin College is here today because of the philanthropy of two men—Franklin W. Olin and Lawrence W. Milas"

— William Norden

Career Initiatives Day 2007

Keeping up with the fall tradition, Career Initiatives Day 2007, held October 11, drew employers and Olin alumni from 39 companies to campus to meet with students. Students had opportunities to talk and interview with various companies about collaboration, internships, and full-time jobs. The entire day was filled with helpful workshops on topics such as choosing a major, graduate school application advice, mock interview sessions, and applying to fellowships and scholarships. Additionally a panel of alumni talked to current students about their experiences post-graduation, and gave tips on negotiation and whether to choose industry vs. graduate school.

Family Weekend 2007

Another successful fall Family Weekend was hosted by the Office of Parent and Alumni Relations in late October. More than 130 families participated by coming to campus to visit their students, partaking in various event activities, attending student project presentations, and enjoying the family dinner.

FWOP Performances Continue to Impress

The Franklin W. Olin Players (FWOP) put on yet another great show, "Picasso at the Lapin Agile," in late October, in conjunction with Family Weekend. The comedy by Steve Martin tells the story of what might happen if Picasso, Einstein, and a mysterious visitor from the future met in a bar in 1904. Additionally in conjunction with Olin's two Candidate's Weekends in late-February and early-March, FWOP performed its second-ever musical — James Lapine's "Into the Woods." The production was directed by Jonathan Cass '08 with musical direction by Paul Mandel '09. Additionally the performance was produced by Olin students and starred students from Babson, Wellesley, and Olin Colleges.

SERV Auction Sets a Record

Another "long-standing" Olin tradition took place this fall, the annual SERV auction. Olin's community service organization, SERV, sponsors the event which is open to the Olin Community. Students, faculty, and staff members donated goods, time, and services to be auctioned off. The 2007 auction marked the organization's most successful event to date, with nearly \$7,300 raised.

Fall 2007 Open House

Olin's fall Open House was held on October 28, 2007. Visiting prospective students had the opportunity to learn more about engineering and related careers, meet with Olin faculty one-on-one to find out more about Olin's unique curriculum and tour the state-of-the-art campus. Prospective students attended an Olin student panel, "Students with Props!" to learn about student life at Olin College.

Olin Hosts a Flash Conference Focused on Producing Pedal Power

The Olin student organization, Olin Students for Awesome (OSA), focuses on creating appropriate technologies, dealing with issues such as human rights, social entrepreneurship, sustainability, and in general, doing things that make a difference. This year, Olin College hosted the OSA Flash Conference 2007 on the Olin campus. Enthusiastic designers, thinkers, and planners gathered at the conference to design a universal pedal powered platform to be use in various appropriate technology solutions.

Candidates' Weekends

Once again Olin's longest standing tradition didn't disappoint. On February 29-March 1 and March 7-8, 2008, Olin hosted its 14th and 15th Candidates' Weekends where students, staff and faculty are given the chance to show off what being a member of the Olin family is all about. Several members of the community were involved in interviewing and evaluating candidates for entry in the Class of 2012, while many other community members participated in various other weekend events. It's hard to match the enthusiasm and energy on campus during candidate's weekends and this year again stood out as one of Olin's best!



(above) Olin alumni return to share their experiences in the "real world" with current students; The Powers family, (below, left) and the Cheng family (below, right) joined their students for Olin's Family Weekend Celebration.



(below) the FWOP cast performs "Into the Woods"



(above, left) Class of 2012 prospects participate in a candidates' weekend design exercise; (above, right) Participants in the Pedal Power flash conference.

>>> AUGUST >>>
 >>> JULY >>>
 >>> JUNE >>>
 >>> MAY >>>

DEVELOPMENT UPDATE

The past months have been busy ones for the Development Office and I would like to thank everyone for their active support. A number of exciting achievements have occurred and new initiatives are underway. These include:

- The final gift from the Olin Foundation for more than twelve million dollars, an extremely generous legacy. The College search for a Vice President for Development resulted in the selection of J. Thomas Krimmel. The search process included numerous meetings with all Olin constituencies and focused sessions with the Development Committee of the Board as well as other Board members. J. Thomas Krimmel left his position as Chief Development Officer at the National Foundation for Teaching Entrepreneurship (NFTE) in New York City and joined Olin College on April 1 (see cover story).
- The generous support of the Trustees as reflected in a new matching funds program for all parents of freshmen who contribute at least \$1000 as well as all alumni who increase their pledges by a minimum of \$100 over last year.
- The Annual Fund campaign including a letter from the Parents Advisory Board requesting 100% parent support for the College has resulted in a 76% participation rate to date, the highest parent participation rate in our history. Our goal is 100% parent participation by the end of our fiscal year (June 30).
- 60% alumni parent participation in the Annual Fund campaign. Our goal is 100% participation of alumni parents.
- The hosting of regional friend raisers in New York, Portland, San Diego and Boston.
- Corporate visits to IBM, HP, Flir, Mentor Graphics, ESI, Adobe, Planar, Nortel, and USG.
- The Presidential Lecture Series featured John Sculley, former President of Pepsi and Apple. A full auditorium greeted his presentation on Designing the Future – Business Leadership and Great Design. (story, back cover)
- An alumni focus group is in the process of formation. The goal of the group is to better understand the communication needs of the alumni and the types of tools that would be most effective for them.
- The establishment and meeting of the Foundry Advisory Board. The group discussed structure, levels of entrepreneurial learning, tool kits of knowledge, faculty involvement and needs assessment.

A reminder that in order to recruit additional external support for our objectives it becomes even more critical for the outside world to understand the core support of the College from within. An important metric is the participation rate and our goal is 100% participation.

If you have not yet participated in achieving the 100% goal please consider making a gift to the College. Gifts can be made by cash or check to the Development Office. Credit card payments can be made on line at https://www.olin.edu/about_olin/online_donation.asp. If you wish to make another type of donation please contact me at joanne.kossuth@olin.edu.

Thank you so much for all of your support and further consideration. I hope your holidays were joyous ones and your preparations for spring hopeful.

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Alex Dorsk sets sail with WHOI while Kristen Dorsey remains ashore with AmeriCorps VISTA

This article is part of an occasional series on what Olin alums are doing

Olin's hands-on approach has drawn its fair share of attention from students, faculty and media alike. It could be argued that the reason it draws so much attention is because it translates so well to post-college life. Just ask Alex Dorsk '07 and Kristen Dorsey '07. They've both chosen paths that involve a lot of hands-on, team-oriented work and are enjoying every minute of it.

Following graduation last May Alex joined the team at Wood's Hole Oceanographic Institute in Woods Hole, Mass., as a shipboard technician. Duties of his job range from writing programs for the ship's computers, to helping scientists on board learn how to use the ship's sensors, to photographing various expeditions. He's been all over the world (Iceland, Barbados, Bermuda, Canada, Brazil and Ascension Island) to observe, record, and map the ocean floor. He's tested a new sediment coring system, mapped the sea floor near the Reykjanes Ridge in Iceland, and tracked red tide in the Gulf of Maine.

He credits Olin with giving him the skills he needs to be successful at sea, "As a result of working in teams for class projects at Olin, I now know the importance of defining expectations at the beginning of a cruise, how to get answers when I need help and how to keep the mood light and the expeditions fun," said Dorsk.

Kristen Dorsey isn't exploring the ocean; instead you'll find her among a sea of high-schoolers. Kristen is serving as an AmeriCorps Volunteers in Service to America (VISTA) volunteer working with Boston's FIRST Robotics teams. VISTA members like Kristen commit to serve full-time for a year at a nonprofit organization or local government agency, working to fight illiteracy, improve health services, create businesses, strengthen community groups, and much more. The ultimate goal is to expand programs, in this case the local FIRST Robotics program, that are designed to bring individuals and communities out of poverty.

Even though working with FIRST is not something she ever imagined she would do after college. Kristen says, "I should have seen it coming. I really love community service and had a lot of fun at Olin serving a team as FIRST mentor, so this really was a logical step."

Like Alex, she feels like the hands-on teamwork that she engaged in at Olin helped prepare her for just about anything. Additionally, the communication skills she acquired through those experiences are helping her to stay connected to her co-workers who are spread throughout New England.



(above) Alex Dorsk '07 aboard the Knorr research vessel; (below) Kristen Dorsey '07 works with First Robotics students from Boston.



Olin's Class of 2007 Progress Report – Six Months After Graduation

Where are they Now

- 66% are employed
- 22% are enrolled in or plan to enroll in graduate school
- 3% are working with a volunteer or service organization such as Teach for America, One Laptop per Child, First USA
- 3% are involved in starting their own business
- 3% are actively in pursuit of employment
- 1 student is teaching English on a Fulbright Scholarship in South Korea

Employment and Salary Details

- 93% of employed alumni are using engineering or technical skills
- Salaries for employment range from \$10,000 to \$95,000
- 59% are earning between \$50,000 to \$75,000
- The average salary for the class is \$56,569, up from \$52,510 for the Class of 2006, and above the national average of \$56,470.

Graduate School

- 16% are enrolled in an Engineering, Math or Science program
- 6% are enrolled in a Business, Law or Medical program
- Two students were awarded National Science Foundation Grants.
- The top five graduate schools attended by Olin graduates are: Babson, MIT, Stanford, Harvard, and Cornell

★★ Note: The Class of 2007 had 72 graduates; however these figures are based on an 87% response rate to a survey that was conducted in January 2008.

Olin SCOPE Project Targets Sustainability in Guatemala

Every year Olin sponsors its own SCOPE project. The project is determined by the junior class the year prior to its implementation. Sustainability is a topic that has been of great interest to Olin students and last year, following the College's Big Conversations event in April, four students collaborated to submit a proposal for the 2007-2008 FW Olin SCOPE project. The idea was accepted and now four Olin seniors—Carmelle Tsai, Stephen Westwood, Christopher Carrick and Ryan Hubbard, as well as one Babson student, Melina Martinez—are working to improve an existing wood burning stove design that was created by Estufas Ixiles Stove Co., an initiative of Community Enterprise Solutions (CES) (www.cesolutions.org). CES is a non-profit that works with local groups throughout Guatemala to design and implement entrepreneurial and educational solutions that are uniquely responsive to long-standing, rural challenges.

There are two primary areas of focus to this project. The first is to improve the stove's design, making it less expensive, easier to assemble, appealing to the design values of its users, and at least as energy efficient as the current model.

The second main area of focus is designed to address the business issues by 1) understanding the

current market and value-chain; 2) understanding the partnerships between CES and local entrepreneurs; 3) studying the competition (i.e. other stove distribution organizations); and 4) increasing the sustainability of the low-cost business model built around the product. Professor Jessica Townsend is serving as the team's faculty advisor.

Ultimately, what the team hopes to accomplish is finding a means to drive the cost of the stove as low as possible while maintaining or increasing usability, energy efficiency, ease of assembly, and ease of distribution. "We wanted to work on this project specifically so that we could learn about the larger world and make a difference in it at the same time," said Steve Westwood, one of the team's safety/ethics coordinators. "We were inspired by Big Conversations and wanted to do something important in the lives of others." Big Conversations, an Olin-sponsored lecture series, recently hosted a forum on appropriate technologies in the developing world.

The Olin SCOPE project is one of 11 projects in progress this year. Other sponsors include aPriori, Boston Scientific, Lexmark, MITRE, Nortel, Pratt & Whitney, Rockwell Automation, ROCONA, Schlumberger and Vision Robotics. To learn more please visit www.olin.edu/scope.



(above) members of the FW Olin SCOPE Team work on their wood burning stove.

(left) a stove prototype.

REPORTER'S NOTEBOOK

E! (Pronounced "Ee bang") = Entrepreneurship the Olin Way

It's a blustery Tuesday afternoon when I visit Olin's Foundations of Business and Entrepreneurship (FBE) class, taught by Professors Steve Schiffman, Steve Gold and John Bourne. I've expressed interest in writing a story about this class because it fascinates me to know that Olin has found a way to extend its distinctive hands-on approach to teaching entrepreneurship. Which is exactly what FBE is all about – simulating the steps involved in starting up a business. The class is a requirement for all Olin students and is designed to provide them with experience in planning and growing a business venture. Students learn by doing, while building competence in the functional areas of business, including accounting, finance, marketing and strategy.

There are a minimum of guidelines and limitations, because the class is designed to teach entrepreneurial skills. Students are asked to focus on the "business" aspects of the project rather than on designing or building a technology. Additionally they must stay within their \$1-\$300 budget (an amount that is paid back to Olin), and complete the project in just ten weeks. Professor Gold points out, "it is important to note that we're not trying to create business people in this class, we're trying to create holistic thinkers that understand what it takes to develop ideas into great products and services."

Here's how it works: at the start of the semester each student makes a "rocket pitch" to the class, in which they have three minutes and three slides to explain their idea for a business. Students then vote on the ideas that are most appealing; from there they form teams around the ideas they

like and take on typical business roles such as CEO, CFO and VP of Marketing.

This particular class (the one I visited in the fall of 2007) had the following seven businesses gelling:

- Words from the Earth – unique greeting cards created from 100% recycled paper, which is made by the students.
- Comfy Things from Olin – custom made bean bag chairs.
- Ductems – custom-made, rugged duct tape items including (but not limited to) iPod cases, roses, wallets, belts, neckties, and laptop carriers.
- Ultraviolet Environmental Services – diagnostic testing for common chemical and biological contaminants.
- The Olin Tutoring Squad – private subject and SAT tutoring for high school students.
- Olin Custom Calendars – incorporates campus scenes and key Olin dates into custom calendars.
- Adhere Custom Stickers – unique, custom printed stickers for personalizing generic consumer products.

Over the course of the semester students spend time developing, marketing, and selling their products. As students are introduced to fundamental business concepts in class, they experience them first hand in their businesses. To enhance their experience, professor Gold has

found a way to leverage his many years of experience as an entrepreneur and early-stage investor by inviting real-life entrepreneurs into the classroom. "We're looking to provide students with examples of how someone with a technical background can become a successful entrepreneur and do something really exciting that has potential to improve many people's lives," says Gold. He has also invited various other entrepreneurs, investors, corporate attorneys, and patent attorneys to address other relevant topics. While the students do generate profits (in most cases), in the end that isn't what their grade depends on. It's more about the quality of the concept, how the group worked as a team to accomplish their goals and how well they marketed the business.

To top it off, the profits that are generated by the businesses are donated to a charity of the class's choosing. This year the lucky recipient was the Hyde Park FIRST team. The FBE class presented them with a check for \$2,000—not bad for ten weeks worth of learning! —*Alyson Goodrow*



Olin's FBE class presented a check to the Hyde Park FIRST team.

Two Olin Faculty Members Reach Out to Fellow Educators to Make a Difference



Rob Martello presents to students at the Museum of Fine Arts, Boston

By nature many of Olin's faculty members are predisposed to giving back and their involvement with Olin only reinforces that commitment. Case in point: Rob Martello and Brian Storey, two Olin professors who are effecting change among fellow educators in the U.S. and abroad.

Rob Martello, associate professor of the history of science and technology, is doing his part to revitalize K-12 history education in several ways: more closely connecting it to the arts and sciences; using history as a way to foster student skill development such as critical writing and reading; and treating teachers as adult learners by viewing teacher education as an ongoing process. His efforts are part of a much larger effort, a \$1 million Teaching American History grant from the U.S. Department of Education. The grant was provided to support a partnership between the Savannah-Chatham County Public Schools and the Georgia Historic Society (GHS) for a project entitled "America: The Experiment - The Experience - The Echo." Olin College is one of the participating institutions on this grant project.

Martello serves as the history of technology representative on the interdisciplinary educational team. He has begun by serving as a guest speaker and panel discussant in last fall's teacher education symposium in Savannah, GA. He continues to work on the project by developing teacher education materials. He is currently preparing for a summer travel institute in which he will give lectures to a group of Georgia teachers when they visit the Boston area.

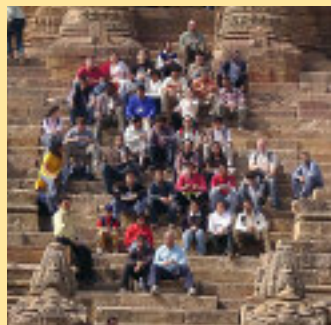
"I love working with these motivated teachers and learning about the challenges they face," says Martello. "They enthusiastically want to use history of technology narratives and perspectives to help their students think of

history as dynamic and relevant. I'm exploring the possibility of bringing some of these teachers to our campus at some point, and I would also like to involve Olin students in this project as well."

While Martello helps students in the South, Associate Professor of Mechanical Engineering Brian Storey, traveled half way around the world to effect change. During winter break, professor Storey went to Gandhinagar, India, to participate in the first-ever Hands-On Research School. This revolutionary school targeted educators from developing countries where resources are limited and laboratories equipped for cutting-edge research are rare. Nine senior faculty members and their assistants were joined by 45 young scientists from 21 countries.

The idea was to teach physics via hands-on laboratory research and mathematical modeling. Participants took part in interactive, hands-on research involving tabletop experiments with real-time computer data acquisition and associated computational modeling. The research was inherently interdisciplinary, and topics ranged from biological networks to spatial patterns in fluids to laser chaos.

Professor Storey was recruited by Harry Swinney, one of four founding directors, because of his experience teaching in a hands-on format at Olin. He



Participants of the Hands-On Research School make time for sight-seeing in Gandhinagar, India.

jumped at the chance to be involved "The idea of a hands-on workshop was right up my alley," says Storey. "I was interested to do what I could to spread Olin's mission to members of the international community, and I knew I had a lot to gain from teaching students with such diverse backgrounds."

With the help of two Olin alums, David Boy '07 and Nathan Karst '07, professor Storey taught the only computational based session, "Mathematical Modeling," which was meant to be complementary to the experimental sessions.

The inaugural session was a notable success and while the school remains an experiment at this point, a second session is planned for July 26-August 7, 2009 in Sao Paulo, Brazil. For more information please visit <http://www.ipr.res.in/winterschool07/>.

Faculty Development Module: Faculty learn circuits, Olin-style



Jose Oscar Mur-Miranda

During winter break I taught the third faculty development module, titled "The Circuit Experience at Olin." Ten of my colleagues participated and Professors Brad Minch and Gill Pratt co-taught with me. Interestingly, my experience teaching Olin faculty members was surprisingly similar to that of teaching Olin students: a classroom filled with very smart, ambitious students whose backgrounds span all possible levels of expertise in the subject. Everyone was engaged and giving their maximum effort, but as many engineers know, sometimes Murphy's Law makes sure that a simple hour-long laboratory turns into a ten-hour fight to discover why the laws of physics cease to exist in the confines of your breadboard. There were similar groans when things didn't work and similar excitement when circuits finally behaved as expected.

The purpose of this module was to expose the faculty to the hands-on laboratories that first and second year students experience in Engineering of Compartment Systems (ECS) and Principles of Engineering (PoE). Exposing faculty to the same experiences that students have helps them understand the work that students do in other classes and the contributions and ways of thinking that carry across disciplines. Following projects that first and second year students are required to complete during ECS and PoE, the module reviewed an anemometer circuit, a Lego clock circuit, and two microcontroller circuits. Faculty from all disciplines formed teams and dove into these projects mimicking the process students follow where teams work largely on their own, while instructors provide guidance as requested.

"I enjoyed the circuits faculty module because it was material I had not really been exposed to before, particularly the actual building, so it gave me a much better grounding in terms of terminology and what the students actually do in some of the first and second year classes," said Alisha Sieminski, assistant professor of bioengineering.

Furthermore, sharing these experiences enhances the complementary nature of Olin's curriculum. "Participating in the faculty circuits module this winter gave me great insight into some of what the students are learning in ECS and POE," said Rebecca Christianson, assistant professor of applied physics. "Since my classes are concurrent with ECS and immediately precede POE, this has helped me to better relate the material in my classes to what they are seeing elsewhere."

Participating in these faculty modules is a great experience that sets Olin apart from other institutions. As a participant, I get to learn new and different material. As a teacher, I had the opportunity to learn more about my teaching style, and gauge more accurately whether the presentation of the material is clear. I look forward to participating in future faculty modules and hope this becomes a permanent part of Olin's tradition and culture.

— Jose Oscar Mur-Miranda

Publishing Notes

Associate Professor of Computer Science **Allen Downey** isn't exactly a publishing novice. In fact, he runs a small company called Green Tea Press (greenteapress.com) where he's published four books to date. His most recent is titled "Physical modeling in MATLAB" which is now being sold online after serving as the text book for last semester's Integrated Course Block (ICB): Math & Physics. As if that weren't keeping him busy enough, he's also working on a revision of "How to Think like a Computer Scientist," a book that is under contract with Cambridge University Press. In the meantime, fellow faculty member **Ellen Argyros**, Adjunct Assistant Professor of Arts, Humanities and Social Sciences, has recently signed a contract with Publish America to have her first book of poetry, "Feta in Brine," published.

Sponsored Research Update

More than \$70,000 worth of grant money was awarded to Olin professors during the latter part of 2007 from sponsors including MIT, NASA, the Savannah-Chatham County Public School System and the National Security Agency (NSA). Specific projects funded included the NASA/Olin Summer engineering internship program; Assistant Professor Rob Martello's preparation for his participation in the Summer 2008 Travel Institute and the History Illuminaria Symposium (see article above); and a research program that revolves around the marriage of classical mathematics and modern wireless communications systems. Moving forward, the first part of 2008 has already seen more than \$2 million worth of proposals for external funding to support a variety of projects including collaborative research on the topic of using the learning community paradigm as a pathway to produce engineering graduates who welcome diversity and value humanity's needs; reconfigurable and programmable analog education; exploring constraints and frustration in nano-structured and bio-molecular materials; as well as supporting the acquisition of a fleet of mobile-dexterous robots to support the development of a new robotic program of study within a multi-university community.



INSIGHTS

**Presidential Lecture Series
Features Philanthropy Expert,
Former Apple CEO**

A noted philanthropy expert and one of the country's most respected CEOs headlined last fall's Presidential Lecture Series at Olin. Dr. Claire Gaudiani, former president of the University of Connecticut, discussed how American philanthropy has inspired innovation, while former Apple and Pepsico CEO John Sculley shared his thoughts on the new "flat-world" economy.

Dr. Gaudiani, one of the leading authorities on the history and economics of American philanthropy, spoke at Olin November 14. With many examples drawn from America's past, Gaudiani argued that, as Americans, "we are not generous because we're rich, we got rich because of our generosity."

Gaudiani, author of the widely cited book "The Greater Good: How Philanthropy Drives the American Economy," said the interrelationship of philanthropy and economic development began in the earliest days of American society. She cited the founding of Harvard College as an example of

the relationship between philanthropy and economic development. After the college was established in 1636, the founders looked for a way to include students from all economic classes, not just the rich. They approached Lady Molson, a wealthy colonist, who agreed to fund scholarships for the "artisan class."

Soon, said Gaudiani, 20 percent of Harvard's students came from this class. Grateful communities who benefited from the talents of educated graduates gave back to Harvard in the form of wheat and other commodities. This set up a virtuous cycle of generosity, opportunity, prosperity and gratitude, leading to further acts of philanthropy.

"This illustrates the core of American culture—a commitment to innovation and courage, topped off by generosity," said Gaudiani. "They realized if they invested in each other, they would be better off."

Gaudiani urged Olin students—as beneficiaries of the largesse of the F. W. Olin Foundation—to make generosity a central part of their life plan, in the great American tradition of philanthropy.

Gaudiani, the former president of Connecticut College, is a professor at

New York University, where she directs the graduate program in philanthropic studies.

On January 30 as part of the same series of lectures, former Apple and Pepsico CEO John Sculley addressed the Olin community, sharing with them his ideas on the global trends that are transforming business in today's "flat world" economy.

Sculley, who is known for combining product design innovations with creative marketing, outlined the new financing and business models behind "Economy 2.0." Among the factors driving the new world economy are the rise of such developing economies as Brazil, Russia, India and China, and the introduction of the Internet and new communication technologies. In this environment, companies are forming "virtual ecosystems" for manufacturing and distributing products.

Success in this new environment, said Sculley, depends on focusing on a "superior end customer experience." This focus on superior customer experience is, in turn, creating a new emphasis on "end to end" systems-integrated business structures encompassing inventories, distribution and especially well thought out product design.

Sculley pointed to Apple, Inc., as an example of a company that is flourishing in the new economy. In contrast to many other high tech companies, which concentrate first on the technical components of a product, Apple focuses on the design and the customer experience, an approach that has created such beautiful technical "jewelry" as the iPod, and combined it with useful programs like iTunes. "The digital world really shifted power to the designers who were thinking of things from the user's perspective," said Sculley.



American philanthropy expert addresses the Olin community.

OLIN STUDENTS SHINE



Olin students shine during Fall Expo. Please visit <http://olincasts.olin.edu/> to view a five minute video feature on Expo.

UPCOMING
ACTIVITIES AND
EVENTS

April 9, 2008
Big Conversations

May 12-14, 2008
Olin Exposition

May 18, 2008
Commencement for Class of '08

Innovations

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