Message From The Chair

Dear Alumni and Friends of the Department.

This year was a most productive one for the department. We continue to see enrollment increase and the first of many large classes has graduated-96 students over the past three quarters. We expect graduation classes of over 100 for at least several years in the future. Another change we will see is the conversion to a semester based system, coming in 2012. We have developed a plan of how we will evolve our curriculum into the semester format which is going through the university approval processes. When the new curriculum is official we will post it on our website. Of course, there is also a plan to assist students who will get their degrees with a hybrid of quarter and semester course credits.

Our faculty has also been very productive in their research. We had 15 Ph.D. students graduate last year and our research expenditures increased to over $16M or over $750K/faculty member. This is comparable or better than that achieved at the very best departments of Chemical Engineering in the nation. As part of this research productivity L. S. Fan and S. T. Yang both received very competitive ARPA-E (Defense Department Advanced Research Projects Agency-Energy) multimillion dollar grants this past year. We have also added our 19th faculty member, Aravind Asthagiri, who joined the department in July, from the University of Florida.

The most significant news by far is related to progress in defining our new Koffolt Laboratories building. This past spring there was an intense period of activity as the design architect, architect of record, construction manager, and mechanical electrical and plumbing (MEP) firms were selected after a very competitive bidding and interviewing process. The significant choices for the architectural firms were Pelli Clarke Pelli for the Design Architect and Burt Hill for the Architect of Record. It should be noted that Cesar Pelli of Pelli Clarke Pelli is famous for the Petronis Twin Towers in Malaysia as well as for numerous high quality projects for museums, universities, corporate and office buildings and health care facilities both in the United States and abroad.

We are continuing our efforts in reaching our goal of $17.5M in private support that is required to compliment the approximately $97.5M in state capital funding required for the new building. The Chemistry department with whom we will share space in the new building is obligated to raise $11M resulting in a total building cost of approximately $126M. Chemical and Biomolecular Engineering is expected to occupy about 60% of the assignable 124,000 sq ft of space in the building. We are currently developing a program with the architects which will deal explicitly with the space requirements for our teaching program as well as for research and administration. Once the space plan is approved by the university this fall more detailed design work will begin. Thanks to all of our alumni and friends who have already contributed to our “Campaign for the New Koffolt Laboratories.” Our students and faculty greatly appreciate your generosity.

Best wishes for another wonderful year! Go Buckeyes!

Stuart
Department Chair
Stuart Cooper  292-7907

Faculty
Araavind Asthagiri  688-8882
Bhavik Bakshi  292-4904
Robert Brodkey*  292-2609
Jeffrey Chalmers  292-2727
L.S. Fan  688-3262
Martin Feinberg  688-4883
Harry Hershey*  292-2609
Winston Ho  292-9970
Kurt Koelling  292-2256
Isamu Kusaka  688-8302
James Lee  292-2408
Umit Ozkan  292-6623
Andre Palmer  292-6033
Michael Paulaitis  247-8847
James Rathman  292-3760
Thomas Sweeney*  436-9099
David Tomasko  292-4249
Jessica Winter  247-7668
David Wood  292-9636
Barbara Wyslouzil  688-3583
S.T. Yang  292-6611
Jacques Zakin*  688-4113

Staff
Angela Bennett  292-9076
Graduate Program Coordinator

David Cade  292-2728
Building Coordinator

Bill Cory  247-2449
Human Resources Manager

Mike Davis  292-6928
Systems Specialist

Brian Endres  292-6986
Academic Advising Coordinator

Leigh Evrard  292-2780
Design Engineer

Lynn Flanagan  688-3309
Fiscal Administrator

Paul Green  292-2718
Lab Supervisor

Geoffrey Hulse  292-3589
Director of Information Technology

Dave Jones  271-6718
Systems Engineer

Kirsten Marinko  292-7907
Communications Coordinator

Layla Mohammad-Ali  292-9889
Fiscal Associate

Holly Prouty  688-5686
Undergraduate Advisor

Susan Tesfai  292-5086
Fiscal Associate

*Denotes Professors Emeritus

What’s Inside:

Message From The Chair  2
Directory  3
Alumni Spotlight  4
Faculty News, Awards & Honors  6
Staff News, Awards & Honors  8
Student News, Awards & Honors  8
Koffolt Campaign Committee  10-11
New Faces  11
Lowrie Lectures  12
Lowrie Banquet  13
Unit Operations  14
Advisory Board  15
Alumni Honors, News & Updates  15-16
In Memoriam  16
Alumni Support  17
Alumni Update Form  18
Blast from the Past  19
Alumni Spotlight

**Dennis (’67) & Forrest Hurley (’42)**

Dennis and Forrest Hurley are both OSU Chemical Engineering Alumni. Earlier this year Dennis Hurley made a $100,000 pledge to the campaign for the New Koffolt Laboratories in memory of his father, Forrest, who was devoted to OSU and especially proud of the Chemical Engineering department and contributed to the original Koffolt Laboratory building project.

After graduating in 1942 Forrest Hurley’s first job was with the General Chemical Company in East St. Louis, Illinois in the control laboratory. In 1944 he enlisted in the U.S. Navy serving as communications officer aboard the USS Barataria. In 1946 he joined the Monsanto Chemical Company in Dayton, Ohio, where he worked with phosphorus and nitrogen for flame-proofing and glow-proofing agents for cotton textile materials and with fluoride for inorganic catalysts. In 1954 Forrest received his PhD in Chemistry from OSU and joined the Davison Chemical Company in Baltimore, Maryland where he continued his research with hydrazine chemistry and silica-alumina catalysts. In 1966 he joined the Cement and Lime Division of Martin Marietta where he designed, built and staffed the Cement and Lime Division Laboratory as Director of Applied Research. After Martin Marietta exited the cement and lime business Forrest re-joined W.R. Grace who had acquired his former company Davison Chemical Company, as Director of Cement and Concrete Research in the Cambridge, Massachusetts labs, where he worked until his retirement in 1986.

Dennis Hurley graduated in 1967 from the department and was offered a position in the Process Engineering department of Dow Corning, working in a new group charged with new process evaluations. In 1974, he moved to Brussels to establish the economic evaluation practice in Dow Corning’s European businesses. In 1976, he took an assignment in the finance function to manage the European systems development and data processing network. Dennis returned to the U.S. in 1978 to work in the finance function as manufacturing controller for the U.S. plants. In 1983, he became the manager of corporate planning and budgeting and in 1988, Dennis moved to the Treasury department and began managing the pension and 401(k) plans for the corporation – an assignment that lasted until his retirement in 2009.
The Class of Champions (‘52) was and still is one of the closest classes of Ohio State Chemical Engineering engineers. Joe Koffolt bestowed the title to the class because of their many successes during their time at Ohio State such as their routine winnings of their intramural sports teams, the five championship competitions won by the AIChE Student Branch team, the “Best Float” award in the Engineers’ Day parade around the Oval, and multiple academic first place recognitions. There were 67 graduates from the Class of Champions and for those of us who did not know them as students, it was refreshing to observe their diverse personalities and their loyalty to each other and to the University. As Department Chair from 1977 – 1994, Jack Zakin said, “I had many opportunities to meet members of the Class of Champions and it was always a pleasure.”

Carl Schlea, was the first Class of Champions classmate to pass away in 1957 and the Class established the Class of Champions Memorial Fund. The fund is in memory of those members of the Class of 1952 who have departed and continues to be active.

The Class of Champions’ annual newsletter, created in December of 1952 by Elmer Pendleton (’52) and wife Audrey, with assistance from Bill Glancy, provided a vehicle for classmates to stay in touch. Elmer passed away in 1975, but Audrey volunteered to carry on the newsletter tradition and continued to do so for over 40 years. In addition to taking ownership of the newsletter Audrey attended every reunion, even after the passing of her husband. The reunions in Columbus every five years were well attended with the highlight reunion being the 50th in 2002 organized by Dave Stephan and Phil Walden. Attendees received a binder of each class letter submitted over the years and were also presented with walking sticks. Audrey Pendleton passed away in September 2009 and with the help of James Froning (’52) the final Class of Champions newsletter was sent in December 2009. The newsletter, so graciously put together and delivered by Elmer and Audrey Pendleton was the glue that helped hold this class and their families together for more than 55 years.

*Article content contributed by James Froning, Dave Stephan and Jack Zakin*
CBE Professor S.T. Yang and team received $3.9 million in federal stimulus funds for their alternative fuel research through a program called Advanced Research Projects Agency – Energy (ARPA-E). These funds will be used for an industrially scalable bioreactor approach to incorporate genetically engineered bacteria that metabolizes carbon dioxide, oxygen, and hydrogen to produce butanol. The team, consisting of Robert Tabita, professor of microbiology, natural resources, and plant cellular and molecular biology, and scientists at Battelle anticipates at least a twofold productivity improvement over current levels and a cost that can be competitive with gasoline.

Yang also is developing methods to produce butanol from biomass rather than from carbon dioxide and hydrogen. With support from a $1 million grant from Ohio Department of Development Third Frontier Advanced Energy Program, Yang partnered with ButylFuel, a start-up company, to build a pilot plant that improves on the conventional method for brewing butanol in a bacterial fermentation tank.

Stuart Cooper Receives Society for Biomaterials Founders Award

Stuart Cooper, Department Chair, has been awarded the Society for Biomaterials 2010 Founders Award. This award is specifically given for long-term, landmark contributions to the discipline of biomaterials. The award was formally presented to Stuart at the Society for Biomaterials Annual Meeting held in Seattle, Washington on April 21-24, 2010.

Jessica Winter Wins Grant

Jessica Winter won a grant from private university fund raising group, "Women in Philanthropy". The grant was for $28K for her research on the development of brain mimetic hydrogel materials that provide in-vitro methods to screen for therapies for neurological disorders.

Jim Lee Receives 2010 SPE International Award

Jim Lee, Helen C. Kurtz Chair of Chemical and Biomolecular Engineering, has been awarded the Society for Plastics Engineers (SPE) 2010 International Award. This is the highest award from the largest polymer engineering society for an individual who has demonstrated outstanding achievement and recognized as an international leader in the field of polymeric materials and technology. The award was formally presented to Jim at the SPE Annual Meeting held in Orlando, Florida on May 16-19, 2010.
Faculty members Winston Ho, Jim Lee, Andre Palmer, David Tomasko and Jessica Winter win OSU’s College of Engineering awards

Lumley Research Award

Winston Ho, Andre Palmer, and Jessica Winter have been awarded the Lumley Research Award. The Lumley Research Award recognizes the research contributions of faculty and research scientists.

Winston Ho received the award based on his outstanding research accomplishments and significant influence on the development of novel membranes for fuel cell, energy, water purification and antibiotic recovery applications.

Andre Palmer received the award based on his pioneering advances in engineering novel hemoglobin-based oxygen carriers (HBOCs) for use as red blood cell substitutes in transfusion medicine, and the use of those HBOCs to target and enhance oxygen transport to mammalian cell cultures.

Jessica Winter received the award based on her research of fluorescent-magnetic nanoparticle composites and polymeric biomaterials. Jessica has established herself as a leader in both fields, especially in the nanoparticle area, where she led one of the first research groups to develop magnetic quantum dots.

Faculty Diversity Excellence Award

David Tomasko received the Faculty Diversity Excellence Award because of his commitment to his efforts at increasing diversity of the student population, promoting a culture of mutual respect, and creating supportive environments for diversity to flourish and has a tremendous impact on the interest level of women and minority students choosing chemical engineering as their...

David C. McCarthy Engineering Teaching Award

Jessica Winter was awarded the David C. McCarthy Engineering Teaching Award due to the significant impact she has made through her support for classroom technology, curriculum enhancements, integration of outreach and teaching and support of undergraduate research.

Lumley Interdisciplinary Research Award

Jim Lee received this award based on his important contributions in the following four areas: (1) reactive processing of thermoset polymers, (2) polymer composite manufacturing, (3) polymer nanocomposites/foams/supercriticalCO2 technology, and (4) polymer micro/nanoengineering and BioMEMS (BioNEMS), through close interactions among universities, government laboratories, and the chemical industry.

L.S. Fan Elected as a Foreign Member of the Chinese Academy of Engineering

Congratulations to L.S. Fan on his recent election as a Foreign Member of the Chinese Academy of Engineering. The election was based on his outstanding achievements in engineering and technological sciences as well as his contributions to China’s development in Engineering and Technological Sciences. The 10th General Assembly of the Chinese Academy of Engineering was held in Beijing, June 2010, where Dr. Fan had the opportunity to attend and accept his certificate of membership.

Professor Martin Feinberg Published in Science Magazine

Congratulations to Professor Martin Feinberg for his article appearing in the March 12th, 2010 edition of Science Magazine. The article, titled, “Structural Sources of Robustness in Biochemical Reaction Networks,” was coauthored with Guy Shinar, from the Weizmann Institute of Science.
Student News, Awards & Honors

Paul Green Receives OSU Distinguished Staff Award

As a laboratory supervisor, Paul Green manages the construction and maintenance of the Department of Chemical and Biomolecular Engineering’s essential scientific laboratories. As an innovative thinker and gifted machinist and model/instrument maker, Green goes above and beyond the mandated aspects of his job to enhance the safety and function of Ohio State laboratories.

A trained machinist, Green uses his own expertise to build laboratory instruments that could otherwise cost departments up to $10,000 apiece. Green not only saves departments, individuals and research groups money through making and repairing instruments, but he also brings in revenue to the Department of Chemical and Biomolecular Engineering.

“He has a great deal of experience on various kinds of equipment and outstanding equipment design, fabrication and support/maintenance skills,” wrote a nominator. “This has significantly increased the research and teaching productivity in the Department of Chemical and Biomolecular Engineering.”

CBE Students Place at the 2010 Fuel Cell Symposium

Dieter von Deak won 1st place at the 2010 Fuel Cell Symposium. His co-authors were Elizabeth J. Biddinger and Katie A. Luthman. Nandita Lakshminarayanan won 3rd place. Her co-author was Hyunkyu Choi.

The Ohio Fuel Cell Symposium was created by the Ohio Fuel Cell Corridor (OFCC). OFCC partners with the academic community across the state to encourage intra-university collaborations, and collaborations with industry to support fundamental and applied research needs that lead to accelerated commercialization of fuel cell technology and the growth of Ohio’s industrial role.

Graduate Student Elizabeth Biddinger Selected to Attend The Council for Chemical Research Leadership Workshop

Elizabeth Biddinger, a graduate student in Professor Umit Ozkan’s research group, was selected to attend The Council for Chemical Research’s Leadership Workshop, which was held at the CCR Annual Meeting in Atlanta in April 2010. This selection brings with it a travel scholarship as well.
Kartik Ramasubramanian Awarded the 2010 Elias Klein Founders' Travel Award

Kartik Ramasubramanian, a Ph.D. student in Winston Ho's group, has been selected as a winner of the 2010 Elias Klein Founders' Travel Award from the North American Membrane Society (NAMS). The selection of this award is based, in part, on academic achievements, and provided travel expenses for Kartik to present a paper, entitled “Modeling of CO2-selective Membrane Processes for Hydrogen Purification and Carbon Capture”, at the First Joint Annual Meeting of NAMS and International Conference on Inorganic Membranes in Washington, DC on July 18 – 22, 2010.

CBE Graduate Students Teach Women In Engineering CHEER Session

Graduate students Nicole Guzman, Jake Elmer, Adam Burley and Troy Vogel, with David Tomasko as the representing faculty member led a session of WiE CHEER, an event hosted by the Women in Engineering (WiE) Program AT OSU. The event is designed to give 8th grade girls an in-depth look at important research areas and concepts within the field of chemical engineering. Each day, the program combines a field trip to an area business or corporation with a series of fun, hands-on activities. The off-campus field trips allow participants to see what chemical engineers do in the “real world,” while the on-campus activities enable students to imagine themselves as practicing chemical engineers. Off-campus field trips and on-campus activities are developed and coordinated by Ohio State engineering faculty and staff as well as graduate students who are earning their Ph.D.s in chemical engineering. Activities led by the CBE graduate students included making ice cream and lip gloss.

Nicole Guzman wins an Ohio Space Grant Consortium (OSGC) Fellowship

Nicole Guzman was awarded an OSGC Fellowship based on her research of the creation and design of medical diagnostic devices for the early detection of cancer and the prevention of infectious diseases. The Ohio Space Grant Consortium (OSGC) and its member universities offer graduate Fellowships to students who are United States’ citizens and have demonstrated the ability and aptitude for advanced study in studying in a Science, Technology, Engineering, and Mathematics (STEM) related discipline.

CBE Students Win 3rd Place in the Engineering Capstone Design Showcase

Robert Hoelzle, Annemarie Fox, Julia Mueller, and Brian White placed 3rd in the College of Engineering’s 3rd Annual Engineering Education Innovation Center (EEIC) Engineering Capstone Design Showcase with their project on Production of Butanol from Biomass. Their project was hosted by CBE Professor S.T. Yang and supervised by Post Doctoral Researcher Mingrui Yu. The event recognizes the hard work and excellence of senior undergraduate students in completing their undergraduate senior capstone design project. The goal of the capstone design projects is to expose students to real-world engineering design problems, supplied by industry partners, to gain experience in the entire design process.
The Koffolt Laboratories National Campaign Committee gathered on September 10, 2009, to discuss progress to date on the new building. Bill Lowrie ’66, chair of the committee, reported that more than $13 million had been committed to date towards the $17.5 million fundraising goal for the project.

University Facilities representative, Amanda Hoffsis, shared with the committee plans for the new site location on 19th Avenue next to the current Koffolt Laboratories, rather than the previously identified site of the former Lord Hall. Interim Dean Greg Washington welcomed the change, noting that this new location would showcase the William G. Lowrie Department of Chemical and Biomolecular Engineering proudly within the engineering and technology corridor of campus.

The committee will meet again in September 2010 to review the building plans and continue their efforts to engage fellow ChemE alumni in support of the new Koffolt Laboratories.

Koffolt Campaign National Committee Members:

- **William G. Lowrie** (B ChE ’66), Chair
  Sheldon, South Carolina

- **Jeffrey D. Adams** (B ChE ’87)
  San Mateo, CA

- **Richard A. Arnold** (B ChE ’48, MBA ’50)
  Houston, TX

- **Cynthia (Cindy) Gerstle Bishop** (B ChE ’86)
  Coppell, TX

- **James (Jim) F. Dietz** (B ChE ’69, MS ’70)
  Northfield, IL

- **David (Dave) Grove** (B ChE ’70, MS ’70)
  Stuart, FL

- **Jack A. Hammond** (B ChE ’61)
  Iron Gate, VA

- **Ronald D. Harris** (B ChE ’61, MS ’61)
  Columbus, OH

- **F. William (Bill) Hauschildt, Jr.** (B ChE ’67, MS ’67)
  San Francisco, CA

- **Karen Lafferty Hendricks** (B ChE ’71)
  Maineville, OH
Dr. Aravind Asthagiri obtained his B.S. in Chemical Engineering with a minor in Mathematics (1998) from The Ohio State University, and a Ph.D. in Chemical Engineering from Carnegie Mellon University (2003). In his doctoral research with Professor David Sholl, he examined the enantiospecific potential of chiral metal surfaces and the growth of thin metal films on metal oxides. From 2003-2005, he was a postdoctoral fellow at the Carnegie Institution of Washington investigating amino acid adsorption on chiral mineral surfaces with Dr. Robert Hazen and modeling the electromechanical properties of ferroelectric materials with Dr. Ronald Cohen. In 2005, Asthagiri joined the Chemical Engineering Department at the University of Florida as the Dow Chemical Company Foundation Assistant Professor. Dr. Asthagiri has been the organizer of the Low Pressure group at the AIChE National Meetings since 2009. He is currently co-editing a forthcoming Royal Society of Chemistry book titled “Computational Catalysis: Recent Advances in Methods and Applications”. In 2010, he accepted a position as Associate Professor in the Chemical and Biomolecular Engineering department at his alma mater, The Ohio State University, and will begin in August 2010. His research involves the application of atomistic simulations to examine and rationally design novel materials.
William G. Lowrie Lectureship & Honors Banquet

2010 William G. Lowrie Lecturer

Rakesh K. Jain, PhD, is the Andrew Werk Cook Professor of Tumor Biology in the Department of Radiation Oncology at Harvard Medical School, and the Director of the Edwin L. Steele Laboratory of Tumor Biology at Massachusetts General Hospital. Dr. Jain is regarded as a pioneer in the fields of bioengineering, tumor biology, drug delivery, in vivo imaging and bench-to-bedside translation. Trained as a chemical engineer, he has developed the world’s leading laboratory for the quantitative study of tumor physiology. He has been most generous in sharing his innovative technology and creatively designed model systems, which has truly enabled much of the progress in this field worldwide. A mentor to more than 150 doctoral and postdoctoral students from over a dozen different disciplines, Dr. Jain’s findings are summarized in more than 485 publications, including three in Scientific American. He serves on advisory panels to government, industry and academia, and is a member of editorial boards of ten journals, including Nature Reviews Cancer and Nature Reviews Clinical Oncology. He received more than 50 awards and honors, including a Guggenheim Fellowship, the Humboldt Senior Scientist Award, the National Cancer Institute’s Research Career Development Award, the Outstanding Investigator Grant, the Academic Scientist of the Year Award from the Pharmaceutical Achievements Awards and the Department of Defense-Breast Cancer Innovator Award. He is a member of all three US National Academies - the Institute of Medicine, the National Academy of Engineering and the National Academy of Sciences - and the American Academy of Arts and Sciences.

Lecture I: Normalizing tumor vasculature to treat cancer: From mathematical model to mouse to man

Cancerous tumors require blood vessels to grow and spread to other organs. Dr. Jain demonstrated that the blood vessels of tumors are abnormal—not only in their structure, but also in their function. Using a mathematical model, he showed consequences of this abnormality—specifically, how this abnormality contributes directly to malignant properties of a cancer as well as prevents treatments from reaching and attacking tumor cells. Dr. Jain proposed a novel concept that “normalizing” tumor vessels would allow cancer therapies to penetrate the mass and to function more effectively. He then went on to show first in mice and then in cancer patients that drugs originally designed to destroy tumor vessels could, paradoxically, also repair them, creating a window of opportunity to attack the cancer most effectively.

Lecture II: Transport phenomena in tumors: Integration of engineering principles with molecular and...
LOWRIE LECTURESHP AWARD
Awardee: Rakesh K. Jain

SPECIAL RECOGNITION
Elizabeth Biddinger: Selected to attend the Council for Chemical Research’s Leadership Workshop
Hyunkyu Choi: Received Best Poster Award at the IMR Materials week
Nicole Guzman: Received Ohio Space Grant Consortium Fellowship
Hartawan Laksmono: Received a $500 travel award from the American Association for Aerosol Research
Kartik Ramasubramanian: Selected as a winner of the NAMS 2010 Elias Klein Founders’ Travel Award

AMERICAN INSTITUTE OF CHEMISTS FOUNDATION AWARDS
AIC Outstanding Undergraduate Student Award
Awardee: Katherine Kinstedt
AIC Outstanding Graduate Student Award
Awardee: Bo Yu
AIC Outstanding Postdoctoral Award
Awardee: Fanxing Li

DOW CHEMICAL OUTSTANDING JUNIOR AWARD
Awardee: Vince Frascello

AIChe STUDENT AWARDS
AIChe Central Ohio Section Outstanding Student Award
Awardee: John Larison
Donald F. Othmer AIChe Sophomore Academic Excellence Award
Awardee: Kunal Parikh

AIChe STUDENT CHAPTER OFFICERS
President – Alex Aossey; VP – Katie Vermeersch; Treasurer – Eric Sacia; Secretary – Jean Wheasler; Membership Chair – John Titone; Philanthropy Chair – Nariman Alkhatib; Co-Social Chairs – John Larison & Lindsay Volpenheim; ChemE Car President – Craig Buckley; ChemE Car Treasurer – Lindsay Volpenheim; Research – Jean Wheasler; ChemE Car Safety Chair – Beth Johnson & Katie Vermeersch; Fuel Cell Team Leader – Thomas Yeh; Timing Mechanism Team Leader – Eric Sacia; Chassis Team Leader – Justin Spitzer

DEPARTMENT OF CHEMICAL AND BIOMOLECULAR ENGINEERING AWARDS
Co-Op Award
Awardee: Doug Knapke
Outstanding Undergraduate Award for Research Excellence
Awardees: Ibrahim Bamba, Beth Johnson, Doug Knapke, Dennis McOwen, Mark Politz, Qi Wang
Outstanding Graduate Award for Academic Achievement
Awardees: Guo Chen, Jake Elmer, Yongjia Fan, Preshit Gawade, Daniel Heath, Haifeng Shi, Manish Talreja, Michael Vilt, Fei Wang, Yipin Zhou
Outstanding Post-Doc Award for Research Excellence
Awardee: Mingrui Yu, Xulang Zhang

CEGC OFFICERS (Chemical Engineering Graduate Council)
Academic Officer: Robert Urban
Social Officer: Adam Burley
Recruitment Officer: Jacob Elmer
Facilities Officer: Yongjia Fan

Katie Kinstedt & Jack Zakin
Yongjia Fan & Kurt Koelling
Kunal Parikh & Barbara Wyslouzil
Xulang Zhang & L.S. Fan
The enrollment of this summer’s Unit Operations class is 113 students, just slightly below last year’s record enrollment of 118 and several advances in the lecture and experiments have been implemented.

The Shell & Tube Heat Exchanger experiment has been redesigned and consists of new equipment and instrumentation. The Mixing Dynamics experiment has been expanded to include two phase gas-liquid dynamics and the pH measurement for the CSTR and PFR reaction kinetics experiment can now be made with online data acquisition. The computer instrumentation controls on the distillation column have been updated and the hydrogen fuel cell has been upgraded to include additional pressure and flow measurements and humidity control. The plate heat exchanger data analysis has been updated to reflect current literature references and mathematical modeling.

The Unit Ops summer course consists of 12 experiments; and three areas of focus: Environmental, Biological, and Classical. Students are assigned to one of the three areas of focus and are required to perform 4 experiments. This year we have added a lecture on distillation column internal design and commercial applications. We have also added laboratory demonstrations for all students on the remaining 8 experiments.
The 2010 Advisory Board Meeting was held March 18 with attending board members from left to right Mike Winfield, Terry Chern, Linda Broadbelt, Nancy Dawes, and Drew Weber.

Department Chair Stuart Cooper discussed department highlights, new faculty positions, the increasing enrollment numbers of the undergraduate program, and the University’s plan to switch from quarters to semesters. The Department is reaching historic highs with undergraduate enrollment (sophomore-senior) approaching 500 students. Close to 100 B.S. degrees will be given this year. In 2009 there were 95 graduate students with the majority at the PhD level. Even though our faculty size is increasing student-faculty ratios are also increasing. Although this can make instruction more challenging, faculty productivity is outstanding. Dean Greg Washington updated the committee on enrollment, and research funding from industry and government for the college. Enrollment is up 34%, industrial sponsored research is up 58% from 5 years ago, and federal and state sponsored research is up 30%. A collaborative movement has begun where we connect with industry in a more direct and meaningful way. The College of Engineering has one of the best first year programs in the country with the freshmen retention rate at 88% resulting in a highly competitive student.

After lunch undergraduate student, David Tarai, and graduate student, Shwetha Ramkumar, spoke to the group about their experiences in the department and field of Chemical Engineering and possible revisions to the B.S. program educational objectives were discussed.

Dr. Cooper gave an update on the new building. Dr. L.S. Fan discussed his research regarding “Chemical Looping for Hydrogen Production or Combustion”, Carlo Scaccia and Jim Rathman updated the group on the future of lab instruction and the meeting wrapped up with a roundtable discussion addressing challenges and opportunities in regards to undergraduate enrollment pressure, shortage of teaching assistants, the new proposed curriculum, and recruitment. Overall the consensus was that this meeting was very productive.

### Alumni Honors, News & Updates

The Shining Star award recognizes AIChE local chapter levels outstanding volunteerism. Larry has been an active member of the Central Ohio Section since 1982. He served as Chair in 1989 and has served as an officer for much of the time since then, including his current position of treasurer, an office that he has held for many years. Larry continues to be active in the organization even though his current job has placed him several hours away from most meeting locations. He tries to attend most meetings and when he cannot, is still very prompt in taking care of the treasurer duties. It is for Larry’s constant long-term support of the Central Ohio Section of AIChE that he was nominated for and received the “Shining Star” Award.”
Henry B. Lange worked at Merck and Co. for ten years after graduating from ChE, where he earned five patents and wrote two papers that were published in Chemical Engineering Magazine.

Bill Mead is retired but consulting in Cohasset, Massachusetts.

Paul Brown Mount II has retired as Chief of Mineral Resources of California's State Lands Commission after having worked his entire career in oil and gas exploration and production. He was also a colonel in the U.S. Army.

Matthew Barbicas is a service supervisor for Carrier Corp. in Dulles, VA.

In Memoriam

Winston Howard Duckworth (B.S. ’40 & M.S. ’41) died on March 19. He worked at Battelle in the Ceramics area.

Leonard Arthur Harris, B.S. ChE, ’43, passed away on July 4, 2010 in Las Vegas, NV. After graduation from the Ohio State University, Len served with the Army Corps of Engineers during WWII in the South Pacific. During his professional career he works for the Royal Commission in Saudi Arabia, PPG Industries, and Kerr-McGee in the areas of plant design and chemical manufacturing. He will be missed by his friends, family, and fellow Buckeyes.


Lawrence “Larry” A. Carlson (B.C. ’48) of Vero Beach, FL died November 12, 2009. He was born in Akron, Ohio and lived in Vero Beach for 26 years coming from Manistee, Michigan. Mr. Carlson served in the US Army during the WWII and was employed by The Morton Salt Company for 37 years, the last 18 years of which he was the Manager of it’s plant in Manistee, Michigan. He retired in 1988.

Dr. Jorge A. Guzman (MS 1970, PhD 73) passed away March 30, 2009 in Puebla, Mexico. After graduating he returned to his native country to dedicate his life to teaching.

He taught at the UNAM(Universidad Nacional Autonoma de Mexico), UDLA(Universidad de las Americas), BUAP(Benemerita Universidad Autonomo de Puebla) and various Technological Institutes. He was chairman of the Chem Eng.dept of BUAP for 20 years. After retiring from the BUAP he founded a private 4 year Engineering University.

He was visiting professor at OSU 1988-1989. He recommended several of his students to OSU where they received graduate degrees. Jorge was a member of AICHE and IMIQ(Mexican Chemical Engineering Institute).He served many years on the local and national boards of directors of IMIQ.

He will be remembered by generations of students for his International Engineering Conferences organized with support of UNESCO, BUAP and OSU as well as numerous other Universities where Engineering professors from many nations mingled with his students and inspired them with new ideas.

Jorge is survived by wife, Frann and daughters Alexa(Puebla) and Nicole (currently a graduate student in CBE at OSU).
Our department benefits from a variety of types of Alumni support. These include graduates who have established endowment funds which support undergraduate scholarships, annual support received from Jewels Club members and from annual support that is designated for the general fund of the department. This support is vital to the quality of our program and helps us provide an educational experience for our students that transforms them into future leaders of our profession.

Now we ask that you consider another category for your giving plans, the campaign for the New Koffolt Laboratories, a once every 50-60 year opportunity to provide a great new home for the department. The department must raise approximately $17.5M of the more than $125M that the building will cost. We are in the middle of the building campaign with close to $13.5M pledged as multi-year gifts and over $4M in an interest bearing account so we are making good progress thanks to generous alumni. Please let us know if you would like more information on possible giving options, including making a multi-year pledge to our Koffolt Laboratories building fund.

Name____________________________________
Home Address_____________________________
_________________________________________
_________________________________________
Phone____________________________________
Cell Phone________________________________

Please check one of the following:
☐$50     ☐$100     ☐$250
☐$500     ☐$1000     ☐Other________

☐See if your supported gift will be matched by a corporate gift matching program.

Amount Enclosed__________________________
☐Check     ☐Credit Card

Please make checks payable to the Chemical and Biomolecular Engineering Department

Please charge my:
Visa  ☐Mastercard  ☐Discover
American Express

Name on Card________________________________
Account Number____________________________
Expiration Date ___________________________
Signature__________________________________

Please indicate where you would like your donation applied:

New Building Fund, 310614______  General Fund, 302693______  Jewel’s Club, 310335_____
PERSONAL
Name____________________________________________________ Spouse___________________
Address___________________________________________________________________________
City____________________________ State_______________________ Zip___________________
Children__________________________________________________________________________

COLLEGE
Degree__________________________ Major________________ Month/Year_________________
Degree__________________________ Major________________ Month/Year_________________

PROFESSIONAL
Occupation________________________________________________________________________
Most Recent Employer_______________________________________________________________
Department________________________________________________________________________

ACTIVITIES
News and information to share with fellow alumni and friends in Chemical Engineering. Work related, outside activities, achievements, honors, family news, etc.

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
Blast from the Past

Can you identify who is in this picture? If so, please send an email to Geoff Hulse at hulse.1@osu.edu.

If you would like to contribute something of your own please send an email to Geoff Hulse, as well. The photos will be placed on our website at www.chbmeng.ohio-state.osu.