From The Chairman

It is again a pleasure to communicate with you and inform you of recent exciting things that are happening in your department, College, and University, two of which are of particular importance. First, the College's Development Office has started an Alumni Society Merit Award Program, in conjunction with All-Alumni Weekend (which was 2-3 October this year); and, as you are perhaps aware, the University has just begun a one-billion-dollar Capital Campaign that is intended to attract the resources that are vitally needed to sustain the University of Michigan's long tradition of excellence in education, research, and service.

The IOE Alumni Society Merit Award — Our First Recipient.

The Department is pleased and proud that Thom Hodgson, currently at the National Science Foundation, is the first recipient of the IOE Alumni Society Merit Award. More information about the award and Thom are provided elsewhere in this Newsletter.

The Capital Campaign.

The College's targeted share of the University's Capital Campaign is $80,000,000, which is intended to provide support for research and instructional support, endowment, facilities construction, and annual giving. The Capital Campaign support that is targeted for facilities construction is intended to satisfy the College's remaining primary facility need, which includes classrooms and other space needs for IOE. This very important additional resource is also discussed elsewhere in this Newsletter.

The objective of directing Capital Campaign resources to research and instructional support is to develop within the College those areas that hold great promise for future significant impact and for insuring that the College will make notable contributions to the overall knowledge base and further secure its own national academic leadership role. These areas include: advanced information systems, bioengineering and biotechnology, environmental engineering, manufacturing, and materials technology. IOE capability can affect virtually all of these areas, particularly bioengineering and biotechnology (through our internationally known Center for Ergonomics) and manufacturing.

The College—wide Program in Manufacturing.

With regard to manufacturing (in its broadest sense, which includes production technologies, design, materials, and other technologies that impact the overall manufacturing enterprise), the College has recently developed a College-wide strategy for manufacturing - a mission, goals, and a
set of suggested initiatives. This strategy provides a College-level direction for the College’s educational, research, and technology transfer activities in manufacturing. Results of this effort include the creation of a College-wide Program in Manufacturing, which has as its primary tasks, communication within and outside the College regarding CoE manufacturing-related activities, coordination of manufacturing-related activities within the CoE, and promotion of high-impact industrially-relevant research and educational initiatives with the CoE.

The Michigan Joint Manufacturing Initiative

A related initiative at the University level is the development of the Michigan Joint Manufacturing Initiative (MJMI), a joint activity between the College and the Business School, whose mission is to focus the capabilities and assets of the University, in direct partnership with industry, to support and create industrially-relevant educational, research, and technology exchange activities. The intent of this initiative is to pursue educational and research activities that involve the participation of both University units, and eventually other units within the University (e.g., LS&A, through the Department of Economics; the School of Natural Resources; the Law School), in order to significantly impact the global competitive capability of the State and Nation in manufacturing. Highlights of this initiative include a Center for Manufacturing Excellence, a portfolio of manufacturing-related degree programs that blend engineering course work with course work in the Business School, and a highly mission- and manufacturing-oriented research program. Direct industrial involvement at both the design and execution stages of the MJMI insure that this initiative will be a truly collaborative venture with industry.

We look forward to hearing your reactions to these and other activities with which the Department are involved. More generally, we are interested to hear from you on all subjects of interest and to print observations that you wish to share with your fellow alumni. When you write, we would appreciate your continued support of the Department. Further discussion of how you can become a part of the Capital Campaign and help to support the efforts of IOE is presented elsewhere in this Newsletter.

In closing, let me thank all of you for your continued interest in the Department. We look forward to working with you in the years ahead to continue the excellent tradition of engineering education in IOE and at the University of Michigan.

—Chip White

About The Campaign for Michigan

The University of Michigan has always looked to the future to identify new opportunities, possibilities, and challenges. To seize those opportunities, the University has had generous support from alumni, corporations, foundations, and other friends. This support is more important than ever. It is the hope of the future.

The financial profile of the University has changed dramatically in recent decades. Today, the University derives most of its revenue from tuition and fees, research support from the public and private sectors, and from private giving. While funding from the State of Michigan continues to play an important role in supporting the institution’s mission, it is no longer the primary source.

Private support is now the key determinant in the University’s ability to provide leadership in higher education. Therefore, the University of Michigan has embarked upon its most ambitious fund-raising campaign ever. The Campaign for
Michigan will seek gift support from private sources to strengthen existing resources: to build the endowment; to increase annual giving; and to renew physical facilities through renovation, restoration, and selected new construction projects. The College of Engineering has accepted responsibility for $80,000,000 of the Campaign for Michigan's overall goal of $1,000,000,000.

The Michigan Engineering Design for Impact

The College of Engineering has few peers in modern education and research. Its faculty and alumni set the pace in critical technologies across all disciplines, demonstrating Michigan Engineering's impact and presence throughout the nation and the world.

Consistent with the engineer's reasoned approach to complex problems, the College joined its expert resources—faculty and administration, students and staff, alumni and friends—to develop a plan for assuring Engineering's continuing impact on the future. Their recommendations for endowment, programs, and facilities are the priority objectives of the College's $80,000,000 Design for Impact Campaign, an integral part of the Campaign for Michigan. Its success will position the College, and the people it serves, for maximum results in the decades to come.

A Symbol of Michigan Engineering Excellence

The overlapping block "E" and "M" of the Design for Impact symbol represents the past, present and future Excellence of Michigan Engineering education, research and professional performance. Look for this symbol in Engineering publications throughout the five-year Design for Impact Campaign to find information about the Campaign.

The Opportunity

The College of Engineering has completed an organizational agenda to assure its continued eminence well into the next century. The $80,000,000 Design for Impact Campaign is structured to support this agenda and to maximize the potential of the College's programs, people, and facilities in the decades to come.

The College Program Priorities

The College will raise and invest $20,000,000 for these programs.

Advanced Information Systems to accelerate the College's information technology advancement to the next paradigm shift in computing, moving Michigan Engineering from a listen-and-read model to a design-and-lead experience.

Bioengineering and Biotechnology to support Michigan's leading-edge work in human health and safety, as well as expediting Biotechnology's significant potential to strengthen America's competitive economic position.

Environmental Engineering to enhance and sustain the seminal work of Michigan Engineering's world-class education and research initiatives on global environmental change.

Manufacturing to work in close partnership with United States industry to significantly impact the global competitive capability of the United States in manufacturing.
Materials Technology to increase and focus Michigan Engineering's resources on developing materials that are so frequently critical to defining engineering solutions.

The College Endowment Goals

$10,000,000 for our Professorships to double (from eight to sixteen) the number of endowed professorships available to the College's outstanding faculty members, Michigan Engineering is at a competitive disadvantage among its peer institutions in the pursuit and retention of the best professorate. For example, the University of California at Berkeley now offers one endowed professorship for every eight faculty members, compared to Michigan Engineering's one for every twenty. The goal for this priority objective is.

$15,000,000 in Graduate Fellowships to provide the financial assistance that is often essential to the continued education and training of tomorrow's engineering leaders. Again, Michigan currently stands at a competitive disadvantage.

$10,000,000 in Undergraduate Scholarships to provide an increase in endowed funds to assure that the most promising students can get an engineering education at the University of Michigan.

$15,000,000 to construct a new Engineering Center, to establish a focal point for faculty, student and alumni activity, a comprehensive student service area, administrative and business operations, and additional space for the Department of Industrial and Operations Engineering.

$10,000,000 in Annual contributions, given without restriction, or directed to specific departments within the College.

Through the Campaign, alumni who are regular donors will be asked to consider increasing their annual support, and others will be asked to consider making first-time gifts to the College.

President's Column
The IOE Alumni Academy

This is my first IOE Alumni Academy column, and I am approaching this task with a certain amount of wariness. In part, this is due to the second of the two subjects of this particular column. The first subject is the Academy itself and its activities, something you may have heard about before. The second subject is... well, we may wait until later in the column to explore it. Over the past several years, the IOE Alumni Academy has enabled the department and some interested graduates to meet and discuss a fairly broad range of topics, concerns, and needs. Some of this information is of general interest, with the department chair or other faculty representatives updating some recent, and not so recent, graduates of developments within the department, the College of Engineering, and the university at large. At times the department has specifically sought the advice and counsel of the Academy on particular topics and has even been open and receptive at those times when it did not seek, but was given, advice anyway. Topics have included curriculum developments, accreditation, department performance relative to its "peers" at other universities, staffing and recruiting, faculty news, and college or university wide programs such as those addressing manufacturing and quality improvement processes in education.

The Academy meets twice a year, normally in October and May. It is self supporting, by the way, with its modest expenses defrayed by the not so periodic assessment of its members. The Academy has been particularly close to the department as an active resource for the IOE 424 projects course. Students, preferably in teams, work "on site" with a project sponsor on a part time basis for an entire semester. Progress is paced by regular reviews and final reports and presentations on these "real world" problems. Jeff Liker initially approached the Academy several years ago when a pilot was sought for this new ABET (an engineering school accreditation body)
requirement, and the Academy has been involved as individuals or as an organization ever since.

The second topic is, well, money. The Academy was never intended to be, and will not become, a fund raising organization. That would exploit and perhaps abuse the role of the Academy and the relationships it has with the department, and, more importantly, with the alumni. However, if you are inclined to support the department or university, the Academy certainly encourages you to do so. Besides the federal tax deduction and Michigan tax credit, you have the opportunity to highly leverage your interest in the department or College of Engineering and focus or target your support. Personally, I encourage you to support the university, the College of Engineering or the IOE department. As alumni, we want our educational institutions to sustain their relevance, address the 21st century, and educate engineers and others for a more economically competitive future.

If you are interested in becoming a member of the Academy or supporting its efforts please contact Vance Shutes at 313-231-1300 (work) and 313-429-1863 (home), or me, 313-481-7677 (work) and 313-348-2765 (home).

—Douglas Berg
President, IOE Alumni Academy

IOE Alumni Gather for October Homecoming Reception
IOE Faculty and Alumni Meet at Reception

Professor Walton Hancock

Professor James Miller (your IOE Newsletter editor) with George Perrett
New Engineering Center Building Will Provide Additional Space for IOE

We are anxiously looking forward to the construction of the new Engineering Center Building (ECB). In addition to providing a centralized site for the College's faculty, student organizations, and administration, the ECB will provide much needed additional space for the IOE Department. The new building will house leading edge teaching facilities, laboratories, and offices:

**Teaching Facilities.** Plans call for three large lecture halls, two small classrooms, and a computer lab/classroom. The lecture halls will be shallow and wide, with tiered seating wrapping around the instructor. This "teaching in the round" will enhance communication between the speaker and audience. Further enhancing the teaching impact will be computer and video projection equipment integrated into each of the lecture halls. The computer lab/classroom will be set up with a computer workstation for each of the students. The instructors and students will then be able to work together on computer aided engineering in such areas as statistical quality control, computer simulation, information systems, and optimization.

**Laboratories.** The proposed laboratories will support research and teaching in human factors/work measurement, biomechanics, electrosensory processes, and process metrology. This new laboratory space will let us restructure space in our current building, thus providing needed facilities for new research, such as human computer interfaces, hand tool ergonomics, and repetitive stress trauma.

**Offices.** Additional office space in the ECB will provide more graduate students with offices for collaboration, preparing material as teaching assistants, and holding review sessions. Other office space will provide IOE's student organizations with a place to meet and work.

These additional spaces for the IOE Department will provide facilities necessary to be a leading industrial engineering department in the country.

—Chris Konrad and Jim Foulke

How You Can Directly Contribute to IOE

The IOE faculty and alumni are heavily involved in the campaign. You can see from the above article that we will particularly benefit from the contributions for our additional facilities as well as through endowments, the manufacturing program, and the annual giving.

A number of the IOE alumni have told us that they would feel more comfortable if they could be assured that their contributions would be used to benefit the IOE Department directly as opposed to helping the college in general. This can be done by indicating on the form that is to be sent back with the payment that the contribution is to go toward the programs of the IOE Department. Below is a typical form that is used. By writing the dollar amount and then "Industrial and Operations Engineering" or "IOE" in the "Other (please specify)" section, your contribution will be credited to the IOE Department's unrestricted funds account.

The Department will then be free to use the funds to help fulfill the highest priority needs of the Department. These needs change from time to time, but seem to practically always be in the following areas:

1. **Travel funds for the faculty.** The faculty are very active professionally and are expected to attend and participate in professional meetings worldwide. The funds available for this purpose are not sufficient for us to maintain world-class stature without alumni support.

2. **Student support funds.** We compete for the best graduate students in the
country. In order for us to do this successfully, we must be competitive with other prominent departments in the financial support that we can offer to prospective students. Of course, once they are in residence, we want to continue to provide them with enough support so that they can focus on their studies.

3. Equipment funds. We continually need to update our equipment, not only for research, but also to teach our students how to use the increasingly complex computer software. The expected life of desktop computers is four years and the software is continually being updated, so we must not only continue to purchase computing equipment, but also we have to have support personnel to aid in rapid implementation.

—Walton Hancock, IOE

---

**College of Engineering Fund**

<table>
<thead>
<tr>
<th>I would like my gift designated for:</th>
<th>Enclosed is my gift of: $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Fund $</td>
<td></td>
</tr>
<tr>
<td>Presidential Fund $</td>
<td></td>
</tr>
<tr>
<td>University Libraries $</td>
<td></td>
</tr>
<tr>
<td>Other (please specify) $</td>
<td></td>
</tr>
<tr>
<td><strong>Industrial &amp; Operations Engineering</strong></td>
<td></td>
</tr>
</tbody>
</table>

As this year approaches its close, remember the tax advantages provided by your contribution now. Your gifts are deductible as allowed by law.

**Senior Design Course**

This Fall is the first time that the senior design requirement is in force for all graduating seniors. You may recall from an earlier newsletter that our accreditation board, ABET, requires a capstone design course which focuses on real world problem solving. Students have several options. The most common options are the Practicum in Hospital Systems (IOE 481) taught by Richard Coffey, the head of the management engineering department at the U.M. hospitals and a graduate of our program, and the Practicum in Production and Service Systems (IOE 424), which is taught on a rotating basis by IOE faculty. Each of these courses are drawing 20-25 students per term.

Both courses require students to work in teams on actual projects under the guidance of a site coordinator (representing the client). In the hospital course Richard Coffey uses projects from the U.M. hospitals and provides close supervision and technical guidance.

The more general course on production and service systems continues to be run with the assistance of our alumni academy. We depend on nearby firms ranging from firms in Ann Arbor to firms within a 1 hour commute. The site coordinator plays a particularly crucial role in assuring access to relevant data and helping the students find their way around the firm. Often these site coordinators are U.M. alumni. Students are required to present their results to management and their grade is partly based on feedback from the site coordinator. Since the projects cover a broad range of technical areas, students also identify a faculty member who knows the area and can act as a technical consul-
important. To give students examples of real world projects we invite speakers from I.E. departments in companies to come to class and describe actual I.E. projects.

The projects students work on are important and real I.E. projects. To give you an example of the range of projects covered this fall in IOE 424, at ReCellular in Dexter, a company which refurbishes cellular phones, one group is helping them analyze data on the kinds of refurbishing various phones need so they can more rationally plan production schedules. Another group is helping that company with shop floor layout. Another group is helping Consumers Power by writing a user manual for a software program which optimizes meter reading routes. In another project for General Motors Gear Center, students are analyzing data statistically to determine significant factors which influence the noise and durability of gears being developed for a new transmission. At Sarns 3M, which makes heart-lung assist devices for open-heart surgery, students are helping design the layout and workstations for a clean room. In total, 22 students are working on ten projects.

The senior projects courses will continue to be a vital part of the IOE curriculum. If you live within a drive of the Ann Arbor area and have a project that might be appropriate for this course, please contact Chip White.

—Jeffrey Liker

Program in Occupational Safety Engineering and Ergonomics

The IOE graduate program in Occupational Safety Engineering and Ergonomics has received a grant from the National Institute for Occupational Safety and Health (NIOSH) totaling $130,000 for the 1992-93 academic year. While federal funding for this program has been reduced in recent years, the IOE department continues to receive the largest award in the nation among all competing programs.

NIOSH grants are used to support the training of Masters, Ph.D., and post-Doctoral students who plan professional or research careers in Occupational Safety and Ergonomics. Trainees receive tuition and a monthly stipend to partially offset educational and living costs. Four IOE graduate students are appointed as NIOSH trainees this year. In addition, the grant supports library and laboratory facilities in the IOE Building.

For additional information on this program and the availability of current students, contact Professor Monroe Keyserling.

Japan Technology Management Program

The Japan Technology Management Program is now in its second year. It was started last year with a $2,000,000 grant from the Air Force Office of Scientific Management to facilitate the transfer of knowledge about Japan to the U.S. in three ways—research, continuing education programs, and student fellowships to learn about Japanese language and culture. It is a cross-university program with three co-directors—Professor Jeffrey Liker of IOE, Professor John Ettlie of the business school, and Professor John Campbell (Director of the program) of the political science department.

We have made great progress on all three fronts in our first year of operation. In research there are ten faculty projects ongoing on a range of topics including concurrent engineering, technology transfer, joint ventures, manufacturer-supplier relations, body-in-white engineering, management of R&D, and the role of culture in the transfer of practices from Japan to the U.S. Most researchers visited Japan to collect data and the results have already been incorporated into continuing education courses. Three IOE faculty and two PhD students are working on these
projects and a fourth IOE faculty member is joining the group in the second year.

In continuing education we started a new engineering summer conference course on “Best Practice Technology Management: U.S. and Japan” offered in the summer of 1992. This three day course had over 100 enrollees making it the single most successful launch of an engineering summer conference course. The course was highly evaluated and we are already improving the design for its second offering in 1993. We also held a one-day briefing on “World Class Design Process Management” which drew almost 200 people and was also highly rated. In January we are running a one-day remote video course nationally through the National Technological University on “Japanese Product Development Practices: Lessons from the Auto Industry.” We have also included Japan content in two popular courses in the executive education program of the business school, a one week course on manufacturing and a three day course on strategic management of technology.

In student scholarships we have awarded summer intensive Japanese language fellowships and academic year graduate fellowships in Japanese language and culture to about 40 students, most of them engineering students or business students with an interest in technology. We also have several student placed on internships in Japan.

As another method of dissemination we are planning an edited book. We will hold a working conference of authors in the summer of 1993. The book will include chapters from researchers at U.M. who will summarize their research findings from the project. We will also invite several nationally known scholars researching Japan technology management from other Universities and labs to contribute chapters. We expect the book to be used in courses and to be read by practitioners.

U.M. was one of four Universities who won the awards in the first year of these grants in 1991 through a competitive proposal process. Six more Universities won awards in a second round in 1992. A third round of awards will be granted in 1993 and the original grantees will be allowed to compete for renewal. You can be sure that we will be submitting a renewal proposal. Those interested in learning more about the Japan Technology Management program should contact Jeffrey Liker at (313) 763-0166.

—Jeffrey Liker

The Student Organizations

Note: The student groups are always interested in having alums return to campus and present a short luncheon topic about their company or current topic in the area. Any alumni wishing to contact any of the student organizations may do so through Jolene Glaspie at (313) 763-1332.

Alpha Pi Mu

Alpha Pi Mu is organizing another year of activities focused on understanding the broad base of knowledge provided by industrial engineering and on enriching our interaction with the department, the college, and the community. In conjunction with IIE and ORSA, we are planning activities for Tech Day, a college-wide event sponsored by UMEC to introduce visiting high school students to engineering and allow them to explore each of its disciplines.

This year we will be organizing several academic information events as we have done in the past. The MBA vs. MSIOE Program is an event at which information is given in regard to choosing a direction of masters study in either business, IOE, or both. The IOE Options Night is geared toward new students in the department and undeclared engineers; it presents professors from different disciplines within the IOE department speaking on their areas of interest and the classes that are offered in each. The Alumni Forum is an evening spent with graduates of the
In order to help our peers and to maintain a standard of excellence in the department, Alpha Pi Mu has a committee of people who provide tutoring to underclass persons in 300 level IOE classes and core engineering classes.

Alpha Pi Mu is also reaching out to the community to help those in need. We are continuing the can drive that has been successful in the past. We have two large collection displays, and the proceeds from the returnables will go to a local charity organization still to be voted on by the group. Another philanthropic endeavor in the planning stages is spending time with people in the community who are often forgotten in the day to day hustle and bustle those at local nursing homes and orphanages, the VA Hospital and Mott's Children's Hospital. Throughout the year, we hope to use these activities to continue our interaction with the department, the college and the community.

—Valerie Hamilton

**Institute of Industrial Engineers**

For the 1992 - 1993 academic year, the Institute of Industrial Engineer's main goal is to increase attendance at society-sponsored events. By passing out surveys at our mass informational meeting, IIE was able to gain a perspective on its members' needs and expectations of the society. On the basis of their input, we have planned many exciting events. This year, IIE will be having luncheons instead of meetings at night. At the luncheons, members will have the opportunity to learn about the applications of industrial engineering by listening to experienced professionals. IIE also plans to host a couple of intra-mural sports teams, happy hours, and faculty/student mixers this year.

In conjunction with Alpha Pi Mu, IIE will host a Valentine's day raffle. The proceeds from this event are going to be split among the two societies to provide funding for future events and the publication of the *Industrial Blueprint* (a newsletter sponsored by IIE, APM, and ORSA). In addition to the raffle, IIE also plans to sell either sweatshirts and/or coffee mugs to subsidize some of its fall term events. Most of the funds generated, however, are planned to be used for the IOE yearbook. The yearbook committee already has plans underway for a new and improved edition.

If anyone has interest in talking about their post graduation IOE experiences, please contact me at 996-4872. IIE wishes alumni the best of luck and continued success for the future.

—Todd Barber, President

**Operations Research Society**

If the 80's was the decade of the finance industry, the 90's will be the decade of manufacturing. Members from the industry, the government institutes as well as the academia have raised their alarm over the effects that a decade of neglect has produced in the manufacturing industry. More and more, people are turning to Operations Research to look for solutions to the many complex problems accumulated over time. Operations Research methods are now regarded as a powerful tool for problem solving with a potential that is yet fully realized.

The local chapter of the Operations Research Society of America (ORSA) at the University of Michigan is a small, but dedicated group of graduate and undergraduate students from the IOE and other engineering departments. We are currently working on expanding the application of Operations Research methods. By engaging ourselves in projects from diverse fields, we hope to explore the potential of this powerful problem-solving tool. Apart from our projects, we are also actively involved in representing the IOE depart-
Fall 1992

ment in many on-campus events, such as the Tech Day. We meet every Friday, from 12:30 to 1:30 p.m., at Rm. 241 IOE Bldg. We welcome anyone who shares our interest in this promising field.

—Jong W. Chow

Student/Alumni Awards

The department is always proud to announce the awards received by our current students and alumni. Be sure to notify us of any awards you have received so that we may publicize it in our next newsletter. This year has been exceptional with the following receiving awards:

Current Student Awards:

Arthur Andersen Scholarships: Jennifer Merchant and Michael Booth.

The Wyeth Allen Award: Kevin Vliet.

Outstanding IOE Undergraduate: Rochelle Collison.

Ford Scholarship: Kevin Vliet.

Rockwell International Scholarships: Lisa Mohnke; Jennifer Kiefer; Julie Quick.

Ford Electrical and Fuel Handling Division, Customer Driven Quality Award: Jay-Wook Yoon and Byung-Ki Lee

Alumni Awards:

Alumni Society Merit Award: Dr. Thom J. Hodgson (see article below).

Faculty Focus

James Bean is studying the applications of genetic algorithms to large scheduling and integer programming problems on a massively parallel computer. He is also leading the development of a five year "Engineering Global Leadership" BS/Master's Honors program for the College of Engineering. Professor Bean is still editor of OR/MS Annual Comprehensive Index and was recently elected to the Operations Research Society of America Council.

John Birge John Birge received two grants from the National Science Foundation. The first is an extension of his previous work on methods for multistage stochastic programs and general models in manufacturing, finance, and transporta-
tion. The second is on the role of investment uncertainty in economic policy for reducing CO2 emissions. This latter project will help define costs and strategies for CO2 emission restrictions. Professor Birge has also set the dates for the 15th International Symposium on Mathematical Programming as August 15-19, 1994, in Ann Arbor. Copies of the first announcement are available from the IOE department.

Don Chaffin received two special honors this past year. The first was the Distinguished Collegiate Professor within the College of Engineering; the second was the Outstanding Faculty Research Award in the IOE Department. He continues his research on Materials Handling Assist Devices aimed at determining ergonomic requirements at Ford Motor Company, as well as continuing work with Monroe Keyserling and others in the Center for Ergonomics on a project involving the tools used at Walt Disney World to reduce physical stresses. He also has begun a study with Coca Cola to study ergonomics in package handling.

Monroe Keyserling is involved in two ergonomics research projects sponsored by the Ford Motor Company. The first project involves working with plant personnel to develop methods for in-house evaluation of ergonomic stresses; while the second project is concerned with predicting postures during manual materials handling tasks. He is also a co-investigator, with Don Chaffin, in a project to evaluate and control ergonomic stresses in the hotel/resort industry. During the past year Keyserling presented at the International Conference on the Prevention of Occupational Musculoskeletal Diseases in Stockholm, Sweden and was the keynote speaker at the 1992 MOST Users Conference sponsored by the H.B. Maynard Company. He continues to serve on the Medical Advisory Board of the American Trucking Foundation and as the Director of the UoM Occupational Safety Engineering Program.

Jeffrey Liker has been particularly active as co-director of the Japan Technology Management Program now in its second year. The article he has written for this Newsletter describes these activities.

James Miller supervised the "Capstone Design" course during the Winter 1992 term. Fourteen projects were undertaken with the cooperation of numerous IOE alumni serving as project site coordinators. Last summer he originated a well received Engineering Summer Conference course on the topic of Warnings, Labels and Product Packaging: Design and Compliance. The course will again be offered in Summer 1993. His research in the area of product warnings, instructions, and operator manuals continues for companies including Honda, Black & Decker, Rheem, Whirlpool, DuPont and Sears. His research into the mechanisms for occupant protection in the boating and personal watercraft areas also continues through sponsorship by the American Boat and Yachting Council and the U.S. Coast Guard.


Robert L. Smith recently received a three year grant from the National Science Foundation for theoretical research in Infinite Horizon Optimization. He also received a grant from Bell Laboratories through the AT&T Foundation for research in global optimization. Professor Smith is Director of the Dynamic Systems Optimization Laboratory.

Co-appointment, Visiting, and Adjunct Faculty

Co-Appointment Faculty

These faculty participate in our department’s teaching and research but have a primary affiliation with another University department:
Fall 1992

**Thomas Armstrong**, Professor of IOE and also Professor of Industrial Health teaches IOE 433 Fall Terms.

**Adjunct Faculty**

Our adjunct faculty have their primary employment outside the university. They bring to the students the realities of the outside world in the selection of courses they teach for us. We are interested in other alumni in the area who might also be willing to serve in this capacity.

**Richard Coffey** as an Adjunct Assistant Professor teaches IOE 481 (Hospital Systems) during fall and winter terms.

**Andy Crawford** is teaching IOE 491 Special Topics course on Entrepreneurship during Fall 1991. Andy is president of Ascott Corporation, Ann Arbor.

**Paul Green** is an Adjunct Assistant Professor and also Associate Research Scientist at UMTRI and teaches IOE 334.


**Alumni News**

This news is from alumni responses to the Fall 1991 IOE Newsletter.

**James C. Achtenberg** (BSE ’76, MBA ’78) is president of Woodstock Enterprises, Inc. which deals in computer sales and consultation and is now located over in Manchester Michigan.

**Elizabeth Anne Baxter** (BSE ’89) is currently attending Duke University on a fellowship in the MBA program.

**Dale R. Beck** (BSE ’68, MBA -Cincinnati) is the Manager of Government Contracts at Abbott Laboratories. He deals primarily with the bidding and managing of USDA and medicaid contracts.

**Philip R. Beltz** (BSE ’63, MBA ’70) is President of Beltz & Associates, which provides risk reduction products and services.

**Joseph R. Blaylock** (BSE ’87) is a Lieutenant in the U.S. Navy and the Manpower and Personnel Officer for the Naval Reserve Readiness Command in region thirteen.

**Sonny S. Bloom** (BSE ’71) provides consultations to the Federal government in the area of marketing and corporate strategy.

**Ward Chartier** (BSE ’80, MBA ’84) is the product and test engineering manager for DSC Communications Corporation in Garland Texas. They produce "next generation" fiber optic telecommunications equipment.

**Michael Gladden** (BSE ’79) is a safety engineer with Xerox and coordinates ergonomics activities.

**Cameron T. Hill** (BSE ’83) is a methods engineering supervisor at Chrysler Corporation where he works with their direct labor requirements at the Dodge City complex and Warren truck assembly plant.

**Susan Khoury** (BSE ’88) is a reliability engineer with Saturn Corporation of Troy Michigan. She received her CQE certification from ASQC in June ’91.

**Hyun Chan Lee** (PhD ’88) is now an Assistant Professor at Hong-IK University in Seoul Korea. He was previously with the Korea Electronics and Telecommunications Research Institute.

**Witold Malinowski** (BIE-ME ’48) retired from Ford Motor Company in September 1990. His last position was as the Manager of Tool Proveout and Overseas Assembly Engineering, in Body and Assembly Operations.
George C. Marx (BSE '81) is now with Group Schneider of Walnut California where he is a Regional Applications Engineer dealing with motion control systems.

Ammar Nofal (BSE '89) is the President of International Trade & Capital, Inc. of Irvine California. His company exports bulk and processed foods and agricultural machinery to the middle east.

Jerome B. Overmire (BSE '83) is a Senior Industrial Engineer with Electro-Wire Products, Inc. here in Michigan.

David W. Parish (BSE '88, MSE '89) is now with the Grand Rapids Fire Department.

Michael Penn (BSE '86, MEnvE '89) is now a Doctoral Fellow at Michigan Tech and is working with Martin Auer (PhD '79) in the area of phosphorous in sediments.

Jeffrey Pozy (BSE '90) is a Manufacturing Engineer with Ford Electronics where he is involved in capacity studies and labor planning at the Automotive Electronics Manufacturing facility in Landale, PA.

Jerry Rattenbury (BSE '87) is a Factory Planning Engineer at Texas Instruments where he designs, implements and installs factory layouts for Texas Instrument's internal customers.

Stacey Schubert (BSE '89) has returned to UofM in the Masters of Public Health program after previously being employed at Steelcase, Inc.

Wayne M. Smith (BSE '81, JD '84) is now an attorney with Pepper, Hamilton and Scheetz and specializes in business litigation and intellectual property.

Stuart R. Stamm (BSE '81) is currently the Corporate Industrial Engineer at Masco Corporation, and he resides in Ann Arbor.

—James M. Miller, Editor