

# IOE ALUMNI NEWSLETTER

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## THE DEPARTMENT OF INDUSTRIAL AND OPERATIONS ENGINEERING THE UNIVERSITY OF MICHIGAN FALL 1989

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### From The Chairman

This will be one of the last messages from me as chair of the IOE Department since I will be stepping down this summer after nine years of holding one of the best jobs in academia. The current quality of our students, alums, faculty, staff, and facilities should make it possible to attract an excellent person to take the department into the twenty-first century. I hope that I have contributed my share, over these past nine years, to achieving our current position of excellence. The success of you, our graduates, who after all are our primary "product," put all the administrative hassles into proper perspective. Course scheduling, student appeals, faculty hiring, course development and endless meetings now seem well worth the effort.

Each of you, in your professional lives, is becoming more and more aware of certain trends: the changing characteristics of our national demographics and how they are expected to evolve over the next decade; the projected radical changes in our country's (indeed, the world's) economy; and the novel challenges inherent in an information-driven post-industrial society. It is likely that as an Industrial Engineer, Operations Researcher, Ergonomist, or Management Scientist you will meet these challenges with appropriate mixes of technology, models, methods, organizational designs and management understanding.

In this context, let me present to you some of the elements of the reality we perceive here at IOE. (I would be delighted to hear from you about any of them.)

- The current cohort of over 300 undergraduate IOE students includes about 45% women and 8% minorities. This may be quite a different profile from what you saw as a student here.

- Some two decades after the general modernization of I.E. academic programs throughout the country, there is still a large gap between the preparation we give our students and the expectations of industry, which hires them into the job title (or function) of "Industrial Engineer." Present day IOE graduates are educated, at a minimum, in optimization, ergonomics, computer systems, probabilistic and statistical phenomena and organizational analysis. They are exposed to simulation, quality control, inventory and production analysis, decision analysis, queueing, scheduling, materials handling and facility design. Yet the prevailing industrial conventional wisdom is that industrial engineers are only fit for work methods and time studies, and in general are concerned (how many years after Taylor?) with a focus on worker utilization and its ultimate effect on production "efficiency."

•At a recent meeting of the College of Engineering's National Advisory Committee, three members were asked to react to IOE's programs and accomplishments. These three were Robert Teeter (founder of Market Opinion Research, and a long time political advisor), Dwight Carlson (President of Perceptron, a thriving computer vision company) and Ben Shapiro (Professor of Marketing at the Harvard Business School). Their comments centered on the need for American industry to figure out how to set up the systems, methods and organizations that would take advantage of existing technology, and *not* on producing the next generation of technology.

•Two of our faculty are currently influencing the national engineering policy scene through direct involvement at the National Science Foundation (NSF). On assignment in Washington are Tony Woo at the Division of Design and Manufacturing Systems, and Jack Lohmann at the Division of Undergraduate Science and Mathematics & Engineering Education. Do any of you have colleagues who are also similarly involved?

•I am delighted to discover that our department has been in existence long enough that there appears to be an increasing number of parent-child and other relational IOE families now being created. (For example, on the Friday before the Indiana football game I chatted with current junior Angela Rayle at a TGIF get-together; the next day her uncle, Roger Rayle (IOE '71), by coincidence sat in front of me at the game. Angela's father and cousin are also IOE alums. Is this a trend and are you part of such a dynasty? If so, we would like to know.

•When Lee Iacocca recently visited the College he chose to attend an IOE class. (The University Record's reporting of this event is provided later in this Newsletter.) His prepared luncheon remarks did not pertain to higher education. Rather, he noted that the lack of potential engineers

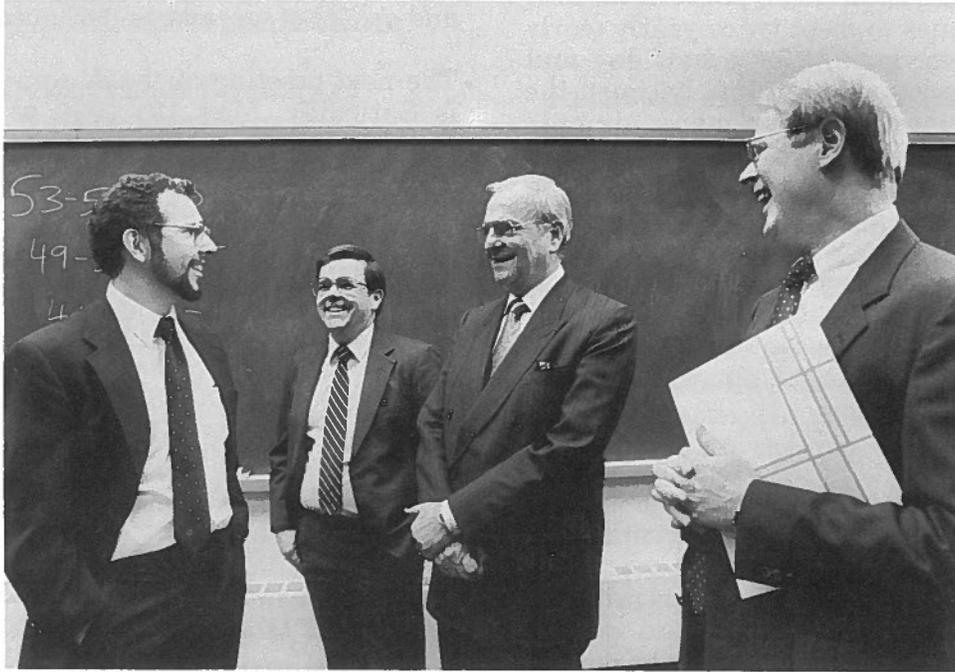
(much less IE's) currently in the high school pipeline is appalling. Unless a spark of interest is kindled early—in the first few grade school years—and then fed in the following years by improved math and science education, we will face a national technology disaster. Although Mr. Iacocca chose not to assess the status of nationwide Engineering College enrollments, there are definite signs of decreased quality and quantity of applicants in the immediate future. Here in IOE, we are also noticing a possible decline in the number of better first year Engineering students who are selecting IOE for their major. In contrast, we are experiencing a substantial number of advanced level undergraduates transferring into IOE, and our graduate program has grown to a level close to the limit of our capability to successfully operate.

This newsletter appears irregularly, and rarely more than once a year. You should receive this edition, not by coincidence, just before the end of the calendar year, when the tax benefits of contributions to the IOE department become salient. As always, we are interested in hearing from you and to print observations you wish to share with your fellow alums. When you write, it would be a good time to continue your support of the department by including a check. If you wish to donate in response to mail or phone solicitations from the college, please specify that you wish your gift to go to IOE. These gifts are important to the department's scholarship and fellowship funds, special projects, seminar series, undergraduate student society support, etc.

In closing let me thank all of you who have continued your interest in the department over these past nine years and have made my tenure as department chairman so rewarding.

Steve Pollock

## Iacocca Visits IOE Class



**IOE Professor Jeff Liker, Engineering College Acting Dean Dan Atkins, Lee Iacocca and U-M President James Duderstadt**

Chrysler Corp. Chairman Lee Iacocca, who has a BS degree in Industrial Engineering, dropped in on Professor Jeffrey Liker's industrial and operations engineering class last week to discuss trade issues, manufacturing processes, international competition and the secrets of his success. The class was held in the recently renamed Lee Iacocca Lecture Hall in the G. G. Brown-Dow Connector on North Campus.

The naming of the lecture hall recognizes Iacocca's contributions to American industry and Chrysler's support for programs at the College of Engineering, according to President James J. Duderstadt. "He is a leader for our times in many ways and exemplifies the qualities that we hope will characterize many of our students," Duderstadt said.

In a luncheon speech at the Art and Architecture Building following the class, Mr. Iacocca addressed some of his favorite themes, including the need to emphasize science education in elementary schools, the trade deficit with Japan and the growing federal budget deficit. Iacocca discussed a multimillion dollar Chrysler Corp. project to stimulate reading by 100,000 students in preschool, kindergarten and first grade classes in ten major cities where Chrysler has plants. "Why are we paying for this?" he asked. "So we don't have to pay for illiteracy later."

In his speech, Iacocca praised the high-quality training provided students at the U-M, noting that more than 1000 U-M alumni currently work for Chrysler. "I buy your products," he said, "and you are looking at one very satisfied U-M customer." (*University Record*, Oct. 30, 1989)

## The IOE Alumni Academy

The IOE Alumni Academy, now in its fifth year, continues to meet twice yearly (early Fall and late Spring) for a half day and acts as a communication link between the IOE department and our many alumni. Membership remains strong at twenty members and several new members have joined the academy each year. The process for becoming a member is informal. Generally, local alums who have an interest in the academy contact the IOE department. Potential recruits are contacted by current members, and their membership is proposed to the Academy.

The major activity of the Academy continues to be support and participation in the senior projects course (IOE 424) within the undergraduate curriculum. This course involves having students work on significant open-ended problems in IOE and write a final report that includes concrete recommendations for solving the problems. The Academy has been the main source of sponsorship for these projects to date. Sponsorship involves coming up with a challenging problem that is manageable within a single semester and providing students with access to data and ongoing guidance. The Fall of 1990 will be the first semester in which IOE seniors will be taking this course as a *requirement* for graduation and thus it will be central to the core IOE undergraduate program.

In the October 1989 meeting the Academy decided to focus their efforts on two additional areas. First, they are working with Dwight Stevenson, College of Engineering Assistant Dean of Continuing Education, to investigate ways of increasing alumni access to continuing education opportunities at U.M. You will all be receiving a survey in the near future to get your input. What kinds of continuing education courses would you like to see offered by the IOE department? On what topics? At what times? Second, the Academy has decided to

take a more active role in writing articles in this IOE Newsletter, so you will be hearing more from the Academy about issues and events of interest to IOE alumni.

The next meeting of the Alumni Academy is Saturday, May 12, 1990 at the IOE Building on North Campus. Alumni and faculty are all encouraged to attend, find out what is happening with the Academy, and renew acquaintances with friends. There is a \$50 initiation fee for Alumni who wish to join the Academy, with no additional fees charged to members. Interested alumni can contact Mike Zonnyville (Secretary) at (313) 487-6122, George Perrett (President) at (313) 769-5900, or Jeff Liker, Faculty Liaison at (313) 763-0166 for more information.

—Professor Jeff Liker

## Department Development Committee Formed

Under the chair of Professor Don Chaffin, a departmental development committee which includes Professors Teichroew, Hancock and Smith has been formed. One major charge for the committee will be to address the shortage of space which has developed as the department has grown. Various expansion possibilities for the present IOE building will be considered. Additional rooms for seminars and classes, laboratories, and offices for adjunct and visiting faculty are among the present shortages. Also of concern is the enhancement of the department's fiscal capabilities to provide activities not supported by the university general fund, such as faculty and student development, seminar sponsorship, faculty endowment, and support for promising students with special needs. We hope you will accept the opportunity to help in this important effort by designating your gifts to the "IOE Department."

## The Student Organizations

### A New Student Organization:

#### The American Society of Safety Engineers

During the past six months a new student organization was added to our department. The effort was initiated by graduate student Paul Adams along with Professors James Miller and Monroe Keyserling. The student section of ASSE was formed under the sponsorship of the Greater Detroit Chapter of the American Society of Safety Engineers. ASSE is a national professional society for people working in safety and health fields and related disciplines.

The local IOE group was officially chartered in June, 1989 at the ASSE Professional Development Conference, coincidentally held in Detroit this year. The charter membership was twelve graduate students and eight undergrads. The departments of Industrial & Operations Engineering, Occupational Health Nursing, and Environmental and Industrial Hygiene were represented. Many of the graduate students are connected with the Center for Ergonomics.

Activities planned for 1989-90 include a tour of the GM Health and Safety Training Center, monthly meetings with speakers on such topics as plant safety engineering, consulting, safety careers in the insurance industry, environmental science, and product safety and liability. The group is actively encouraging participation from students from other engineering disciplines, the Law School, the School of Public Health, and other programs related to safety and health. In addition, the ASSE student section informs students of job openings on a nationwide basis and provides opportunities for interaction with local safety and health professionals. Faculty advisors for the new section are Professors Keyserling and Miller with Paul Adams acting as the

Student Liaison between the IOE student chapter and the Detroit senior chapter.

—Paul Adams

#### Institute of Industrial Engineers

The student chapter of the Institute of Industrial Engineers (IIE) is growing steadily. The organization started out the year with a well-attended mass meeting, gained 50-60 new members, and has sponsored a luncheon every other week since the start of the school year and hope to continue them through next term. Through these luncheons, IIE members gain insight about IOE's in the real world. Monthly meetings are held at night so those who are not able to come to the luncheons have a chance to find out about IOE's in industry, new technology and business. The "Happy Hours" are well attended even by some professors.

The group is trying to become more involved with the senior Detroit IIE Chapter. A few of the officers attended an IIE Halloween party which was given by Wayne State University, where they met IIE members from GMI who would like to be more involved with our U of M chapter. In response, there are plans to have an IIE day toward the end of Winter term inviting all the other IIE Chapters in our district. The chapter is looking forward to our annual student-faculty wine and cheese party next term.

If any of you are interested in being a speaker at one of the luncheons or night meetings, please write to me in care of the IOE department.

—Madhana Rajamanickan

## Operations Research Society

The Operations Research Society of America's Student Section was resurrected this Fall. It is dedicated to bringing additional academic experience to those involved with our organization through specialized projects in operations research for local companies. In addition, the section brings in faculty and graduate students to talk about their research, as well as attend national conventions and participate in modelling competitions.

The officers and advisors for the current academic year are:

Alan G. Kalton, President  
Susan Szulczewski, Executive Vice President  
Melanie J. Steer, Secretary and Treasurer  
Derek Holmes, Graduate Advisor  
Mandyam Srinivasan, Faculty Advisor

Over the past few months, the ORSA section has completed a project for the General Electric plant in Warren Ohio, modeling the elevator systems as part of a graduate student project. The next project we are planning to undertake involves a simulated operating room and intensive care in a hospital. Our goals for next term are to conduct and complete four or five simultaneously running projects, to enter an ORSA sponsored modelling competition, and to attend the ORSA-TIMS National Convention at the beginning of May in Las Vegas, Nevada.

—Alan G. Kalton

*Note: Need an excuse to have your employer send you back to your favorite university town for a day? Consider volunteering to present a luncheon seminar to one of our fine student groups. Any alumni wishing to contact any of the student organizations may do so through Jolene Glaspie at (313) 763-1332.*

## Faculty Focus

**James Bean** is founding editor of the Operations Research/Management Science Annual Comprehensive Index, a computer based compilation of publications in the field. Professor Bean is also directing a \$560,000 grant from the U.S. Department of Education to provide fellowships for students in all areas of the department.

**John Birge** organized the Fifth International Conference on Stochastic Programming in Ann Arbor last August. The conference was supported by the Department and College, plus NSF, IBM and AT&T. It attracted participants from thirty-three countries and six continents.

**Yavuz A. Bozer** continued to work on material handling systems design and facilities planning. As part of his Presidential Young Investigator Award, he is working on partitioning schemes for tandem AGV systems and workstation location around each AGV loop. He also received a research grant from General Electric Company to study block layout problems in multi-floor buildings.

**Don Chaffin** has been re-elected for a second term to the Executive Council of the International Society of Biomechanics, and also chosen to be Secretary General of the Council. Don continues to direct the Center for Ergonomics. His research on the cause and prevention of occupational low back pain continues under sponsorship from NIH, Ford Motor Co., and the Association of American Railroads.

**Walton Hancock** has been named the first holder of the William Clay Ford Professorship of Product Manufacturing. He also serves as Associate Dean and director of the College's Center for Research on Integrated Manufacturing, as well as continuing his teaching and research in the IOE department.

**Monroe Keyserling** is completing a research project sponsored by the UAW/GM Joint National Committee on Health and Safety. This project, performed with faculty from the School of Public Health, is evaluating the effectiveness of ergonomic interventions in reducing work place stress and work injuries. He has recently started two new projects with Ford; one will develop and validate job analysis procedures to identify the causes of ergonomic stress in the work place, and the other will develop a computer model for predicting seated posture.

**Jeff Liker** is back from sabbatical and actively pursuing research in two main areas. First, he has been researching participative approaches to implementing ergonomics programs in manufacturing plants. An article appearing in the recent issue of *International Journal of Industrial Ergonomics* describes a comparative study of United States and Japanese approaches to participatory ergonomics. Second, he is working on a proposal to NSF to study organizational approaches and computer tools to aid in the engineering design process.

**James Miller** has just completed his third book dealing with the design, evaluation and forensics relating to product information systems. This current book is entitled *Instructions and Warnings: The Annotated Bibliography*. His coauthor is Dr. Mark Lehto, who is a Visiting Assistant Professor with us this year from Purdue University. The book, besides being in hard copy, has been made available in an Electronic Hypertext Version, with innovative search, retrieval and report generating capabilities.

**Katta Murty**, on sabbatical leave last year, has returned from a visiting professorship at the Systems Engineering Department in the King Fahd University of Petroleum and Minerals, Dhahran, Saudia Arabia. While there, he continued his research on optimization algorithms and

collaborated on a project for optimizing the transport of crude across the country using available pipelines. Currently, he is editing a special issue of an international journal (*Arabian Journal of Science and Engineering*) published at KFUPM. The issue is to appear in October 1990 and is dedicated to optimization and its engineering applications.

**Robert L. Smith** is continuing research in infinite horizon optimization sponsored by the National Science Foundation and the University Transportation Center. He also is working with colleagues from the Netherlands and Canada on random search methods in mathematical programming, a joint research venture sponsored by a NATO Collaborative Research Grant.

**Mandyam Srinivasan** is continuing his research in Polling systems and performance analysis of Local Area Networks and Material Handling Systems. His work in Local Area Networks is supported by a grant from Northern Telecom, and his work in Material Handling systems is supported by a grant from General Motors.

**Candace Yano** is on sabbatical during Fall 1989 as a visiting faculty member at the Georgia Institute of Technology.

## Co-appointment, Visiting, and Adjunct Faculty

### Co-Appointment Faculty

Those faculty participating in our department's teaching and research but whose primary affiliation is with another University department include:

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

**David Kieras**, also Associate Professor of Technical Communications will be teaching IOE 333 (Human Performance) Winter '90.

**Richard W. (Andy) Andrews**, Associate Professor of Business Administration, while not on joint appointment, has been active in assisting us by teaching in the quality control area (IOE 466: Statistical Quality Control).

### Adjunct Faculty

Adjunct faculty have their primary employment outside the university. Their participation provides significant benefit in that they bring to the students, through the courses they teach, the realities of the outside world.

**Seth Bonder**, President and **George Miller**, Group Leader, both of Vector Research, Inc., Ann Arbor are co-teaching IOE 424 (Special Projects in Production and Service Systems).

**Andy Crawford**, President of Ascott Corporation, Ann Arbor, is teaching an IOE 491 Special Topics course on Entrepreneurship.

**Raymond Deyoung**, also a Research Fellow, School of Natural Resources, and an Adjunct Lecturer in Psychology, will teach IOE 300: Management of Technical Change during the Winter '90 term.

**Robert Hancock**, Manufacturing Engineer, Ignition Engineering Dept., Ford Motor Company will teach IOE 463 (Work Measurement and Prediction) during Winter term '90.

**Robert Inman**, Staff member of the GM Research Laboratories will teach IOE 541 (Inventory Analysis and Control) during Winter '90.

### Visiting Faculty

As always the department is honored when faculty from other universities choose to spend their sabbatical time with us. Some of the faculty visiting this year are sharing their expertise by teaching several of our course offerings.

**Arnon Boneh**, Professor, Department of Statistics, The Hebrew University, Jerusalem, is teaching both IOE 315 (Stochastic Industrial Processes) and IOE 474 (Simulation) during his visit this year.

**Richard John Caron**, Associate Professor, is visiting from the Department of Mathematics and Statistics, University of Windsor, Windsor, Ontario, Canada.

**Antonio Frietas**, Professor, IBMEC, Rio de Janeiro, Brazil taught IOE 451 (Engineering Economy), Fall '89 and IOE 474 (Simulation) Winter '90.

**Mark Lehto**, Assistant Professor, is visiting from the Department of Industrial Engineering, Purdue University, West Lafayette, Indiana.

**Chan Park**, Professor, Department of Industrial Engineering, Auburn University, Auburn, Alabama, will teach IOE 551 (Capital Budgeting) Winter '90.

**James Wise**, Professor of Facilities Management and Director of CIFR, The F. E. Seidman School of Business, Grand Valley State University, Grand Rapids, Michigan. During Fall '89. Jim taught IOE 533 (Human Factors in Engineering Systems).

## Alumni News

This news is from alumni responses to the Spring 1989 IOE Newsletter.

**Robin Bachman** (BSIE '84) is a human factors engineer with IBM in Research Triangle Park, North Carolina, where she is working on interface design for telecommunications products and experimental-survey designs for product evaluation.

In receipt of special awards are **Jeffrey M. Alden** (PhD) and **David Vander Veen** (PhD). They received, as GM employees, the Charles L. McCuen Special Achievement Award in recognition of "staff members whose research significantly contributed to the success of General Motors Corporation." Dr. Vander Veen was honored for his work on a mathematical model that helps make machine investment decisions. Dr. Alden's recognition came in conjunction with the development of PC based software which allow users to estimate the throughput and work-in-process inventory of serial production lines.

**David F. Cole** (BSIOE '89) has become a Management Associate with Citicorp Savings of Illinois.

**Annette (Ruthenberg) Bielecki** (BSIOE '86), an industrial engineer at GM, coordinates Value Engineering Sessions that evaluate design and processing for reducing costs and increasing competitiveness.

**James W. Bishop** (BSIS '54 and BBA) is with Digital Equipment Corp. in Massachusetts as Manager of Strategic Collaboration. His responsibilities include establishing strategic relations with universities, government agencies, consortia, consultants and professional societies.

**David A. Bradbury** (BSI&ME '48) owns Bradbury Engineered Solutions & Technology after retiring in 1987 from Sohio. He is a past Mayor of Orchard Lake.

**Michael R. Clement** (BSIOE '83), who is currently working towards his MBA at Wayne State Univ., is a Senior IE for TRW Vehicle Safety Systems at the Inflatable Restraints Plant. He is responsible for coordinating all IE Department activities and is managing a plant expansion project.

**Ken Dollhopf** (BSIOE '83) founded his own company, Electrical Control Systems, in 1985 in the automation control market. He employs 12-25 employees in Dearborn.

**Sharon (Glassford) Donahue** (BSIOE '86) oversees a staff of twenty-three employees as Operations Manager at Paging Network of Michigan and recently started a refrigeration service business. She also has a three year-old daughter.

**Thomas A. Douglas** (BSIE '69 and MBA) is EDI Project Manager for Sears Technology Services, developing and implementing EDI for Sears, Roebuck & Co.

**Edward S. Evans** (BSIE '63) is Executive Vice President at Ralph C. Wilson Industries, Inc. in Detroit.

**Tom Green** (BSIE '63 and MSE) is a plant manager at Abbott Laboratories.

**Howard R. Grunwall** (BSIOE '80) was recently promoted from process/quality engineer to Manager of Quality and Productivity Improvement at Roll Coater, Inc., a division of Arvin Industries located in Indiana.

**Frank Guden** (BSIE '61), Senior Project Engineer at GM Tech Center, is doing simulation modeling of manufacturing systems.

**Kristen Gudan** (BSIOE '89) is pursuing a Master's in Industrial and Systems Engineering with a Systems concentration, at Northwestern University.

**David Gustafson** (BSIE '62, MSIE '63, PhD '66) is a Professor of Industrial Engineering and Preventive Medicine at the Univ. of Wisconsin at Madison. His research has focused on applications of decision sciences to the solution of health and social service problems. In addition to receiving a Service to Society award, his health promotion software won an award from the American Medical Association and is used in over 2000 schools.

**James A. Hague** (BSIE '50 and MBA) resides in Ft. Myers, Florida and is employed at Smith, Hague & Co. (NYSE), where he recently led a seminar on "Investments for Fraternal Organizations" for five states. He also recently became a Lindal Cedar Home Dealer, selling pre-cut limber kits.

**Geoffrey M. Holczer** (BSIE '71 and MBA) is Chief Financial Officer for Designs, Inc., an \$80 million, 80 store retailer of Levi Strauss & Co. headquartered in Chestnut Hill, Massachusetts.

**Scott E. Hovarter** (BSIOE '85) is with Martin Marietta in the capacity of a Systems Engineer. He has responsibilities in the reliability area in relation to the Titan II and Titan IV launch vehicle programs.

**Roland J. Jersevic** (BSIE '74) is a practicing attorney in Saginaw.

**J. Kachen Kimmell** (BSIOE '81), who received his J.D. at U of M after working for IBM, has been practicing in a private law firm in Chicago for three years. He specializes in real estate and finance transactions.

**John J. Ling** (BSIOE '82) recently received an M.B.A. in finance from Southern Methodist University in Dallas. Since that time he has returned to Michigan to work at Frito-Lay Inc. as a plant controller and financial manager of a \$35 million operating budget.

**Robert Luttmann** (IOE '80), as Director of Management Engineering at Brigham &

Women's Hospital in Massachusetts, is responsible for improving cost and quality "at one of America's leading healthcare institutions."

**Glenn Marshall** (BSIE '55) is an executive recruiter with the National Computerized Employment Service in Pennsylvania.

**John Ross McKinnon** (BSIE '66 and MBA) is Vice President and Manager of Telecommunications and Engineering Planning at Manufacturers National Bank.

**Frank Mills** (BSIE '74 and MBA) is a Director at Plastics Molding Corp. in Ohio and is in charge of technical operations, new product development and corporate quality control.

**Brian Ray Obrecht** (BSIOE '80, MSIE '81) is running two companies. As owner of Outer Edge Expeditions he arranges adventure travel vacations to remote worldwide wilderness areas. As principle and owner of Healthcare Management Consulting he performs consulting services in the areas of productivity and service quality.

**Robert W. Pethick** (BSIOE '84) just received his MBA from the University of Chicago and is now a consultant with A. T. Kearney, specializing in strategic management and manufacturing consulting. Prior to returning to school he worked for GM in Flint.

**Jill Mills Polich** (BSIE '78 and MBA) works at Consumers Power Company as a Supervisor of Systems - Gas Operations. She is responsible for load modeling, computer system support, budget analysis and business planning for the gas distribution system. She has a three-year-old daughter, Megan.

**Jerry Rattenbury** (BSIOE '87) joined Texas Instruments as a Factory Integration Engineer.

**Laura Rowe** (BSIOE '84) is an engineer for a software design and management company in Munich, West Germany, where she has responsibilities for a large software system for the German Train Transport Authority.

**Fred G. Schriever** (BSIE '71, MSIE '72) is at ITT Automotive after fifteen years with American Motors Corp. He works as Director of Raw Materials Purchasing.

**Pete Schroeter** (BSIE '77, MSIE '78 and MBA) is back in Michigan as Manager of Logistics and Distribution at Domtar Gypsum. His responsibilities include managing North American sourcing, materials management, and physical distribution activities for a construction products business.

**Lawrence E. Scully** (BSIOE '86) is with Cadillac Motor Car Division of GM. He is a Senior Analyst in the Marketing and Product Planning Department.

**Lisa A. (Fikany) Scully** (BSIOE '84) is a Senior Industrial Engineer in the Manufacturing Planning Department of Cadillac Motor Car. Her responsibilities include productivity improvement measures and competitive analysis.

**James V. Sines** (BSIE '65) has moved to Vice President of Purchasing for United Airlines, from Director of Purchasing for Chevrolet, Pontiac, and GM Canada.

**Dave Stein** (MSE '82) is a vice-president at AT&T and head of the group that is marketing their exciting new KORBX system.

**Chris Turner** (BSIOE '87) is a manufacturing systems engineer at a German-owned manufacturer of paper making machinery, Sulzer Escher Wyss Inc. He is also President of Mariemont Players, a community theater in Cincinnati. Chris announces his marriage in September to Judi Andersen (BFA '88).

**Sue Wangler** (BSIOE '88) is employed as a quality assurance/SPC engineer with James River Corp.

**Frank C. Watts** (BSIOE '86) is in Chicago with Andersen Consulting of Arthur Andersen & Company performing development, support, marketing and training for multi-function business software.

**Clifford J. Wilcox** (BSIOE '84) with an MBA from Loyola University is now a field engineer at Square D Co. of Illinois where he is developing a customer base of electrical contractors and planning and implementing marketing programs and distributorships.

**George B. Wolf** (BSIME' 51 and MBA) is with Baxter Healthcare - Fenwal Division as a Materials Manager. He graduated with one of the first Industrial Mechanical Engineering degrees and notes that it has proven to be "timeless and a solid foundation for the fast paced changing environment in manufacturing today." He heartily recommends this type of background for students aspiring to become leaders in manufacturing in the '90s.

**Jim Wright** (BSE '51) is in his thirteenth term in the Pennsylvania House of Representatives, is Chairman of the Consumer Affairs Commission, and sits on various other committees. His legislative efforts have included development of recycling programs, funding of cancer research programs, and establishing a state energy development authority.

**Theresa Moran Wyza** (BSIOE '83) received her MBA in 1988 from U of M Flint and is currently working at Delco Electronics as a methods engineer. Her involvement includes methods and ergonomic training and the formation of an ergonomics committee.