

Center For Ergonomics

By Don Chaffin, G. Lawton and Louise G. Johnson Professor, IOE

The Center for Ergonomics continues its research programs to understand how a variety of human factors affect the performance and safety of different operating systems. A partial list of these projects is:

- The effects on the operator of mechanical assistance devices (e.g., hoists and balance arms) when moving objects in different materials handling jobs.
- Human movements needed to reach and see objects while driving a vehicle.
- Arm and leg strength effects on performance of high exertion tasks.
- Ergonomics and safety considerations in trucking and warehousing.
- Job safety analysis in long-cycle-time manufacturing environments.
- Modeling and aiding highway traffic operators's tasks.
- Computational modeling of human multitask performance.

Lanae Kimmerly (test subject) and Xudong Zhang (at desk) perform an automotive ergonomics study of driver performance while using control devices. The study focused on the number of devices a driver could use safely.

- Analysis of the pattern of muscle activity and force exertion when using computer input devices (keyboards, mouse, track ball, pen, touch pad)
- The effects of floor characteristics (compliance) on leg muscle fatigue
- Design of interface for remote driving of vehicles
- Driver performance of using control devices.

The above projects involve many excellent graduate and undergraduate students, some of whom came from departments other than IOE (e.g., Environmental and Industrial Health and Biomedical Engineering). Financial support for these studies is provided by grants and contracts from both industrial and government organizations who are concerned that the safety and health of workers is not adequately considered in the design of many manufacturing processes and consumer goods.

In addition to its research activities, the Center provides PC software for simulating human exertions, as well as a variety of 2-5 day professional development courses. Please call the Center at 313-936-0148 for flyers if interested in these outreach activities.

Tauber Manufacturing Institute - Get Involved

By James Bean,
Professor, IOE

The Tauber Manufacturing Institute (TMI) promotes cross-disciplinary education and research in manufacturing, combining the strengths of the College of Engineering, School of Business and many industry partners. In 1997, 24 teams of engineering and business students solved important manufacturing problems that required integration of



Hirneisen Photography

business and engineering knowledge and experience. These Team Projects involved 70 students and 39 faculty, many from Industrial and Operations Engineering. Students worked on site for four months.

TMI's industry partners have realized millions of dollars of savings from Team Projects while substantially enhancing the education of many business and engineering students. Many companies have found Team Projects an invaluable recruiting tool, as many TMI students go to work permanently for the companies for which they did Team Projects.

In the Faculty Fellows Program, five teams of engineering and business faculty, aided by doctoral students, are conducting industrially relevant research with GE Lighting, GM and Ford, Libby-Owens Ford, NSK and Steelcase. Our hope is to integrate Faculty

TMI students David Rochlen and Shance Hu during their Team Project at Boeing.



TMI students James Wu, Randy Guimes and Jeffrey Coffey during their Team Project at 3M.

Fellows and Team Projects so that research done by faculty can be implemented by student teams.

Each fall TMI and the National Coalition for Manufacturing Leadership sponsor the National Manufacturing Recruiting Forum. Approximately 200 students from over a dozen cross-disciplinary manufacturing programs at top schools join over 35 companies in two days of intensive interviewing in Ann Arbor. This fall we expect students from MIT, Northwestern, Stanford, Penn State, and many others to join a large number from U-M. The Forum takes place on November 20 and 21, 1997.

We invite your organization to get involved with TMI! You can sponsor a 1998 TMI Team Project. You can sponsor a team of Faculty Fellows. You can recruit students at the National Manufacturing Recruiting Forum. A great first step is to attend the annual Project Spotlight! Each Team Project from the previous summer presents their experience and impact. Industry executives judge the projects and award fellowships. Many companies have found this event an excellent way to get to know TMI. Last fall over 170 industry executives attended the Spotlight!

To get more information about any of these activities, contact Paul Kirsch at 313-998-8162, FAX 313-998-8164, email pskirsch@umich.edu.

Program in Manufacturing (PIM)

By Henia Kamil, Administrative Associate, PIM

The Program in Manufacturing (PIM) , is an interdisciplinary program established in January 1993. The IOE department is extensively involved in the program and is represented by Professor Yavuz Bozer. Since 1993, PIM has graduated 41 students. PIM continues to attract graduated students to its Master of Engineering (M Eng.) program and Doctor of Engineering (D. Eng.) in Manufacturing program. Full-time work experience in manufacturing or a related field is a requirement for admission.

In January of 1997, PIM established its new Simultaneous Graduate/Undergraduate degree program, which allows students to acquire a BSE in IOE and M Eng in Manufacturing in 5 years.

In addition to courses they take in the College of Engineering, PIM students take classes from the Michigan Business School on topics related to finance, marketing, human resources and operations management.

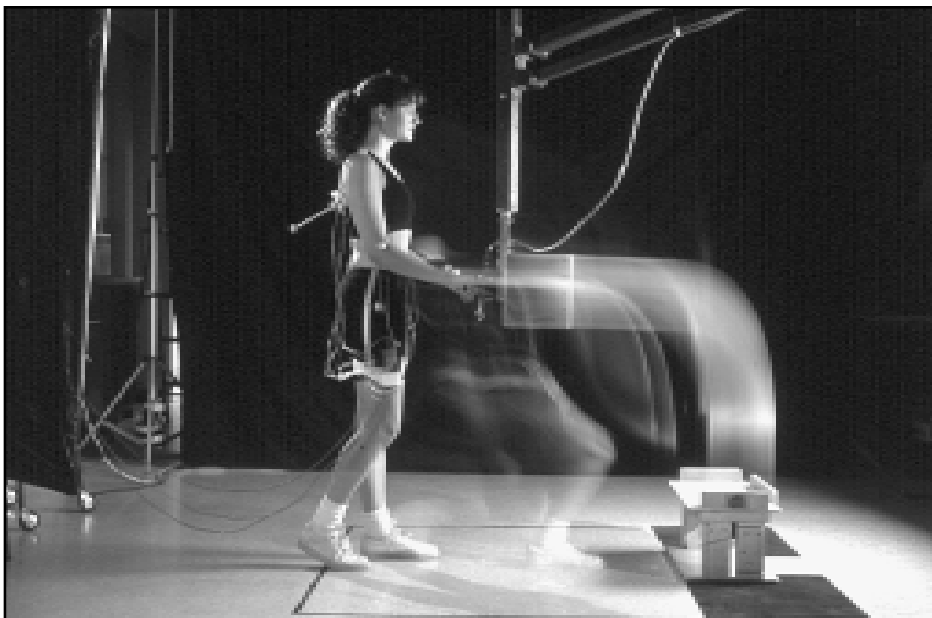
For further information on PIM, please contact Henia Kamil at 313-764-3312 or hek@engin.umich.edu

Program in Occupational Safety Engineering and Ergonomics

By W. Monroe Keyserling, Professor, IOE

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 \$145,000 for the 1997-98 academic year. This grant is used to support the training of Masters and Ph.D. students who plan professional or research careers in Occupational Safety and Ergonomics. In addition, the grant supports library and laboratory facilities in the IOE Building. For additional information on financial aid opportunities, contact Prof. Monroe Keyserling.

As part of course revisions associated with Curriculum 2000, the existing safety management course (IOE 439) will be restructured into two 2-credit courses, each running approximately eight weeks. The first course will be a general survey of safety management issues, while the second course will focus on case studies. In another Curriculum 2000 change, the existing 3-credit work measurement course (IOE 463) will be reduced to a 2-credit, eight-week course.



Hirnsen Photography

In the Center for Ergonomics, subjects are put through a variety of tasks to determine work measurement. Here, Gerri Baker conducts a simulation for Ford sponsored research.

Japan Technology Management Program

By Jeffrey Liker, Associate Professor, IOE

The Japan Technology Management Program is now in its seventh year with funding from the Air Force Office of Scientific Research. JTMP is directed by John Shook, an adjunct in IOE, and co-directed by Jeffrey Liker of IOE, Brian Talbot of the business school, and John Campbell of Political Science. JTMP supports teaching, research, and outreach. JTMP continues to fund students interested in technology to learn Japanese and do internships in Japan. These students come from the business school, social sciences, and engineering. In 1996-97 eleven students did summer internships in Japanese companies and fourteen students were supported during the academic year to study in Ann Arbor or Japan or as research assistants. A number of these students were from IOE which has been the largest recipient of JTMP support in the college of engineering.

Our outreach activities led by John Shook and Mike Rother (Manager of manufacturing outreach) have focused on lean manufacturing. This is no surprise since John Shook spent over ten years at Toyota, including disseminating the Toyota Production System to managers and suppliers. Lean manufacturing is now sweeping American industry, particularly in the auto industry where the Big-3 and most of their suppliers are actively trying to implement their versions of TPS. This past summer we held the third annual conference on lean manufacturing at the Dearborn Inn and drew over 300 attendees from industry. As experts on implementing lean manufacturing we should be working directly with companies and in fact we have a project to help a company called Mechanical Products (a small defense contractor) switch from their traditional batch operation to lean manufacturing. One of our Ph.D. students, Charles Standard is working along side Mike and John to transform this plant which could get major

visibility in the defense community.

JTMP also funds research and our focus has been predominately on Japanese manufacturing. JTMP activities have led to the production of two books currently underway. One is a practitioner-oriented book that includes cases studies of plants in a variety of industries that have made progress in implementing lean manufacturing methods. Edited by Jeffrey Liker, it is called *Becoming Lean: Inside Stories of U.S. Manufacturers*, to be published by Productivity Press, and about half the chapters are written by IOE faculty, students and alumni. This will be out in November. The second book is an academic volume underway for 1998 publication: Liker, J.K., Fruin, M., and Adler, P. (editors), *Remade in America: Transplanting and transforming Japanese Production Systems*, Oxford University Press. We brought together academic leaders in this field from all over the country to Ann Arbor in September of 1996 to share papers, theoretical insights, and war stories and out of that conference came this book.

Finally, we are teaching courses in IOE. John Shook and Mike Rother teach IOE 425: Manufacturing Strategies which focuses on the Toyota Production System. Jeff Liker teaches an IOE graduate course on Japanese Technology Management.

In September the JTMP offices along with our Associate Director, Heidi Tietjen, moved from the Center for Japanese Studies to the newly renovated IOE building. In this way we will get even more closely integrated into IOE. One of the challenges to JTMP is to become financially self-sufficient. With the stream of support from our outreach courses and JTMP's educational role in IOE we will undoubtedly be part of the landscape at Michigan for years to come.



Activities in Transportation

By Chelsea C. White, III, Professor, IOE

IOE students and faculty are involved with two of the on-going research activities at the University involved with transportation - The ITS (Intelligent Transportation Systems) Research Center and the Trucking Industry Program. Each of these activities continues to be a cooperative undertaking between several departments in the College and other units in the University, including UMTRI (the University's Transportation Research Institute), the School of Business, the School of Urban and Regional Planning, and Literature, Sciences, and Arts. Both research activities are integrated with the Rackham ITS Education Certificate Program, a program that has graduated over 75 students in its seven year history.

ITS Research Center. The ITS Research Center is one of three such centers nationally. Major support for these centers comes from the Federal Highway Administration within the U.S. Department of Transportation. Our Center also receives support from the Michigan Department of Transportation and a variety of other public agencies and national and international firms. The mission of our Center is to perform research on technical, economic, and institutional issues associated with the role of information and its enabling technologies in transportation, with particular interest is its impact on safety, the environment, and economic competitiveness. Chip White serves as Center director. The Center sponsors approximately \$1.8 million of research annually.

The Center's research interests are broad scoped and include supporting such topics as: 'Legal Issues in ITS', 'Willingness to Pay for ITS in the Pacific Market', 'Driver Eye Fixations Required by In-Vehicle Displays', 'Innovative Schemes in Congestion Pricing', 'Traffic

Modeling and Dynamic Routing', and 'Spread Spectrum Extenders for Beacon-Based ATIS Networks'. Specific engineering-based research topic areas for which basic and applied doctoral research are supported include:

- The examination of how information made available from new information technologies can be used to improve transportation system, individual vehicle, and/or vehicle fleet measures of effectiveness.
- The identification and development of new information technologies that will provide data having potentially significant beneficial impact on transportation system, individual vehicle, and/or vehicle fleet measures of effectiveness.
- The examination of how these new forms of information, coupled with new control technologies, modify the driver-vehicle relationship in controlling the vehicle.
- The development of displays that effectively provide these new forms of information to the appropriate decisionmaker, e.g., the transportation system manager, the vehicle driver, the fleet dispatcher.

One of the activities of the ITS Research Center has been to serve as a founding member of the MOTORCITI consortium, a public-private partnership having as its objective the development of a commercial market for traffic congestion and incident information in Southeast Michigan. Members of the consortium are the Michigan Department of Transportation, the Road Commission for Oakland County, and the Research Center. Currently, due to the substantial investment in a transportation information infrastructure (comprised in large part of loops in the road and pole-mounted cameras) traffic congestion and incidents can be sensed in real-time in many areas in Southeast Michigan. This information

is used now primarily for traffic management and emergency vehicle routing. However, such information has potential commercial value in providing information useful for routing to the private driver and the commercial fleet. The information provided from MOTORCITI will be made available to the ITS Research Center in real-time, will form the basis for future laboratory facilities for exposing students to state-of-the-art traffic and fleet management



At the ITS Research Center, in-vehicle information systems are developed and tested.

systems, and will serve a unifying focus of multidisciplinary research on the use of information in the transportation sector.

The University of Michigan Trucking Industry Program (UMTIP). UMTIP is a program supported by the Alfred P. Sloan Foundation which takes a multidisciplinary approach to the problems and opportunities confronting the trucking service industry. UMTIP involves faculty, research staff, and students from the Business School, the College of Engineering, UMTRI, the Department of Economics, and the Institute of Labor and Industrial Relations and faculty and students from the University of Massachusetts and the University of Wisconsin. The trucking service industry is by far the largest component of the commercial transportation sector, directly employing over 1.6 million people in the intercity transportation of goods and involving an additional 5.5 million people in goods-producing, goods-distributing, and goods-receiving industries. The trucking service industry currently accounts for 78.1% of freight revenue, 43.2% of freight tonnage, and 27.6% of ton miles. Current research thrusts

include a driver survey, a less-than-truckload firm case study, an owner/operator survey, and a study of the role of information in the trucking industry. A joint activity between the ITS Research Center and UMTIP is a study of the newly emerging ITS industry, as a function of important, near-commercial products and services and to understand the market potential of adaptive cruise control, dynamic route guidance systems, and dispatch and navigation systems for commercial vehicles. Chip White serves as Co-Director of UMTIP. UMTIP sponsors approximately \$750,000 of research annually.

Financial Engineering Update

By John R. Birge, IOE Department Chair

The Financial Engineering (FE) program is growing rapidly as students around campus and the world are hearing about the opportunities for highly skilled quantitative analysts and researchers. The FE program currently has 16 enrolled students with perhaps another two dozen who are participating in

the FE seminar this term. Besides IOE, the students have backgrounds from multiple engineering departments (aerospace, electrical, materials, mechanical, nuclear), physics, mathematics, economics, and business. The first graduates of the program have found opportunities in federal agencies and the private sector.

FE students this term will be able to use the new Financial Engineering Laboratory in the Media Union. This system features the Reuters triarch trading system and will simulate actual trading with real-time data feeds from all major world markets. The system is enhanced by hardware supplied as part of a \$6 million gift from Intel Corporation to the University. These computer systems will ensure that the latest state-of-the-art technology is available for students to conduct projects at the level of the practicing financial engineer.

NSF/ERC Update

By John R. Birge, IOE Department Chair

The National Science Foundation Engineering Research Center (ERC) on Reconfigurable Machining Systems begins its second year in 1997-98. IOE faculty have been heavily involved in the project from the beginning with Jim Bean leading the education effort, John Birge, Yavuz Bozer, Jan Shi, and Chip White all leading projects, and Steve Chick, Izak Duenyas, Tava Olsen, and Rachel Zhang as principal investigators. Each project also includes substantial industrial involvement to help widen ties between industry and the department.

The past summer of the ERC also included a set of case studies conducted by 3 IOE graduate and 6 IOE undergraduate students on the reliability of traditional fixed and newer flexible machining systems. The students

visited multiple plants across the country, gathering data at each machine in a line over an extended period of time. Their reports provide crucial information about the advantages and disadvantages of each type of system and collectively form one of the most informative and realistic comparative system studies that has been done anywhere. We are all proud of our students for this effort and look forward to continued successes in the ERC in the future.

Near Zero Stamping Program— Overview

By Jianjun (Jan) Shi, Assistant Professor, IOE

The Agile and Precision Sheet Metal Stamping—Near Zero Stamping Program is a three-year project, jointly funded by the NIST-Advanced Technology Program and the Auto Body Consortium (ABC). The goal of the program is to develop a new generation of sheet metal stamping technologies to achieve precision and agility in sheet metal stamping:

- (1) Precision: to improve the accuracy of stamped sheet metal parts from the present industry standards of a few millimeters to sub-millimeter tolerances.
- (2) Agility: to reduce the time currently required for sheet metal die design, tryout, and production, by thirty percent (30%).

This program has been carried out jointly by twenty-two (22) Auto Body Consortium companies, in cooperation with the “Big Three” domestic automobile companies (Chrysler, Ford, and General Motors), and five research institutions (the University of Michigan, Ohio State University, Wayne State University, Sandia National Laboratory, and the Industrial Technology Institute).

The program focusses on critical issues in sheet metal stamping that have a large impact on precision and agility. The three major projects and 11 tasks in the program are:

- Project 1. Integrated Design for Stamping and Assembly
 - Task 1.1 Optimized Design Process for Stamped Sheet Metal Components and Assemblies
 - Task 1.2 Computerized Formability Evaluation System for Sheet Metal Part Design
 - Task 1.3 Sensitivity Analysis of Critical Parameters for Reducing Stamping Variation
 - Task 1.4 Product/Process Optimization for Key Hemming Characteristics

- Project 2. Agile Stamping System Design and Try-out
 - Task 2.1 Global Strain-Based System for Fast Die Evaluation
 - Task 2.2 Agile Die Tryout and Modification
 - Task 2.3 Integration of Material Handling and Press Motion in Die Design

- Project 3. Intelligent Stamping Process Monitoring and Control
 - Task 3.1 Innovative Measurement Strategy
 - Task 3.2 Signature Analysis or Stamping Process Monitoring and Diagnosis
 - Task 3.3 Multi-Attribute Decision Supporting System for Die Predictive Maintenance
 - Task 3.4 In-Process Adjustment/ Compensation System

The University of Michigan has played a leading role as a research institute. Dr. Jan Shi and other faculty members from several departments (IOE, MEAM, MSE, and Statistics) are involved in the project. Dr. Shi also serves as the Technical Director for the overall program, and represents the research institute on the Executive Committee Board of the NZS Program.

In the past year, significant progress has been made in the research. Various fundamental issues on die design and tryout, stamping signature analysis, die/press proactive maintenance, and innovative measurement strategies have been addressed. Industrial validations and implementations are being conducted in different stages. The program has generated significant interest from the stamping industry and has had a great impact. As an example, the Minster Company and other ABC members have donated stamping presses of more than one million dollars value to U-M to aid in the ongoing research. As pointed out by Ernie Vahala, President of the Auto Body Consortium and a long-term friend of U-M, "The NZS program provides the first-class researchers at U-M with the state-of-the-art industrial presses. The great impact will go beyond the NZS program's duration."

Dr. Mary Good, Undersecretary for Technology from the U.S. Department of Commerce, reviews NIST-ATP projects at U-M.



Shekinah Errington, U-M MEAM CPO

Alpha Pi Mu (APM)

By Daniel C. Woolson, President

The University of Michigan chapter of Alpha Pi Mu, the National Industrial Engineering Honor Society, is planning an exciting year for its current members and new initiates. A primary goal set by the officers of Alpha Pi Mu this year is to increase the recognition of industrial engineering as a career choice within the College of Engineering. In addition, our society hopes to improve interaction between the students and faculty with the assistance of our faculty advisor, Professor Tava Olsen, and our Regional Vice-President for Alpha Pi Mu, Professor Gary Herrin. We strive towards these goals by planning various events that fall into one of four categories: Career Planning and Professional Development, Community Service, Fundraising, and Social Activities.

We assist students in recognizing the many applications of an IOE degree through our Career Planning and Professional Development activities. The "Career Options" night allows students to direct questions to a panel comprised of former IOE graduates who have gone on to receive MSE in IOE degrees, MBA degrees, and law degrees. A resume book is compiled of all Alpha Pi Mu students each year and is sent out to interested corporations. Moreover, we sponsor corporate presentations by such firms as Deloitte & Touche, Kurt Salmon, and Ernst and Young.

We are committed to serving our community. Our society will spend a day at a Habitat for Humanity site, as APM members will help to construct homes for low-income families. Other activities include working at a local soup kitchen and organizing a food drive near Thanksgiving. These philanthropic activities demonstrate that there is more to university life than just going to class.

Two other community service projects we will undertake are geared towards improving the recognition of industrial engineering as a career choice. Alpha Pi Mu will participate in Tech Day, a college wide event, which allows high school and freshman college students to learn more about various engineering disciplines. We will have the opportunity to talk to these prospective students on a face-to-face basis and tell them what it means to be an IOE student.

Furthermore, we will take this message out to local high schools through a community outreach program.

Several fundraising activities are also on the table. At the end of this term, our society will sponsor a book exchange program. Additionally, we plan on selling IOE T-Shirts and organizing a raffle.

Social activities help to improve interaction between the students and faculty and Alpha Pi Mu and other engineering honor societies. Each term, Alpha Pi Mu sponsors the IOE BBQ, a great time for IOE students, faculty, and staff to get together. This coming October, Alpha Pi Mu is once again challenging Tau Beta Pi in a game of "Capture the Flag" in the Arb. Last spring Tau Beta Pi emerged victorious in this spirited game, but it will be a different story this year! Other activities on the calendar are Rock 'n' Bowl, Ice-Skating at Yost, and a Road Rally.

These are only a few of the events which we are sponsoring this year. We will organize many more events as the year passes. We are very interested in having IOE alumni return to campus and share their professional experiences. If you have any comments, suggestions, or would like to become involved in some of our activities, feel free to contact the APM officers at: apm.97-officers@umich.edu.

Institute of Industrial Engineers (IIE)

By Bree Bowersox, Chapter President

The University of Michigan Student Chapter of the Institute of Industrial Engineers (IIE) has many plans for the Fall 1997 semester. Our biggest function is the Career Pathways Dinner, which will be held jointly with the Detroit IIE Senior Chapter on November 4th. Other plans for the semester include rock-and-bowl, an Industrial Engineering speaker, a fundraiser, and possibly an Industrial Engineering community service project with a non-profit organization. IIE is also working on restructuring our student chapter. Goals for this semester include increasing membership and member involvement;

more mass meetings; and documentation for smoother officer transitions. IIE is also currently in the process of writing a constitution during the 1997-98 school year. We will continue to promote interaction of IOE students within the department as well as assist students in exploring their career options within Industrial Engineering. Please check out our web page for officer contacts and upcoming events: <http://www.engin.umich.edu/soc/ie/>

Society of Women Engineers (SWE)

By Jean Marie DuBay, President

We are well on our way into a very event filled and exciting semester. We will be having events that promote industry relations, public relations, outreach, regional events, and graduate relations.

The Society of Women Engineers is composed of over 300 members, both male and female. Our vision is to be the source of support and guidance for women in engineering at the University of Michigan and prospective women in engineering. Our mission is to provide opportunities for women engineering students to realize and achieve their full potential and demonstrate the value of leadership, teamwork, communication, and diversity. Some of our key objectives include:

- *Developing the personal and professional skills of engineering students
- *Enhancing student career opportunities and guidance
- *Promoting professional and social networks for all engineers
- *Encouraging high school women to enter engineering
- *Providing informational resources for engineering students
- *Maintaining communication through e-mail, meetings and the www site

I would like to take a few moments to tell you more about the actual activities we are involved in during this fall semester.

In the area of Industry Relations the fall is a very busy time for SWE. The SWE/Tau Beta Pi Career Fair will be held all day on October 13 this year. About 130 companies will be in attendance in order to recruit students of all engineering majors for permanent, coop, and summer work. Prior to the Career Fair, on October 12, Professional Development Day will be occurring. Many corporate representatives will be featured as guest speakers and to aid in resume critiquing and mock interviews. SWE hosts this event in conjunction with the National Society of Black Engineers.

We are also the proud hosts of the 1997 SWE Regional Convention. Students from schools throughout the midwest and corporate representatives will be at the convention. The convention will be held from November 7-9. The theme is "Team Leadership" and there will be many interactive, team building activities featured on Saturday. Friday night will feature an International Party with cuisine and dances from various countries. Saturday night a banquet is planned for all of the convention participants.

Throughout the semester SWE hosts Pre-Interviews Monday through Thursday night. Pre-interviews are

SWE President, Jean Marie DuBay, Kingsley Reeves and Jose Israel work on their TMI Team Project at UTA.



informal information sessions featuring companies who are interviewing on campus.

This fall our SWE will be hosting a Shadow Day in which high school women will come to U-M and spend the day with another engineering student. There will also be a Girl Scout Weekend and high school visits to encourage young women to enter engineering.



Our graduate committee continues to host regular brown bag lunches/discussions, lab visits and activities to reach out to incoming graduate students and undergraduate students interested in graduate school.

In addition to all of these events we will continue to have our biweekly general meetings. These meetings often feature speakers and useful topics such as how to get an internship, resume writing, computer viruses, etc.

If you are interested in learning more about any of our events or would like to support us or help us out in any way please contact the SWE office: 1226 EECS Ann Arbor, MI 48109 (313)763-5027 swe.info@umich.edu

Vibrant Industrial Black Engineering Students (VIBES)

By Kimberly Taylor, President

The Vibrant Industrial Black Engineering Students organization was founded in 1993 for the purpose of enhancing the lives of past U-M black industrial engineering students. Since that time, the organization has expanded tremendously and has

VIBES members getting to know each other better at the U-M ropes course.

significantly enhanced the lives of many black industrial engineering students. Our vision is to increase the number of black industrial engineering students that excel academically, succeed professionally, and who positively impact the community. Our goals this year are to provide: sufficient academic support so that students may increase their academic performance, increase knowledge of numerous concentrations within Industrial and Operations Engineering, increase faculty and student relations, increase student awareness and knowledge about skills needed in order to be competitive within industry, and finally to increase the effectiveness of peer counseling for students. So as you can see we will be extremely busy this year trying to get these things accomplished. We plan on fulfilling these goals by inviting industrial representatives to speak at our meetings, plant tours, study jams, Crisp Help-Nites, and Faculty-Student mixers. Currently our meetings are held every 2nd Wednesday at 5:30 pm in 1680 IOE, and we welcome interested alumni to contact us at: kymt@engin.umich.edu or (313)662-2474.