Letter From the Department Chair

Greetings from Houghton. I am honored to have been named the new Chair of Civil and Environmental Engineering this summer replacing Bob Baillod, who served as chair for 14 years before returning to the faculty.

Exciting things are happening within the Department. We have three new faculty members. They will be highlighted later in this issue. Our concrete canoe team placed 3rd at national ASCE completion. Railway engineering is making a comeback. Jim Michelic is vice president for the Association of Environmental Engineering and Science Professors. Bill Leder has been appointed as the Roland Mariucci Distinguished Practitioner in Residence.

Our international programs continue to grow. We have 37 students in our Peace Corps Masters International Programs in Civil and Environmental Engineering – 25 of which are on assignment in countries around the world. Twenty three students completed an international senior design working on several projects in Bolivia. We have established an Engineers Without Borders chapter. They worked on a septic system project in Bolivia over Thanksgiving Break.

Concrete Canoe Team Third in Nation

The Michigan Tech Concrete Canoe Team placed third at the 2005 ASCE National Concrete Canoe Competition. There were 21 teams in the competition, and the team placed in the top 5 of all events but one. These were: 2nd in oral presentation, 3rd in the co-ed sprint race, 4th in men's sprint, women's sprint, and women's endurance, 5th in men's endurance, and 5th in design paper.

Bill Leder Appointed the Roland Mariucci Distinguished Practitioner in Residence

In fall 2005 Bill Leder began his third year as an adjunct professor in the department and was appointed the Roland Mariucci Distinguished Practitioner in Residence.

Bill’s interests include public transportation planning and engineering, airport planning and design, railroad engineering, design-build contracting for large transportation projects, and project management. His papers have been published by the American Society of Civil Engineers and the Transportation Research Board. He holds degrees from Michigan Tech and the Massachusetts Institute of Technology. Bill is a Fellow of the American Society of Civil Engineers and a recipient of ASCE’s Horonjeff Award for contributions to air transportation engineering.

His work in the department includes bringing his 33-year career in the public sector and consulting engineering into the classroom. This fall he is:

- Leading a senior design project focused on a Master Development Plan for the entire Michigan Tech Waterfront.
- Assisting Dr. George Dewey with the Pavement Design, Construction and Materials Enterprise. Teams work on road design and construction assignments with an emphasis on asphalt.
- Advising the newly formed Michigan Tech Railroad Engineering Club.

Next semester, in addition to the above activities, he will co-teach a new course on the management of consulting engineering firms. Bill said, “It’s a great honor to serve in a position that bears Roland Mariucci’s name and reflects his generosity. Helping to educate the next generation of civil and environmental engineers is a remarkably gratifying experience in countless ways. I really appreciate the support I’ve received from everyone in the department, especially Dr. Bill Sproule who has been a willing mentor.”

Engineers Travel to Bolivia
The Michigan Tech Chapter of Engineers Without Borders conducted its first build this fall. Seven undergrad and graduate students traveled with Professors David Watkins and Kurt Paterson to Santa Cruz, Bolivia. They constructed a septic system to serve 515 students at Buen Samaritano school. The system was designed by Chris Fehrman, Kim Kimmes, and Leslie Dellangelo during their 2004 International Senior Design trip to Santa Cruz, Bolivia.

Professor Haas Dies
Professor Emeritus Wilbur M. (Bill) Haas, 82, who retired from Michigan Tech in 1994 after 40 years on the civil and environmental engineering faculty, passed away August 18, 2005.

While at Michigan Tech, Haas researched the effects of frost and freezing on soils, a field of study that took him from the Arctic Circle to Antarctica. He received the Research Award in 1963, and upon his retirement in 1994, was honored for his four decades of distinguished service, teaching, and research. In 1993, he received the Harold R. Peyton Award for Cold Regions Engineering from the American Society of Civil Engineers.

The Bill Haas Memorial Graduate Fellowship fund has been set up in the Michigan Tech Fund in his honor. Donations can be made directly to this fund.
MTU Welcomes Three New Civil & Environmental Engineering Professors

Dr. Warren K. Wray began this fall as professor of geotechnical engineering. He earned his Ph.D. in civil engineering from Texas A&M University. His research interests center on expansive clay theory and practice, soil structure interaction, slab-on-ground theory and performance, and pavement-subgrade interaction. Dr. Wray previously served as Provost and Senior Vice President for Academic and Student Affairs at Michigan Tech, and has been recognized with seven college and university-wide outstanding classroom teaching and research awards.

Dr. Yue Li recently joined the department this year as a Donald and Rose Ann Tomasini Assistant Professor of Structural Engineering. He earned his Ph.D and M.S. in Civil Engineering from Georgia Institute of Technology in 2005 and 2002, respectively. His research interests include: natural hazard mitigation, probabilistic risk assessment, performance-based engineering, bridge engineering, earthquake engineering, wind engineering, and wood engineering.

Dr. Amlan Mukherjee joined the faculty as a Donald and Rose Ann Tomasini Assistant Professor of Construction Engineering. He earned his Ph.D. from the University of Washington in 2005. His research interests lie in interactive and adaptive process simulation platforms for decision making and training decision makers. Specifically he focuses on studying management processes and decision making in construction.

Michigan Tech’s undergraduate environmental engineering program is ranked 17th by US News & World Report.

Michigan Tech is ranked among the top ten universities in terms of number of civil and environmental engineering degrees awarded.

Points of Pride:

Dr. Brian Barkdoll is an Associate Editor for the ASCE Journal of Hydraulic Engineering.

Dr. George Dewey was honored by CEE students with the 2005 Howard Hill Faculty-of-the-Year Award

Dennis Magolan and Linda Phillips share a lecturer appointment for March-November. Dennis teaches Building Construction and Capstone Senior Design classes as well as helping Linda with the International Senior Design classes. Linda also teaches Professional Practice and Project Management.

Dr. James R. Mihelcic was elected to the Board of Directors of the Association of Environmental Engineering & Science Professors (AEESP) and subsequently the Board elected him as the AEESP vice-president elect.

Dr. Kurt Paterson was awarded the Mike Berger Memorial Award for Outstanding Advisor at the 2004 WERC International Environmetal Design competition.

Dr. Judith A. Perlinger was elected to the International Joint Commission (IJC) Great Lakes Science Advisory Board in 2002. She also serves as the board’s liaison to the IJC International Air Quality Advisory Board. The commission was formed between Canada and the US to protect and manage the boundary waters between the two countries.

Dr. Noel Urban serves on the National Science Foundation’s CLEANER Science Policy Board.

Dr. David Watkins is an Associate Editor for the ASCE Journal of Water Resources Planning and Management.

Michigan Tech’s undergraduate environmental engineering program is ranked 17th by US News & World Report.

Michigan Tech is ranked among the top ten universities in terms of number of civil and environmental engineering degrees awarded.

Professor Warren K. Wray began this fall as professor of geotechnical engineering. He earned his Ph.D. in civil engineering from Texas A&M University. His research interests center on expansive clay theory and practice, soil structure interaction, slab-on-ground theory and performance, and pavement-subgrade interaction. Dr. Wray previously served as Provost and Senior Vice President for Academic and Student Affairs at Michigan Tech, and has been recognized with seven college and university-wide outstanding classroom teaching and research awards.

Two new faculty began this Fall, through the Donald F. and Rose Ann Tomasini Civil and Environmental Engineering Transformation Fund. Donald Tomasini, MTU Class of 1954, passed away Monday, October 17 at his home in Wisconsin. Donald was inducted into the CEE Academy of Civil and Environmental Engineers in 1999. Recently, he and his wife made a substantial donation to the Department to establish the fund.

Professor Yue Li joined the department this year as a Donald and Rose Ann Tomasini Assistant Professor of Structural Engineering. He earned his Ph.D. and M.S. in Civil Engineering from Georgia Institute of Technology in 2005 and 2002, respectively. His research interests include: natural hazard mitigation, probabilistic risk assessment, performance-based engineering, bridge engineering, earthquake engineering, wind engineering, and wood engineering.

Professor Amlan Mukherjee joined the faculty as a Donald and Rose Ann Tomasini Assistant Professor of Construction Engineering. He earned his Ph.D. from the University of Washington in 2005. His research interests lie in interactive and adaptive process simulation platforms for decision making and training decision makers. Specifically he focuses on studying management processes and decision making in construction.
After 14 years as Department Chair, Professor Bob Baillod has shed his administrative duties and returned to full time teaching and research. This fall he is happy to be teaching the Senior Water and Wastewater Treatment Course as well as a senior design project focused on sewers for Lake Gogebic and reconstruction of the Bergland Township Park. In the spring, Dr. Baillod will be going to the University of Sonora in Hermosillo, Mexico on sabbatical leave to strengthen the partnership between Michigan Tech and the University of Sonora.

Lee A. Bernson, P.E., BSCE ’65, Michigan Tech
Retired owner/director of Mathisen Tree Farms of Traverse City, Michigan

William J. Bier, P.E., BSCE ’51, Michigan Tech
Retired CEO of Dunn Construction Engineering

Debra A. Campbell, P.E. BSCE ’76, Michigan Tech, MSCE ’94 University of Colorado
Director of Planning for Grand County, Colorado

Paul B. Frair BSCE ’50, Michigan Tech
Retired Vice President of Operations, Herman Gundlach Inc. of Houghton

David I. Matson BSCE and BEA ’69, Michigan Tech, MBA ’70, Western Michigan University
Vice Chairman and Chief Financial Officer, Union Bank of California and UnionBanCal Corporation

Brian C. Rheault, P.E. BSCE ’82, Michigan Tech
President of Bridge Design Associates, Inc. of West Palm Beach, Florida

Richard G. Timmons, P.E., P.S. BSCE ’69, Michigan Tech
Retired Vice President and Managing Principal of Atwell Hicks, Inc. based in Southeast Michigan

Richard D. Wilcox, P.E., P.S. BSCE ’82, BSLS ’83
President/CEO, Wilcox Associates, Inc. of Cadillac, Michigan

Academy of Engineers

The tenth Civil and Environmental Engineering ACADEMY Induction was held on August 3, 2005. The ACADEMY was established in 1993 to recognize excellence and leadership in engineering and civic affairs of outstanding graduates and friends of the Civil and Environmental Engineering Department. Eight alumni were honored bringing the ACADEMY membership to 84.

Front Row (L to R): Richard D. Wilcox, Paul B. Frair, Debra A. Campbell, William J. Bier

Back Row (L to R): David I. Matson, Lee A. Bernson, Richard G. Timmons, Brian C. Rheault

Bob Baillod returns to Teaching and Research

The tenth Civil and Environmental Engineering ACADEMY Induction was held on August 3, 2005. The ACADEMY was established in 1993 to recognize excellence and leadership in engineering and civic affairs of outstanding graduates and friends of the Civil and Environmental Engineering Department. Eight alumni were honored bringing the ACADEMY membership to 84.

Front Row (L to R): Richard D. Wilcox, Paul B. Frair, Debra A. Campbell, William J. Bier

Back Row (L to R): David I. Matson, Lee A. Bernson, Richard G. Timmons, Brian C. Rheault
Research/Education Centers Have Great Input From Civil & Environmental Engineering Students and Faculty

The Transportation Institute continues to lead efforts in transportation education, research, and outreach activities (www.trans.mtu.edu/). The Local Technical Assistance Program (LTAP) serves as the Technology Transfer effort of the Federal Highway Administration’s Office of Professional Development. The Transportation Research Center houses the Center for Structural Durability and also performs research on Portland cement- and asphalt-based materials; aggregate and geotechnical materials. A congressional earmark of $2 million will fund the development of a University Transportation Center that will focus on civil engineering materials research.

The Sustainable Futures Institute was founded in January, 2003 (www.sfi.mtu.edu). SFI's mission is to help create and disseminate new methods and processes that generate scientific knowledge and engineering products in support of sustainability decisions and education. A “Graduate Certificate in Sustainability” was initiated last year.

The Center for Water and Society was created in fall, 2005 (www.mtcws.mtu.edu). The goal is to establish Michigan Tech as a state, regional, national and international leader in interdisciplinary approaches to solving water-related problems.

The Western U.P. Center for Science, Mathematics, and Environmental Education, a partnership of Michigan Tech and the Copper Country and Gogebic-Ontonagon Intermediate School Districts, has received the 2005 Youth Award from the Lake Superior Binational Forum for their outstanding contributions to protecting and restoring Lake Superior basin natural resources! The award recognizes the Center's expansive and diverse K-12 educational outreach programs in 20 school districts and five counties of the western U.P., as well as throughout the upper Great Lakes basin.

Student Accomplishments

- The Concrete Canoe Team won 3rd Place in the 2005 ASCE National Concrete Canoe Competition
- Civil and environmental engineering students affiliated with the Sustainable Futures Institute won the 2005 Daimler Chrysler and UNESCO Mondialogo Worldwide Engineering Award and received honorable mention in the EPA’s 2005 People Prosperity, and Planet (P3) Award for a project on sustainable construction materials.
- An International Senior Design team won 3rd place in the 2005 Parsons Brinckerhoff Environmental and Water Resource Student Design Competition at the at the ASCE-EWRI Conference in May.
- For the 2nd year in a row, the Pavement Design, Construction and Materials Enterprise won the 2004 Wisconsin and National Hot Mix Asphalt Competitions.
- Two design teams brought back 2nd place and outstanding paper awards at the Spring 2004 WERC Environmental Design Competition held in Las Cruces, New Mexico for their design solutions to two problems: sequestration of atmospheric carbon dioxide to combat global warming, and removal of perchlorate to make safer drinking water.
- A civil engineering team placed second in the Heavy Civil and Highway Division Bidding Competition.
Books Published By Faculty and Graduates


Dr. Brian Whitman (BS ‘93, MS ‘94, PhD ‘98—Michigan Tech Environmental Engineering) is one of four authors of a book Wastewater Collection System Modeling and Design (Haestad Methods, 2004). Dr. Whitman is a professor at Wilkes University.


Fundamentals of Environmental Engineering (335 pages, John Wiley & Sons, Inc. New York, 1999) was written by Drs. James Mihelcic, Martin Auer, David Hand, Richard Honrath, Jr., Judith Perlinger, Noel Urban, and Dr. Michael Penn, a Michigan Tech Ph.D. graduate who is a professor at the University of Wisconsin, Platteville.

Partnership Provides Exchange With Mexican Students and Faculty

In 1992, Michigan Tech and the University of Sonora (UNISON), Mexico formalized a relationship, which has grown into a strong partnership between the two universities. Several grants have been obtained through the partnership, enhancing the departments in both universities. Approximately 50 faculty from Michigan Tech have visited UNISON for research and teaching collaboration, with visits ranging from a week to four months. Seven UNISON faculty have visited MTU for research and teaching collaboration.

The most recent grants spearheaded by the partnership are a three-year grant from the U.S. Agency for International Development (USAID), titled “Michigan Tech-UNISON Linkage: Training a Core of Water Resources Experts,” also known as the “TIES” program, and a four-year grant titled “ExCit: Expanding Cities—People, Water and Infrastructure.” The TIES program was highlighted in the Frontlines news for USAID (see http://www.usaid.gov/press/frontlines/fl_sep05/tiesprofile.htm). ExCit establishing a consortium of six research-based universities in Canada, Mexico, and the U.S., for the purpose of exchanging students and faculty. The focus area for the mobility program is sustainable water resources management in North America. Both grants are in effect through 2007.

Additionally, Michigan Tech students and faculty cooperated with UNISON and Mexican government agencies in the design and construction of wastewater and solid waste facilities for the rural, marginalized town of Rosario de Tesopaco, Sonora. Designs and funding for construction of project were approved by the Mexican federal government. Construction of wastewater treatment facility began in 2004.
Railroad Engineering in Finland

The Summer in Finland Program will be offered for the third time in Summer of 2006. Students will spend two weeks at Michigan Tech, including field visits in the Chicago region, followed by three weeks in Tampere, Finland.

Each student takes 2 courses - “Introduction to Railroad Engineering” and a Finnish Language and Culture course. In addition to classroom lectures, field trips are given high priority in both courses.

Visits to rail facilities in the USA and Finland allow students to observe rail industries and systems in action, and cultural visits provide students an opportunity to experience today’s Finland. An additional benefit to...