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Eight students from India's IIT assist in CEAS research projects

For eight weeks this summer, **Pretty Khare** – a fourth-year mechanical engineering student at the Indian Institute of Technology (IIT) in Kharagpur, India – researched high performance machining of semiconductors and ceramics with **Dr. John Patten**, WMU's Department of Manufacturing Engineering chair, and three WMU graduate students: **Ramesh Kattumenu**, **Deepak Ravindra**, and **Madhavi Aysola**.

Khare worked on two of Patten's research programs: tool design for micro-laser assisted machining and computer simulations of tool wear during machining.



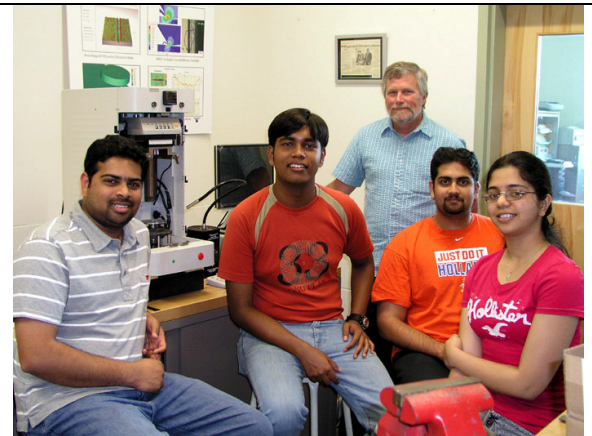
Participants in the summer IIT program include (seated, from left) **Chandra Viswa Santhi**; **Dr. Janet Pisaneschi**, interim Provost; and **Neha Vyas** and (standing, from left) **Vaibhav Jain**, **Manish Batsa**, **Karn Agarwal**, **Utkarsh Agrawal**, **Dr. Raja Aravamuthan**, **Pretty Khare**, **Ashutosh Goel**, and **Dr. Tim Greene**, CEAS dean

Khare was one of eight third-year IIT engineering students who participated in a new summer undergraduate program organized and co-ordinated by **Dr. Raja Aravamuthan**, the Gordon H. Sindecuse professor in the Department of Paper Engineering, Chemical Engineering, and Imaging (PCI). The program represented a collaboration of CEAS and the Hanicke International Graduate Education (HIGE).

The IIT students were enrolled during Summer I 2007 in independent study classes of different departments, and they worked with various engineering professors. "They had the opportunity to enhance their abilities to conduct independent research," Aravamuthan said. "We can assess their potential as prospective graduate students."

The selection of students who had completed their third year meant that the students were already well educated in engineering, Aravamuthan said. At the conclusion of the program, the students submitted a written report to the project advisor and made an oral presentation to the CEAS faculty and students.

According to Aravamuthan, himself an IIT alumnus, between 225,000 and 250,000 students apply to IIT each



Researchers in the CEAS Parkview Tribology Analysis Lab (left to right): **Ramesh Kattumenu**, **Pretty Khare**, a senior next fall at the IIT in India, **Dr. John Patten** (standing), chair of WMU's Department of Manufacturing Engineering, **Deepak Ravindra**, and **Madhavi Aysola**. Khare worked with Patten and the graduate students as part of new summer undergraduate research program for IIT students

year, but only about 4,000 are admitted. "IIT is the best institution in India, and it has the country's top engineering students" he said

In addition to Patten, faculty members who served as research guides and mentors included **Dr. Said AbuBakr**, PCI; **Dr. Haluk Aktan**, Construction and Civil Engineering (CCE); **Dr. Brad Bazuin**, Electrical and Computer Engineering (ECE); **Dr. Steven Butt**, Industrial Engineering (IE); **Dr. Tycho Fredericks**, IE; **Dr. Ajay Gupta**, Computer Science (CS); **Dr. Margaret Joyce**, PCI; and **Douglas Mclaughlin**, the National Council for Air and Stream Improvement (NCASI), a privately funded organization that does research in the paper industry.

Other CEAS faculty and staff members were featured speakers on Friday seminars that were arranged for the benefit of the students.

Aravamuthan joined WMU in 1986 as an assistant professor. In addition to extensive teaching, research and publication, he is involved in various service activities for the university. He is currently the chair for Undergraduate Studies Council, vice -chair for Campus Planning and Finance Council, and a member of many committees such as advising, student success, and curricular revision. He also manages the MI-LSAMP project (in collaboration with University of Michigan, Michigan State University, and Wayne State University) to boost minority participation in Science, Technology, Engineering, and Mathematics (STEM) programs in the University. His email address is raja.aravamuthan@wmich.edu

Send your thoughts on this article or your suggestions for future articles to the editor at jerrie.fiala@wmich.edu Thank you.