



Wichita State University

# Industrial and Manufacturing Engineering

## Samantha Corcoran wins National IIE Paper Competition

### Special points of interest:

- Graduate Certificates offered
- Senior Honor Women named
- Faculty win awards
- Dr. Masud named IIE Fellow

Samantha (Vitt) Corcoran, a graduating senior in industrial engineering at WSU, won first prize at the Institute of Industrial Engineers National Student Paper Competition held recently at the IIE annual conference in Houston. Corcoran's paper, "Development of a Lean Sheet Metal Cell at Thayer Aerospace," co-written with Marki (Farris) Huston, was based on the senior project requirements for the industrial engineering program.

The paper was presented to a panel of judges that evaluated 10 other papers from students in North and South America. In order to reach the final competition, the paper won the regional competition against six schools in Kansas, Oklahoma, and Texas. Marki Huston, IMfGE student, won second place at the regional level.

This is the second time that students from the IMfGE department at WSU have swept the regional competition and also the second time that a student from IMfGE has won the national award. In 2001 Jennifer Sutherland won the national award. Samantha has been President of Alpha Pi Mu, IIE, and the Wallace Scholar Council. Currently Samantha is a Masters student in the Engineering Management program and is employed at Raytheon Aircraft Company as a Manufacturing Engineer I.



## Dr. Hossein Cheraghi Appointed Chair

Professor Hossein Cheraghi was appointed chairperson of the Department of Industrial and Manufacturing Engineering. He joined the department in 1993 and has served the department in numerous roles including graduate coordinator. He was recipient of Wichita State University Excellence in Research Award, 2003-2004, Bombardier-Learjet Fellowship for academic Excellence, 2001-2004, the 2001 College of Engineering Wallace Outstanding Educator Award in Continuing Education, the 1999 Wichita State University Board of Trustees Young Faculty Scholar Award for Excellence in Teaching, Research, and Professional Service, and the 1999 College of Engineering Wallace Outstanding Educator Award for Excellence in Research. He has 29 peer reviewed journal publications and over 55 presentations at professional conferences. He replaces Professor Abu Masud who has chaired the department since 1994.

## Seven New Graduate Certificates Offered

The Industrial and Manufacturing Engineering (IMfgE) Department offers Graduate Certificate programs in seven topical areas. Each certificate program requires the completion of twelve credit hours from a selected list of courses. Students completing the certificate program will receive an appropriately worded certificate from the Graduate School, and notation will be made on the student's transcript when the certificate has been awarded.

**Advanced Manufacturing Analysis.** This program is aimed at equipping students with the skills necessary to carry out advanced analysis of manufacturing processes such as metal forming, machining, casting, and welding and will be of value in this age of analysis based process design.

**Industrial Ergonomics and Safety.** This program provides advanced knowledge and methodology of ergonomics and safety engineering for practitioners in industry who are responsible for the design and evaluation of work systems (tasks, materials, tools, equipment, workstations, and environments) for better usability, health, safety, and performance of workers in the workplace. Curriculum focuses on the essential knowledge, analytical techniques, guidelines, regulations, and contemporary issues of ergonomics and safety engineering for the design and evaluation of various work systems in industry.

**Systems Engineering and Management.** This program applies systems concepts and techniques to the understanding, description, design, and management of large-scale systems requiring the integration of information and human activity. Curriculum focuses on the essential knowledge, analytical techniques, and contemporary issues in complex systems definition, design, and decision-making.

**Lean Systems.** This program provides advanced knowledge and methodology of lean systems design, evaluation and operation for practitioners in industry who are responsible for the development and management of production systems in the workplace. Curriculum focuses on the essential knowledge, analytical techniques, guidelines, and contemporary issues in the design, evaluation and management of lean systems in industry.

**Foundations of Six Sigma and Quality Improvement.** This program is intended for individuals with industrial affiliation interested in enhancing their skills in Quality Engineering and Six-Sigma Methodol-

*Certificates Cont'd on page 4*



### Laura Bernstorf Named Senior Honor Women

IE Senior, Laura Bernstorf, was named one of five Senior Honor Women at Wichita State University for the 2003-2004 academic year. The award recognizes campus wide leadership and contributions to the life of the University. She served as president of Morterboard (2003-2004), Chair of Engineering Open House, Chair of Student Leadership Conference for the WSU Student Ambassadors Society, and was a Wallace Scholar.

Laura joins 4 other IMfgE students named Senior honor Women in the last 6 years; Haydee Serna (2002), Charity Kennedy (2001), Joan Wagner (1999), and Brandi Farris (1998). She is currently employed at Raytheon Aircraft Company as an Industrial Engineer and plans to attend graduate school.

## IMfgE Faculty Receive Recognition



**Dr. Lawrence Whitman**, Associate Professor of IMfgE, received the 2003-2004 Wallace Outstanding Educator Award for Excellence in Continuing Education. Dr Whitman has developed a Lego™ based interactive simulation exploring the principles of production. He has presented this to a range of groups from middle schoolers to, university classes, to professional societies. He has been invited to present in South Africa, Brazil, and Mexico.



**Dr. Vis Madhavan**, Associate Professor of IMfgE, received the 2003-2004 Wallace Outstanding Educator Award for Excellence in Research. His research interests include the mechanics of machining and sheet metal forming, use of Virtual Reality in the design of manufacturing processes and lines, and use of Virtual Reality in engineering education. His work in these areas has been funded by NSF, DoD (Army Research Office), Boeing Co., Cessna Aircraft Co. and Raytheon Aircraft Co.



**Dr. Hossein Cheraghi**, Professor and Chairperson of IMfgE, received the Wichita State University Excellence in Research Award for the 2003-2004 academic year for outstanding research and publications in process analysis and tolerance design. He was also named a Bombardier-Learjet Fellowship for academic Excellence, 2001-2004

## Dr. Abu Masud Named IIE Fellow

**Dr. Abu Masud**, Professor and Associate Dean of the College of Engineering, was elected a fellow of the Institute of Industrial Engineers (IIE) by its board of trustees at its Annual Conference. A fellow is the highest grade of membership in IIE and elevation to this grade is based on professional leadership, scholarship, and contribution to the field of Industrial Engineering. He is one of only 15 people elected a fellow of IIE this

year.

He is considered to be one of the pioneers of multiple-criteria decision making (MCDM). He provided leadership for curriculum redesign and preparation for the Fall 2001 accreditation under EC2000 which lead to new accreditation for the Bachelors of Science in Manufacturing Engineering program.



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ogy. It includes most of the Six Sigma Black Belt certification (CSSBB) requirements outlined by the American Society for Quality (ASQ) with coverage of applied statistical and managerial techniques most useful for process improvement, resource management, and design optimization.

**Composite Materials and their Processing.** This program is aimed at equipping students with the knowledge of the properties of composite materials and manufacturing processes of these materials. The courses are structured to provide extensive information about the composite materials technologies, analysis involving composite materials, and processing of composite materials.

Check the Department's website for complete information.

<http://imfge.wichita.edu>

## IMfgE at Wichita State University

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