

**Research:** Since I joined the Industrial Engineering Department at ASU, I have focused on building a solid research foundation. My research interest areas include supply chain management, collaborative product design and distributed information systems. My activities in each of these research streams are highlighted below:

- **Supply Chain Management:** I am particularly interested in supply chain modeling and supply chain risk management. In the area of supply chain modeling, I have developed network based models to investigate supply chain operational performance and to address issues such as supplier selection, uncertainty and supply chain disruptions. In the area of supply chain risk management, I have been conducting research to assess the vulnerability of supply chain systems
  - Published: Currently, I have 11 publications in *International Journal of Production Research*, *Journal of Advanced Manufacturing Systems*, *Concurrent Engineering: Research and Applications*, *Journal of Operations Management*, *International Journal of Computer Integrated Manufacturing*, *International Journal of Knowledge-based & Intelligent Engineering Systems*.
  - Under Review: I have 6 papers submitted to *International Journal of Production Research*, *International Journal of Computer Integrated Manufacturing*, *Computers and Industrial Engineering*, *Computers in Industry*, *OMEGA*, *International Journal of Physical Distribution and Logistics*.
  - Current Work: I have 2 working paper, which are to be submitted to *IEEE Transactions on Engineering Management*, *International Journal of Production Research*
  - Future Work: I am planning to continue publishing papers in prestigious journals at a rate of at least one paper per year.
- **Collaborative Product Development (CPD):** One important aspect of CPD is the effective decision support framework, which helps collaborating engineers develop product quickly and cost-effectively. My research focus is to develop a "Virtual Product Development Environment", which provides solutions to (a) how should a company select partners to perform the constituent responsibilities of a business initiative? (b) what is a suitable methodology to analyze conflicts among engineers? (c) what is an appropriate mechanism for engineers to converge to an agreeable design?
  - Published: Currently, I have 2 paper published/accepted by *International Journal of Production Research*, *Journal of Design and Process Science*; *Transactions of the SDPS*
  - Under review: Currently, I have 2 papers submitted to *IEEE Transactions on System, Man, Cybernetics* and *IIE Transactions*
  - Current work: I have 1 working paper, which is to be submitted to *IIE Transactions*
  - Future work: I am planning to continue publishing papers in prestigious journals at a rate of at least one paper per year.
- **Distributed Information Systems (DIS):** The difficulties of DIS development are increased due to the issues of intra- and inter- enterprise communication, system heterogeneity, information security, different engineering data formats and database formats. My research focus is to design and implement a DIS to address these difficulties. The system will provide an "information pipeline" that supports the sharing of information, specifically, in the context of collaborative product development. The system will be based heavily on industry standards to provide an open and evolvable environment that will flow with, as well as contribute to, commercial best practices and trends.
  - Published: I have 2 papers published by *Concurrent Engineering: Research and Application*, *ASME Transactions: Journal of Computing and Information Science in Engineering* , and 1 book chapter in *The Handbook of Data Mining*, 1 book chapter in *The Handbook of Industrial and System Engineering*
  - Current work: I have 1 working paper, which is to be submitted to *Computers in Industry*.

- Future work: I am planning to continue publishing papers in prestigious journals at a rate of at least one paper per year.

I have also actively pursued funding including: 9 NSF proposals, 4 industry proposals, 1 ABOR proposal and 1 Department of Education proposal. Successful funding to date includes a NSF CAREER award (\$400,000), a REU (\$12,000), a project from U.S. Department of Education (\$314,867), two industry projects with Intel (\$20,000) and with IBM (\$50,000). My future plan is to continuously seek funding support and submit grant proposals to government funding agents such as National Science Foundation (NSF), U.S. Department of Education (DOE), National Institute of Standards and Technology (NIST), as well as private industry sectors such as IBM, Intel, Rockwell Collins and other local industry. Within the next year, I am planning to apply for ONR YIP Award, submit a NSF GOALI proposal with Rockwell Collins, a NSF Collaborative Research proposal with faculty from University of Illinois (Champaign), faculty from New Mexico State University and faculty from University of Texas, El Paso, and seek support from the NIST.

Through my NSF CAREER award, I have set up the Virtual Computer Integrated Enterprise (VCIE) lab in the Department of Industrial Engineering. The work in the lab focuses on the development of Distributed Information Systems and Distributed Decision Support for Collaborative Product Development. I have served as co-advisor for one Ph.D. student who is now an assistant professor at Chung Yuan Christian University, Taiwan and I have served as the advisor of 3 master students and one undergraduate student. My current research team includes 4 Ph.D. students. My research program provides funding for 3 Ph.D. students. My goal is to develop the reputation of the research team to attract post-doctoral research fellow and more Ph.D. candidates as well as national merit undergraduate students.

**Teaching:** I strongly believe that teamwork skills, hands-on experience and creative problem solving are among the most important aspects of a successful engineering education. Since my teaching focus is in the areas of information engineering, I emphasize active learning, hands-on experience and use the Internet as delivery tool. I have developed an "active learning" portion for each course by integrating lecture, problem-solving and in-class exercises as a seamless whole. Most of the course materials are available on line. The course website provides additional functions such as grades on-line, discussion boards, lectures notes, assignments and solutions. The courses I have taught include: undergraduate IEE 305 (Information System Engineering), graduate IEE 563 (Distributed Information System) and graduate IEE505 (Information System Engineering). In addition, I co-developed a new course for both undergraduate and graduate students, IEE494/IEE598 (Performance Based Decision Support System) in spring 2003. My average teaching evaluation is 4.4 out of 5. To continuously improve my teaching skills, I joined American Society of Engineering Education (ASEE) in 2003.

In the future, I will continue the endeavors to explore active learning approaches. First, I would like to develop internet based course modules and deliver the courses online. Second, I am planning to expand my teaching area by co-developing courses in the area of collaborative product development and supply chain management. Third, I am planning to develop some industry short courses to educate/train industry engineers on new technologies. Fourth, I would like to publish teaching findings in ASEE journal.

**Service:** Within the Industrial Engineering Department, I served as a member of IE faculty search committee, IE chair search committee, Publicity & Seminar Committee and Laboratory & Facility Committee. Nationally, I organized a conference session, served as review coordinator for conferences. Currently, I am an Editorial Board Member for International Journal of Electronic Business Management, an Advisory Board Member for Consortium for Advanced Multi-Disciplinary Research International (CAMRI), program committee member for Intelligent Systems in Design and Manufacturing Conference, and organizing committee member for the NSF CAREER proposal workshop. I have served as a referee for 19 journals and served as a proposal reviewer for 3 NSF programs. I am a member of Institute of Industrial Engineers, Society of Manufacturing Engineers, Institute for Operations Research and the Management Science.

My future goal is to become an editorial board member of recognized journals, serve as a guest editor with recognized individuals in the field. My ultimate goal is to become a designated editor in a recognized journal.