

PROMOTION RECOMMENDATION  
The University of Michigan-Dearborn  
College of Engineering and Computer Science  
Department of Electrical and Computer Engineering

Dongming Zhao, associate professor of electrical and computer engineering, with tenure, Department of Electrical and Computer Engineering, College of Engineering and Computer Science, is recommended for promotion to professor of electrical and computer engineering, with tenure, Department of Electrical and Computer Engineering, College of Engineering and Computer Science.

Academic Degrees

Ph.D.	1990	Rutgers University, New Brunswick, New Jersey, Electrical Engineering
M.S.E	1983	University of Michigan, Ann Arbor, Michigan, Electrical Engineering
M.S.E	1982	HuaZhong University of Science Technology, Wuhan, China, Electronics & Information Engineering
B.S.E. (eq.)	1978	HuaZhong University of Science Technology, Wuhan, China, Electronics & Information Engineering

Professional Record

1996 - present	Associate professor, Department of Electrical and Computer Engineering, University of Michigan-Dearborn
1990 - 1996	Assistant professor, Department of Electrical and Computer Engineering, University of Michigan-Dearborn
1985 - 1990	Teaching and research assistant, Department of Electrical and Computer Engineering, Center for Computer Aids for Industrial Productivity (CAIP), Rutgers University, Piscataway, NJ
1978- 1982	Instructor, Department of Electrical & Information Engineering, HuaZhong University of Science Technology, Wuhan, China

Teaching: Professor Zhao is rated significantly capable in teaching. He has made significant contribution to the ECE programs at both undergraduate and graduate levels. Since joining the department, he has taught 17 different courses (six graduate classes and 11 undergraduate), and proposed or significantly revised six courses. Professor Zhao is a dedicated and attentive teacher and he is always available for students beyond regular office hours. Additionally, he supervised a number of undergraduate design projects, directed seven MS theses, and two PhD theses.

Research: Professor Zhao is rated excellent in his research. His research interests are in the broad areas of imaging technologies, statistical modeling for broad signal patterns, and systematic analysis for digital platforms in particular for manufacturing and resources management. Since joining the ECE department, he has published 24 journal articles, one book chapter, and 55 refereed conference papers. His research work is both theoretical and applied. His work in 3D imaging, range data based object segmentation and recognition has received high acclaim in the academia. Professor Zhao's research has been well respected by government funding agencies, as well as industry. He was the first faculty in CECS to receive a large research grant: \$670,788 in 1994 from NIST, which was a highly competitive award. After he

Recent and Significant Publications:

- Fei Tao, Yefa Hu, Dongming Zhao, Zude Zhou, "Study of failure detection and recovery in manufacturing grid resource service scheduling," *International Journal of Production Research*, 2010, 48(1):69-94. Jan.2010
- Fei Tao, Dongming Zhao, Yefa Hu, Zude Zhou, "Correlation-aware resource service composition and optimal-selection in manufacturing grid," *European Journal of Operational Research*, 2010, 201(1): pp. 129-143 Feb. 2010
- Jie Shen, D. Yoon, Dongming Zhao, Y. Song, "Denoising of two-dimensional geometric discontinuities," *International Journal of Computers and Applications*, 2010, Vol. 32, No 2, pp.1-12.
- Lan Zhang, C. Zhang, Dongming Zhao, "Control of a class of chaotic systems," *Kybernetika*, Vol. 46, 2010, No.1, pp. 38-49.
- Fei Tao, Dongming Zhao, Lin Zhang, "Resource service optimal-selection based on intuitionistic fuzzy set and non-functionality QoS in manufacturing grid system," *Knowledge and Information System*, 2009.10 (24 Pages).
- Fei Tao, Yefa Hu, Dongming Zhao, Zude Zhou, "Study on resource service match and search in manufacturing grid system," *International Journal of Advanced Manufacturing Technology*, 2009, 43(3-4): pp. 379-399.
- Fei Tao, Yefa Hu, Dongming Zhao, Zude Zhou. "An Approach to Manufacturing Grid Resource Service Scheduling based on Trust-QoS," *International Journal of Computer Integrated Manufacturing*, 2009, 22(2): pp. 100-111.
- Fei Tao, Yefa Hu, Dongming Zhao, Haijun Zhang, Zude Zhou. "Study on Manufacturing Grid Resource Service QoS Modeling and Evaluation," *International Journal of Advanced Manufacturing Technology*, 2009, 41(9-10): pp. 1034-1042.
- Yefa Hu, Fei Tao, Dongming Zhao, Zude Zhou, "Manufacturing Grid Resource and Resource Service Digital Description," *International Journal of Advanced Manufacturing Technology* 2009, 44(9-10): pp. 1024-1035. Oct. 2009.
- Fei Tao, Dongming Zhao, Yefa Hu, Zude Zhou, "Resource service composition and its optimal-selection based on particle swarm optimization in manufacturing grid system," *IEEE Transactions on Industrial Informatics*, 2008, 4(4): pp. 315-327.
- Dongming Zhao, S. Li, "A 3-D Image Processing Method for Manufacturing Process Automation," *Elsevier Science Journal: Computers in Industry, Special Issue on Machine Vision*, Volume 56, Issues 8-9, December 2005, pp. 975-985.

Service: Professor Zhao is rated excellent in his service. He has served on various committees at the department, college and campus levels. Currently he serves on the CECS Executive Committee, UM-Dearborn graduate committee, ECE graduate program committee, and SWE committee. The most distinctive service is his efforts in international student recruiting. Through many negotiations, he successfully established two joint programs with Huazhong University of Science and Technology (HUST), a key national university in China, an undergraduate visiting program and a 3+2 program. We have more than 12 visiting students from HUST to date.

External Reviewers:

Reviewer A: “Dr. Zhao is an internationally well established scientist in the area Machine Vision, Image Processing DSP as well as Manufacturing.”

Reviewer B: “In my opinion, Dr. Zhao has contributed extensively in machine vision, in particular, with applications to industrial and manufacturing automation. I have reviewed the above three papers in detail, and all of them are solid scholarly works, with focus on vision and image analysis. They represent significant contributions to the field of machine vision and image analysis.”

Reviewer C: “Dr. Zhao has a strong presence for a researcher at a university without an active PhD program. ...the paper published in *IEEE Tran on Image Processing* in 1997..., is one of Dr. Zhao’s better papers. It is published in a highly regarded journal and represents state-of-the-art ideas for the time that it was published.”

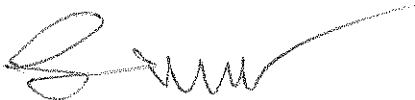
Reviewer D: “His work in the Image Processing area is very good in relation to the others in this area. We have read and used this paper the most. I believe Dr. Zhao is well known for this [following] paper...”

Reviewer E: “Dr. Zhao has performed original work in applied research in the areas of 3D range imaging and optimizations in manufacturing grid. He has distinguished himself as an expert in these fields and worked well with engineers in industry.”

Reviewer F: “In the keen competition in NIST/ATP programs, he has demonstrated his engineering skills and thorough understanding of machine vision technology. He represented University of Michigan in two ATP projects, both in Vision area. I have read a few journal papers of his and found them high quality, that presented him well in academia.”

Summary of Recommendation:

Professor Zhao is a very good teacher who has made significant contribution to the success of the undergraduate and graduate programs in the ECE department. He is an excellent research scholar. His scholarly accomplishments have been significant and highly respected by his colleagues in his research areas (many of the external reviewers are top researchers in the research community). His service to the ECE department, CECS, and the campus has been considered excellent. We are very pleased to recommend, with strong support of the College of Engineering and Computer Science Executive Committee, Dongming Zhao for promotion to professor of electrical and computer engineering, with tenure, Department of Electrical and Computer Engineering, College of Engineering and Computer Science.



Subrata Sengupta  
Dean  
College of Engineering and Computer Science



Daniel Little  
Chancellor  
University of Michigan-Dearborn

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