

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

Chunting (Chris) Mi, 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. 2000 University of Toronto, Toronto, Canada, Electrical and Computer Engineering
M.Sc. 1988 Northwestern Polytechnical University, Xi'an, Shaanxi, China, Electrical Engineering
B.Sc. 1985 Northwestern Polytechnical University, Xi'an, Shaanxi, China, Electrical Engineering

Professional Record:

2007 - present Associate Professor, Department of Electrical and Computer Engineering, University of Michigan-Dearborn
2001 - 2007 Assistant Professor, Department of Electrical and Computer Engineering, University of Michigan-Dearborn
2000 - 2001 Electric Design Engineer, General Electric Company, Ontario, Canada,
1997 - 2000 Research Assistant/Teaching Assistant, University of Toronto, Toronto, Canada
1996 - 1997 Visiting Scholar, University of Toronto, Toronto, Canada
1994 - 1996 Associate Professor/Associate Chair, Xi'an Petroleum Institute, Xi'an, China
1988 - 1994 Associate Professor/Lecturer, Northwestern Polytechnic University, Xi'an, China

Summary of Evaluation:

Teaching: Professor Mi is rated excellent in teaching. His course evaluations from his students are always at the top rank in the ECE department. Over the past four years, the average course evaluation score he received from his students is 3.6. The average score of ECE faculty teaching evaluated by students is about 3.0. Comments such as "great professor," "very helpful" and "great class" are often seen in student evaluations. He has supervised 12 Ph.D. students under the joint education program sponsored by China, Spain and Hong Kong, and has supervised 17 Master's theses. Currently he is supervising six Ph.D. students enrolled in the CECS Ph.D. programs. He has proposed and developed six new courses at graduate and undergraduate levels. Professor Mi has been awarded two major grants for enhancing education programs, a DOE Graduate Automotive Technology Education (GATE) Grant to enhance the education program in automotive systems engineering, and a DOE Grant under the ARRA fund, teamed with the University of Michigan and Kettering University to develop new courses and programs in transportation electrification. Professor Mi's excellence in teaching was recognized with the campus' Distinguished Teaching Award in 2005.

Research: Professor Mi is rated excellent in his research. His research interests are in the broad areas of power electronics, electrical and hybrid vehicles, battery management systems, electric energy systems, motors, and electric drives. Professor Mi is a prolific scholar. Since his promotion to associate professor in 2007, he has published three books, 33 refereed journal articles (including the accepted ones), and 31 refereed conference papers. Many of these journal articles were published in IEEE transactions and the quality of his publications is well recognized by his peers, as shown in the evaluation letters by the external reviewers. Professor Mi has an excellent track record of attaining research funding. Since 2007,

he received more than \$5 million in research funding. In recognition of his research achievements, the University of Michigan-Dearborn bestowed on Professor Mi the Distinguished Research Award in 2009. Recently he has been elevated to the fellow of IEEE society.

Recent and Significant Publications:

Books Authored

Chunting Mi, Abul Masrur, and Wenzhong Gao, Modern Hybrid Electric Vehicles, John Wiley UK, June 2011, total 472 pages, ISBN 9780470747735.

Hua Bai, and Chunting Mi, Short Timescale Transient Phenomenon of Power Electronic Systems, John Wiley UK, July 2011, total 288 pages, ISBN: 9780470686645.

Xi Zhang, and Chunting Mi, Vehicle Power Management- Modeling, Control, and Optimization, Springer UK, August 2011, total 352 pages, ISBN 9780857297358.

Journal papers

Linni Jian, KT Chau, and Chunting Mi, "Analytical Method for Magnetic Field Calculation in a Low-Speed Permanent-Magnet Harmonic Machine," *Transactions on Energy Conversion*, vol. 26, no. 3, pp. 862-870, September 2011.

Zhiguang Zhou, and Chunting Mi, "Power Management of PHEV Using Quadratic Programming," *International Journal of Electric and Hybrid Vehicles*, vol. 3, no. 3, 2011.

Bingzhan Zhang, Mengyang Zhang, and Chunting Mi, "Charge Depleting Control Strategies and Fuel Optimization of Blended-Mode Plug-in Hybrid Electric Vehicles," *IEEE Transactions on Vehicular Technology*, Vol. 60, No. 4, pp. 1516 – 1525, May 2011.

Xiaofeng Ding and Chunting Mi, "Impact of Inverter on Losses and Thermal Characteristics of Induction Motors," *International Journal of Power Electronics*, vol. 3, No. 6, pp. 641-651, June 2011.

Changhong Liu, Chunting Mi, and Ben Q. Li, "The Plasmon Resonance of a Multilayered Gold Nanoshell and its Potential Bio-applications," *IEEE Transactions on Nano Technology*, vol. 10, no. 4, pp. 797-805. July 2011. Digital ID: 10.1109/TNANO.2010.2079943.

Hua Bai, Ziling Nie, and Chunting Mi, "Experimental Comparison of Traditional Phase-Shift Control, Dual-Phase-Shift Control, and Enhanced Model Based Control of Isolated Bidirectional DC-DC Converters," *IEEE Transactions on Power Electronics – Letters*, vol. 25, no. 6, pp. 1444-1449, June 2010.

Service: Professor Mi is excellent in his service. He is extremely active in service at all levels, the ECE department, CECS, UM-D campus and professional societies. Professor Mi served on many committees on campus including the campus Faculty Senate, Ph.D. Council, CECS Executive Committee, the Interdisciplinary Program Committee of Automotive Systems Engineering, and faculty search committees. Professor Mi has a long and impressive professional service record. He is currently serving as an associate editor for three journals, a senior editor for an IEEE magazine, and on the editorial boards of three international journals. He served as general chair for IEEE VPPC 2009, program chair for the IEEE workshop on Vehicle Electronics in 2010, and many conference committees.

External Reviewers:

Reviewer A: "...very impressed with both the quality and quantity of Chris' work. ...he is making contribution to solution of important problems in more than one area."

Reviewer B: “Dr. Mi is among the best engineering scholars and professional leaders in the US and the world.”

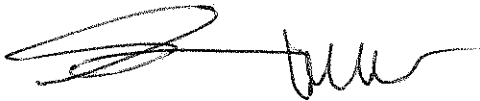
Reviewer C: “His early publications on modeling and analysis of electric machine iron losses are considered outstanding and were cited most. ... In relation to others in the peer group, Dr. Mi is certainly very outstanding.”

Reviewer D: “This paper represents the career achievement for any scholar in the field of electrical engineering. It is more than just the contribution of knowledge in this legendary journal that matters. It is also the recognition of Dr. Mi and his co-authors as established authorities in their field.”

Reviewer E: “In the area of electric machines Dr. Mi has published some outstanding work on the modeling of iron losses of surface-mounted permanent magnet machines.... Prof. Mi has shown and proven through his research that a large discrepancy can exist between calculations and measurements. He then extended his experimental work and developed a novel model based on this research that is original, innovative, and accurate. This work has been cited by many authors in their articles, theses, and reports. I and my colleagues have frequently used his iron loss model in the design of electric machines and in analytical work with customers ...”

Reviewer F: “Just like your university, we also consider research and teaching performance very carefully in cases of promotion and tenure, and in my estimation, the performance of Dr. Chris Mi is worthy of this on all counts and I recommend him for this promotion to the rank of full professor ... I am very impressed with his knowledge of the subject matter and his enthusiasm.”

Summary of Recommendation: Professor Mi is a very prominent and very productive scholar in electrical engineering who has made significant contributions to the field of electric machines, power electronics and hybrid vehicles. He is an excellent teacher and mentor; and he is a leader who contributes significantly both in external and internal services. We are very pleased to recommend, with strong support of the College of Engineering and Executive Committee, Chunting (Chris) Mi 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

May 2012