PROMOTION RECOMMENDATION

University of Michigan-Dearborn
College of Engineering and Computer Science
Department of Mechanical Engineering

Chunhui (Carole) Mei, assistant professor of mechanical engineering, College of Engineering and Computer Science, is recommended for promotion to associate professor of mechanical engineering, with tenure, College of Engineering and Computer Science.

Academic Degrees:

B. S.	1987	Beijing University of Posts and Telecommunications, Department of Mechatronics, P.R. China
M.S.	1990	Beijing University of Posts and Telecommunications, Department of Mechatronics, P.R. China
Ph.D.	1998	University of Auckland, Department of Mechanical Engineering, New Zealand

Professional Record:

1999 to Present	Assistant Professor, Department of Mechanical Engineering, University of Michigan–Dearborn

Summary of Evaluation:

Teaching: Professor Mei's teaching is rated excellent. She is an effective teacher, as evidenced both by the teaching evaluations from her students and her peers. Her teaching evaluation is ranked within the top 15% among the ME faculty members. Since joining the department, Professor Mei has taught two different undergraduate courses, both with labs, and two graduate courses, all of them in the control and instrumentation area. She has also been actively involved in developing new courses and updating the course related materials for laboratories.

Research: Professor Mei's research is rated excellent. She focuses on the subject area of vibration and noise control, a traditional mechanical engineering discipline. She has published 13 papers in top refereed journals in her area of expertise since coming to the University. The external reviewers and the assessment of the faculty concur these papers are of high quality. Professor Mei has written many proposals and she has successfully obtained a research grant from the National Science Foundation. She also has obtained grants from local industrial companies. This is clearly a testimony to the quality and level of her research capabilities that her peers have acknowledged. She has supervised two M.S. theses and one post-doctoral research fellow.

Recent and Significant Publications:

C. Mei, Y. Karpenko, S. Moody and D. Allen, Analytical approach to free and forced vibrations of axially loaded cracked Timoshenko beams, Journal of Sound and Vibration (JSV), available online at JSV website.

C. Mei, J. Cherng and Y. Wang, Active control of regenerative chatter during metal cutting process, ASME Journal of Manufacturing Science and Engineering, to appear in Vol. 128, February 2006.

C. Mei, Free and forced wave vibration analysis of axially loaded materially coupled composite Timoshenko beam structures, ASME Journal of Vibration and Acoustics, Vol. 127(6), pp. 519-529, 2005.

C. Mei, Effect of material coupling on wave vibration of composite Timoshenko beams, ASME Journal of Vibration and Acoustics, Vol. 127(4), pp. 333-340, 2005.

C. Mei and B. R. Mace, Wave reflection and transmission in Timoshenko beams and wave analysis of Timoshenko beam structures, ASME Journal of Vibration and Acoustics, Vol. 127(4), pp. 382-394, 2005.

C. Mei, Effect of material coupling on wave vibration of composite Euler-Bernoulli beams, Journal of Sound and Vibration, Vol. 288, pp. 177-193, 2005.

C. Mei, Active regenerative chatter suppression during boring manufacturing process, Robotics and Computer Integrated Manufacturing, Vol. 21(2), pp. 153-158, 2004.

C. Mei, The analysis and control of longitudinal vibrations from wave viewpoint, ASME Journal of Vibration and Acoustics, Vol. 124, pp. 645-649, 2002.

C. Mei and B. R. Mace, Reduction of control spillover in active vibration control of distributed structures using multi-optimal schemes, Journal of Sound and Vibration, Vol. 251(1), pp. 184-192, 2002.

C. Mei, B. R. Mace and R. W. Jones, Hybrid wave/mode active vibration control, Journal of Sound and Vibration, Vol. 247(5), pp. 765-784, 2001.

Service: Professor Mei's service to the University has been rated significantly capable. She served on several department and college committees. She has been a referee for several journals and conference proceedings and also chaired sessions in conferences. Professor Mei has recently been elected as a member of the Technical Committee on Vibration and Control of ASME.

External Reviewers:

Reviewer (A)
"Her work is analytical and is of excellent quality. In fact, many of her papers are single authored and they demonstrate the superior capacity of Professor Mei as an independent researcher. The quality and quantity of archival papers in her record clearly support her promotion to the rank of Associate Professor."

Reviewer (B)
"The quality and quantity of Dr. Carole Mei's publications qualify her for promotion to Associate Professor, in my opinion. Dr. Mei is probably in the top third of her peer group (the top 20 programs in vibrations). Here at [my institution], the recent number of publications of persons promoted to Associate Professor rank seems to be about 12-15 journal papers, from a bean-counting viewpoint; so Dr. Mei fits right in."

Reviewer (C)
"The quality of written papers, as exemplified by those enclosed with your letter, is excellent. This quality is demonstrated by the quality of the journals in which the papers are published. I estimate that Dr. Mei's standing would be in the top 10% in the peer group in this field."

Reviewer (D)
"Carole's contribution to this area is, in fact, a novel systematic formulation that facilitates the analysis of complex one-dimensional structures, mainly Timoshenko beams that undergo coupled motion."

Reviewer (E)
"While her papers are of very high quality, I find the paper by Mei and Mace entitled 'Wave Reflection and Transmission in Timoshenko Beams and Wave Analysis of Timoshenko Beam Structures' which was published in the ASME Journal of Vibration and Acoustics in 2005 to be particularly good and worthy of the understanding level."

Reviewer (F)
"Her workload, ability to attract some research funding and maintain a good rate of journal publications is equal, if not better than, most applicants to a similar position at our university in the UK. She appears to be well established in her position and is making a good and valued contribution within the University."

Summary of Recommendation:
Professor Carole Mei's research work is highly appraised by her peers of both national and international reputations. She possesses a superb ability in combining in-depth analytical study with practical significance, an important quality that is essential in the training of mechanical engineering students. She has willingly contributed her time and effort to a variety of committee services in the department, in the College and in national professional societies. We are very pleased to recommend, with the strong support of the College of Engineering and Computer Science Executive Committee, Carole Mei for promotion to associate professor of mechanical engineering, with tenure.

Subrata Sengupta
Dean
College of Engineering and Computer Science

Daniel Little
Chancellor
University of Michigan-Dearborn

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