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

Hong-Tae Kang, assistant professor of mechanical engineering, Department of Mechanical Engineering, College of Engineering and Computer Science, is recommended for promotion to associate professor of mechanical engineering, with tenure, Department of Mechanical Engineering, College of Engineering and Computer Science.

Academic Degrees:
Ph.D. 1999  Engineering Mechanics, University of Alabama, Tuscaloosa, AL
M.S. 1997  Engineering Mechanics, University of Alabama, Tuscaloosa, AL
M.S. 1996  Mineral Engineering, University of Alabama, Tuscaloosa, AL
B. S. 1991  Earth Science Education, Seoul National University, Korea

Professional Record:
2003 - present  Assistant Professor, Department of Mechanical Engineering, University of Michigan-Dearborn

Summary of Evaluation:
Teaching: Professor Kang’s teaching is rated excellent. His average effectiveness from student evaluations over the past three years was above 3.62 out of 4.0. This places him within the top 15% among faculty members in his department. Responses from both undergraduate and graduate students interviewed also support the written evaluations. Professor Kang has taught a variety of undergraduate courses, and graduate courses. He has also developed one new course in the area of finite elements for automotive systems and another on vehicle crash mechanics is being developed for Fall 2009. His students provide positive remarks to confirm that he is an effective teacher. He has supervised six undergraduate capstone design projects and 14 graduate capstone design projects.

Research: Professor Kang’s research is rated as significantly capable. He focuses on the subject areas of materials fatigue, mechanical design and manufacturing processes and has published 15 papers in refereed journals in his area of expertise since coming to the University. There are three journal papers under review. Additionally, he has published 13 peer-reviewed conference papers, and made 10 presentations at local industries, in addition to those presented in conferences. In light of the fact that Professor Kang's work is primarily on the experimental side of engineering mechanics, this publication record is considered impressive. He has written many proposals and has recently successfully obtained external research grants from industrial companies. His potential to obtain external grants to bring his research activities to the next level is high. He has supervised four M.S. theses, and has also published research papers with these students in refereed journals and conferences. Professor Kang’s potential to research excellence is high.
Recent and Significant Publications:


Service:

Professor Kang’s service is rated as significantly capable. He has served on a few department committees. He is active in these committees and makes positive contribution. He has also served as a referee for several journals and conference proceedings and has chaired sessions in conferences.

External Reviewers:

Reviewer A: “He has published some very interesting articles in very good journals. Still his productivity with so many other authors is impressive. The quality of the papers that were sent to me is very high and the research topics are very practical. Dr. Kang has been able to attract enough money to conduct research and support a few graduate students. Dr. Kang has taught an impressive number of courses over his 5 years... Dr. Hong-Tae Kang has demonstrated all the attributes that warrant promotion to the rank of Associate Professor. His quantity and quality of publications and his external service is at the level we would expect from our candidates for promotion at [my institution]”

Reviewer B: “A number of Dr. Kang’s papers represent collaborations with companies. From personal experience, I know that it takes energy and research leadership to make these collaborations produce solid results. Dr. Kang has obviously been successful with this. I also note that several of his papers were co-authored with his students. This is an indication that he is effectively mentoring his students, getting them to contribute to the literature. Based on my
review of the materials, Dr. Kang seems to be succeeding in his scholarly endeavors and has reached a high (and commendable) level of productivity.”

Reviewer C: “Dr. Kang has continued to produce good research work in the area of fatigue of steels and welds. He has secured a significant amount of funding to support his research. He also appears to fully take advantage of the existing research strength of the University of Michigan at Dearborn. He has established a good relation with the engineers in the automotive industry.”

Reviewer D: “I find the quality of his publications excellent. I find his new work on the effect of residual stress and heat treatment to be quite interesting and very valuable. His desire to conjoin experimentation, theoretical analysis and practice makes his work unique in many respects and extremely valuable to the engineering practice.”

Reviewer E: “The quality of his publications is superb and he is among the top five researchers in spot weld research in the nation. I am impressed by Dr. Kang’s accomplishment in both funding and publications. Overall, Professor Kang is well known in the area of fatigue of structures and well respected by colleagues in academia and industry. He would have no problem at our school for getting promoted with tenure.”

Reviewer F: “His publications are of very good quality in terms of advancement of knowledge and applicability to real world problems. I have confidence that he will continue to grow and make significant contributions in his research area. I strongly believe that he should be rewarded with tenure and promotion.”

Summary of Recommendation:

Professor Kang is an excellent teacher; his research and his service are significantly capable. In spite of the slump in the auto industry over the past several years, Professor Kang has been able to obtain external and internal support for his research. We are pleased to recommend, with strong support of the College of Engineering and Computer Science Executive Committee, Hong-Tae Kang for promotion to associate professor of mechanical engineering, with tenure, Department of Mechanical Engineering, College of Engineering and Computer Science.

Subrata Sengupta
Dean
College of Engineering and Computer Science

Daniel Little
Chancellor
University of Michigan-Dearborn

May 2009