

PROMOTION RECOMMENDATION  
The University of Michigan-Dearborn  
College of Arts, Sciences, and Letters

Approved by the  
Regents  
May 21, 2015

Jin Wang, assistant professor of physics, Department of Natural Sciences, College of Arts, Sciences, and Letters, is recommended for promotion to associate professor of physics, with tenure, Department of Natural Sciences, College of Arts, Sciences, and Letters.

Academic Degrees:

Ph.D. 2001 University of Queensland, Australia  
M.S. 1995 Suzhou University, People's Republic of China  
B.S. 1992 Suzhou University, People's Republic of China

Professional Record:

2009 – present Assistant Professor, Department of Natural Science, University of Michigan-Dearborn  
2005 – 2009 Assistant Professor, Department of Physics, University of Tennessee-Chattanooga, Chattanooga, Tennessee  
2003 – 2005 Jorgensen Postdoctoral Fellow, Department of Physics, University of Nebraska-Lincoln, Nebraska  
2001 – 2003 Post-doctoral Research Fellow, Department of Physics, University of Rochester, New York  
2001 Research Assistant, Department of Physics, University of Queensland, Australia

Teaching: Professor Wang has been rated excellent in teaching. She adjusted her traditional lectures by instituting a student-based conceptual approach to teaching and learning in Physics 125/126 (non-majors). Further, she also instituted new demonstrations. She also created laboratories for Physics 460 (Advanced Lab) and Physics 405 (Optics). Professor Wang is very active in mentoring undergraduates in the research laboratory and for publication. She also serves as physics major's adviser. Professor Wang has played a significant role in curriculum innovation, as evidenced by her designing a new "Computational Physics" class (in development). In addition to study books on teaching improvement and communications, she also requested advice from colleagues in all disciplines. Her performance in the classroom has yielded very high student evaluations since she has embraced the "conceptual approach to teaching," earning overall teaching evaluations from 4.2-4.7 of 5 (where 5 represents "Excellent").

Research: Professor Wang has been rated excellent in research. Professor Wang is preparing an NSF RUI proposal to provide support for her research and her talented research students. She has maintained both theoretical and laboratory-based research and publication at the pace of one publication per year. She attended seminars here and in Ann Arbor. Regarding her role in multiple authorship situations, Professor Wang is the lead author, the originator of the ideas as well as the major experimentalist and author involved in each study. Furthermore, she has found the financial support to permit these studies (internal grants and Departmental Faculty Development funds).

Recent and Significant Publications:

- Jin Wang, Gabe Elghoul, Stephen Peters, "Lead Zirconium Titanate alternatives for Nanoactuators," *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, 60, 256, 2013.
- Jin Wang, Shawn Strausser, "Single Photon Determination of Transmission, Index of Refraction and Material Thickness," *Journal of Modern Optics*, 59, 381, 2012.
- Jin Wang, "Modelling Decoherence in a Driven Two-Level System Using Random Matrix Theory," *Journal of the Optical Society of America B*, 29, 75, 2012.
- Jin Wang, "A Comparative Study of the P and Q Representations of a Feedback Controlled Two-Qubit System," *Physics Letters A*, 375, 1860, 2011.
- Jin Wang, "Decoherence Effects in an Electromagnetically Induced Transparency and Slow Light Experiment," *Physical Review A*, 81, 033841, 2010.
- Jin Wang, "Feedback Controlled Dephasing and Population Relaxation in a Two-Level System," *Physics Letters A*, 373, 1627-1631, 2009.

Service: Professor Wang has been rated significantly capable in service. Her service has involved the Library Committee, Colloquium Committee, and as the University Benefits representative. She has also been physics advisor for majors. She will continue her professional service through her attendance and work at the American Physics Society meetings.

External Reviewers:

Reviewer A: "I am strongly in favor of promoting Dr. Wang to associate professor with tenure. I think that she is an emerging [junior] faculty member."

Reviewer B: "In summary then I give my very high recommendation for the promotion of Professor Jin Wang to the position of associate professor of physics at the University of Michigan at Dearborn."

Reviewer C: "In summary, my assessment is that Professor Wang is an asset to your institution. From the perspective of scholarship she has done very well for somebody with a full teaching load, publishing regularly and involving students in research. Based on this I would recommend her for promotion."

Reviewer D: "Of these six papers, three are sufficiently close to my field so I have been able to review them. ...they appear scientifically sound, ... ."

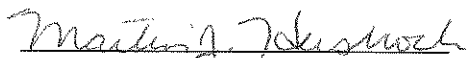
Reviewer E: "After performing this review, I believe that Dr. Wang's scholarship is definitely strong enough to deserve tenure and promotion."

Reviewer F: "Dr. Jin represents a cutting edge field of the physical sciences that is befitting for the UM-Dearborn Physics Department, and given her research output and willingness to move into related fields, she has a commendable record. I heartily recommend promotion to Associate Professor with tenure at UM-Dearborn."

Reviewer G: "Dr. Wang is above average in standing relative to others in her peer group who are working in the same field. She has steadily produced one paper and presented at one conference each year since she joined the University of Michigan-Dearborn. This is impressive productivity given the teaching and service demands of a smaller department and that her research is conducted with undergraduate students."

Reviewer H: "In my opinion Dr. Wang has a strong case to receive tenure. Dr. Wang's most recent papers have student authors, showing that she is successfully engaging undergraduate and graduate students in her research efforts. She is publishing high quality research in excellent journals."

Summary of Recommendation: Professor Wang has made significant contributions to Quantum Optics, her chosen field of research in physics in her time on the Dearborn campus. Moreover, she is an excellent teacher, who is strongly committed to teaching quality science. Professor Wang has mentored several students now featured on some of her most recent publications. Her contributions to professional and university/departmental service is outstanding, and finally, she is an optimistic and positive person, someone who thrives in this teacher/scholar atmosphere. Professor Wang eagerly joins us in our mission to prepare the next generation of University of Michigan-Dearborn graduates towards shaping the scientific and local community towards scientific approaches to finding solutions in our society. Together, and working as a team, we all celebrate our diversity and cultural experiences as the strongest tie between our department membership. We are very pleased to recommend, with strong support of the College of Arts, Sciences, and Letters Executive Committee, Jin Wang for promotion to associate professor of physics, with tenure, Department of Natural Sciences, College of Arts, Sciences, and Letters.



Martin J. Herschcock, Dean  
College of Arts, Sciences, and Letters



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Daniel Little, Chancellor  
University of Michigan-Dearborn

May 2015