Approved by the Regents
May 16, 2024

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

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

Academic Degrees:

Ph.D.	2001	Quantum Optics, University of Queensland, Brisbane, Australia
M.S.	1995	Physics, Suzhou University, Suzhou, China
B.S.	1992	Physics, Yangzhou University, Yangzhou, China

Professional Record:

2015-present	Associate Professor, University of Michigan-Dearborn, Dearborn, MI
2009-2015	Assistant Professor, University of Michigan-Dearborn, Dearborn, MI
2005-2009	Assistant Professor, University of Tennessee-Chattanooga, Chattanooga, TN
2003-2005	Post-doctoral Fellow, University of Nebraska-Lincoln, Lincoln, NE
2003-2003	Post-doctoral Research Fellow, University of Utah, Salt Lake City, UT
2001-2003	Post-doctoral Research Fellow, University of Rochester, Rochester, NY
2001-2001	Research Assistant, University of Queensland, Brisbane, Australia

Summary of Evaluation:

Teaching: Professor Wang's teaching is rated significantly capable. Professor Wang taught several physics courses ranging from introductory to upper-level courses on optics, quantum mechanics, thermal and statistical physics, and also advanced physics laboratory. Professor Wang's teaching is well received by the students, with the majority of students rating her as either an excellent or an above-average instructor. Students find Professor Wang very knowledgeable, enthusiastic, patient, helpful, encouraging, approachable, and passionate about teaching, and she sets high standards. Professor Wang has mentored seven independent study students over the last eight years and all of them now are pursuing graduate opportunities. Besides providing students with first-class experience in research, five of them are currently co-authors with Professor Wang in her peer-reviewed publications.

Research: Professor Wang's research is rated excellent. She has made steady progress in research over the past years in the field of quantum optics with seven published peer-reviewed papers. Professor Wang has published four solo-authored articles. One hallmark of her research effort is the involvement of undergraduate students in research projects. Professor Wang's published papers showcase an understanding of quantum optics and her ability to address complex problems within the discipline. Her research has explored various aspects of quantum phenomena, including quantum entanglement. These papers have been published in reputable peer-reviewed journals, indicating the significance and quality of their contributions to the scientific community. Professor Wang's scientific contributions will advance our understanding

of quantum phenomena and their applications in optics, paving the way for future developments in this rapidly evolving field.

Recent and Significant Publications:

Jin Wang, "Stabilized Magnetic Spin Dimer Entanglement using a Genetic Algorithm," *Journal of Modern Optics*, Vol 69, No.2, p55-59, 2021.

Jin Wang, "Dynamic magnetic field entanglement stabilization," *Journal of the Optical Society of America B*, Vol. 38, Issue 9, pp. 2451-2454, 2021.

Jin Wang, Thomas Sutter, Magnolia Landman, and Zahra Seblini, "Entanglement Evolution in a Heisenberg Spin Dimer," *IEEE Transactions on Magnetics*, Vol 55, No. 12, 2019.

Jin Wang, Thomas Sutter, Magnolia Landman, and Zahra Seblini, "Feedback enhanced entanglement in a spin-1/2 XY dimer model permeated by a transverse magnetic field," *AIP Advances 8*, 101412, 2018.

Jin Wang, "Customizing Vacuum Fluctuations for Enhanced Entanglement Creation," *Journal of Physics B*, 51,135501, 2018.

Jin Wang, "Single Lens Logarithmic Confocal Distance Measurement Array," *Optics Express*, 25 (21), 25326-25331, 2017.

Jin Wang, Michael Milgie, Kevin Pitt, "Superposition Interaction Free Measurement Using Polarized Light," *Journal of Phys. B*, 49, 045501, 2016.

Service: Professor Wang's service is rated significantly capable. Professor Wang has participated in several service activities since her last promotion. She has served one term as physics discipline chair and completed the annual assessment report of the physics program as part of that position. Professor Wang also served in the college curriculum committee as the department representative. As service to her profession, Professor Wang is a member of several societies, and she served as a session chair at the plenary session for a virtual meeting at the International Symposium on Photonics and Optoelectronics in 2022. Professor Wang has also served as a reviewer for several journals within her field.

External Reviewers:

Reviewer A: "I was also very impressed with Dr. Wang's paper on interaction-free measurement, which had two student coauthors."

Reviewer B: "Dr. Wang's papers are excellent and relevant to current applications to insulate a quantum system to external perturbations, i.e., decoherence. She has published, on average, one paper per year in outstanding physics journals. I also note that several of these papers have multiple undergraduate students as co-authors, this is outstanding."

Reviewer C: "She publishes in high-impact journals. I gather from her trajectory that she is a person of very high intellect because she is able to jump into research problems where she had no previous experience and make a contribution to the research in those problems."

Reviewer D: "I was especially impressed by his recent work in dynamic magnetic field entanglement."

Reviewer E: "It is very impressive that she is able to continue to publish high quality research papers with only a small amount of research funding and with significant teaching responsibilities."

Reviewer F: "Finally, I must express my awe in her ability to maintain consistent experimental efforts both in theory and experiment, which is extremely hard. Current high interest in quantum technologies makes the playing field rather competitive, especially for publishing in the respected and well-established journals where Dr. Wang publishes her work."

Reviewer G: "She continues to publish in top journals in her field. The breadth of her research is also impressive."

Reviewer H: "Dr. Wang's works are of high quality and clearly articulate the problem being addressed and connect the results with related systems and results in the literature."

Reviewer I: "Professor Wang has established herself as a leading scientist in the field of quantum op-tics/electromagnetics as well as classical optics."

Summary of Recommendation: Professor Wang is a prominent and productive physicist who has made significant contributions to the field of quantum optics. She is an effective mentor and contributes both external and internal services. It is with the support of the College of Arts, Sciences, and Letters Executive Committee that I recommend Jin Wang for promotion to professor of physics, with tenure, Department of Natural Sciences, College of Arts, Sciences, and Letters.

Dagmar Budikova

Dagmar Budikova, Dean
College of Arts, Sciences, and Letters

Domenico Grasso

Domenico Grasso, Chancellor
University of Michigan-Dearborn

May 2024