

PROMOTION RECOMMENDATION  
The University of Michigan  
College of Literature, Science, and the Arts

Jennifer P. Ogilvie, associate professor of physics, with tenure, and associate professor of biophysics, without tenure, College of Literature, Science, and the Arts, is recommended for promotion to professor of physics, with tenure, and professor of biophysics, without tenure, College of Literature, Science, and the Arts.

Academic Degrees:

Ph.D.	2003	University of Toronto
M.S.	1996	Simon Fraser University
B.S.	1994	University of Waterloo

Professional Record:

2012 – present	Associate Professor, Department of Physics and Program in Biophysics, University of Michigan
2005 – 2012	Assistant Professor, Department of Physics and Program in Biophysics, University of Michigan
2003 – 2005	Post-doctoral Fellow, Laboratoire d'Optique et Biosciences, Ecole Polytechnique

Summary of Evaluation:

Teaching – As a teacher, Professor Ogilvie is admired for her intelligence, the clarity of her presentations and explanations, her helpfulness in and outside of class, and her approachability. She has taught experimental classes in biophysics, quantum mechanics for physics majors, and introductory mechanics to pre-medical students. Professor Ogilvie has a very strong record as a research supervisor and mentor. She has mentored fourteen graduate students with five receiving their Ph.D. during her time as associate professor. Her students and post-doctoral scholars have gained significant exposure at scientific meetings. She is currently mentoring five graduate students and has supervised one to two undergraduate REU or UM students each year. Professor Ogilvie has also played a prominent role in the organization and expansion of the department's chapter of the Society of Women in Physics (SWIP). Under her leadership, the society hosted a very successful national conference at Michigan.

Research – Professor Ogilvie's current research program, built up at Michigan over the past decade, combines the development of advanced ultra-fast and non-linear laser spectroscopy methods with applications to the study of the dynamics in systems of particular biophysical interest. She is clearly quite visible and respected within the ultrafast-optics community as evidenced by her role as co-chair of the 2016 International Conference on Ultrafast Phenomena, the premier international venue for her field. Professor Ogilvie's research is extraordinarily well funded from the Department of Energy (DOE), Air Force Office of Scientific Research (AFOSR), and a National Science Foundation (NSF) Major Research Instrument Program (MRI) on which she is the principal investigator - clearly indicating that she has a strong and sustainable research program.

Recent and Significant Publications:

“Experimental implementations of two-dimensional Fourier transform electronic spectroscopy,” with F. D. Fuller, *Annual Reviews of Physical Chemistry*, 66, 2015, pp. 667-690.

“Two-color nonlinear spectroscopy for the rapid acquisition of coherent dynamics,” with S. S. Senlik and V. R. Policht, *Journal of Physical Chemistry Letters*, 6, 2015, pp. 2413-2420.

“Vibronic coherence in the photosystem II reaction center,” with F. D. Fuller, et al., *Nature Chemistry*, 6, 2014, pp. 706-711.

“Probing photosynthetic energy and charge transfer with two-dimensional electronic spectroscopy,” With K. L. M. Lewis, *Journal of Physical Chemistry Letters*, 2, 2012, pp. 503-510.

Service – Professor Ogilvie has made above average service commitments to the department, university, and her research community. In particular, she has been a member of the departmental Executive Committee (2015-present) and an undergraduate advisor. She has served on the Program in Biophysics’ Graduate Admissions and Placement Exam committees. Her university service includes the ADVANCE Advisory Board and the Rackham Graduate School’s Pre-doctoral Fellowship Selection Committee. Most notable is her service on an incredible number of Ph.D. committees in departments across the University. In addition to chairing the International Conference on Ultrafast Phenomena in 2016, she was the chair of the organizing committee for the American Physical Society (APS) Conference on Undergraduate Women in Physics. She is on the International Advisory Board of the *Journal of Physics B*, has served on the APS Schawlow Prize and Conference for Undergraduate Women site-selection committees, the DOE Basic Research Needs workshop, and has been a reviewer for the AFOSR, NSF, and DOE.

#### External Reviewers:

##### Reviewer (A)

“I think that Jennifer has done a great job pushing forward the technical frontiers of 2DES which should reveal new science in the future. ... The technical quality is excellent. The quantity is very good. Her focus has been technical...and this is certainly a scholarly impact since without working techniques, one cannot advance science.”

##### Reviewer (B)

“...I continue to be very positive about Professor Ogilvie’s future. The work she has done on the development of methods is likely to impact work in other areas, and she seems genuinely committed to learning more about photosynthetic reaction centers. Her more modest, honest and critical approach to the role of coherence in photosynthesis puts her at the top of the list of her peers...”

##### Reviewer (C)

“Without question Ogilvie is one of the world’s leading experts in two-dimensional spectroscopy, a laser-based method that can track the motion and energy flow inside a molecular system during photochemical or physical reactions. ... She has emerged as a scientific leader and also a leading technical innovator in the fields of multi-dimensional ultrafast investigations in biochemistry and biophysics. I believe she has been and will continue to be a strong intellectual contributor in her field and also in the department and the college.”

##### Reviewer (D)

“...Jennifer Ogilvie is an outstanding scientist who has already had a major impact on her field and I predict more to come. She remains on a clearly upward trajectory and the importance of her pioneering work will only grow as more people enter this experimentally demanding and rarified field (now made easier by her efforts) and begin to catch up.”

Reviewer (E)

“...I have closely followed her scientific achievements and I must emphasize that I have been highly impressed with her undeniable success in developing her own program of research. ...Ogilvie stands among the most brilliant scientists in her field, as is further evidenced by the large number of invited talks she’s given in the last ten years.”

Reviewer (F)

“I have very deep respect for Professor Ogilvie’s work, and this...respect is broadly shared across many scientific communities. ...Ogilvie has not shied away from the hardest problems whose solution will have the most impact. ...Professor Jennifer Ogilvie is an absolutely stellar scientist with an outstanding record of service to the scientific community.”

Reviewer (G)

“It is clear that her activities are a huge flywheel for the science and technology drivers in the department and the University. ...Ogilvie has produced a masterful laboratory and a surge of scientific and methodological output since her tenure and promotion to associate professor.”

Reviewer (H)

“...[Ogilvie] has built up a strong research program and has quickly established herself as a world leader in the field. ... The best calibration point for Jennifer’s rise in international reputation is in her selection to be the Chair of the Ultrafast Phenomena Meeting. This is the most prestigious meeting in the field and the selection of chairs is critically evaluated to ensure that the chair is considered by all to be of the caliber required to set the intellectual standard for the meeting. This singular distinction alone shows you that she has reached the status worthy of promotion to full professor.”

Summary of Recommendation:

Professor Ogilvie has shown the highest intellectual quality, productivity, and leadership in creating and disseminating knowledge in physics. The Executive Committee of the College of Literature, Science, and the Arts and I recommend that Associate Professor Jennifer P. Ogilvie be promoted to the rank of professor of physics, with tenure, and professor of biophysics, without tenure, College of Literature, Science, and the Arts.



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Andrew D. Martin, Dean  
Professor of Political Science and Statistics  
College of Literature, Science, and the Arts

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