

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

John H. Clifford, associate professor of mathematics and statistics, with tenure, Department of Mathematics and Statistics, College of Arts, Sciences, and Letters, is recommended for promotion to professor of mathematics and statistics, with tenure, Department of Mathematics and Statistics, College of Arts, Sciences, and Letters.

Academic Degrees:

Ph.D. 1998 Michigan State University, Mathematics
M.S. 1990 Western Washington University, Mathematics
B.S. 1988 University of Puget Sound, Mathematics

Professional Record:

2007 – present Associate Professor, Department of Mathematics and Statistics, University of Michigan-Dearborn
2000 – 2007 Assistant Professor, Department of Mathematics and Statistics, University of Michigan-Dearborn

Teaching: Professor Clifford is rated excellent in teaching. Based upon Professor Clifford's curriculum-based contributions as well as to his reception in the classroom, he introduced a new course in 2004, "Introduction to Wavelets," and was a regular contributor to that course through 2008. He introduced the department to Gateway Exams for the Calculus sequence; coordinating that activity through 2009. He headed up a departmental task force in 2013 charged with developing a policy for peer observation of teaching. He is presently the coordinator for the department's sophomore-level matrix and linear algebra courses. He has been as strong contributor in the department's concentration program in a host of analysis courses ranging from the calculus of real and complex variables to geometry and topology to Fourier series and wavelets. He has supervised two master's projects for the department's Applied and Computational Mathematics MS program, and five undergraduate research projects—all of these led to presentations of results at undergraduate forums, and one of these led to a published article. Professor Clifford thinks long and hard about his students, whether they are concentrators, would-be engineers, or dual enrolled high school students; for him advising is always spelled with a capital "A," something not lost on his students nor on his colleagues.

Research: Professor Clifford is rated excellent in research. Professor Clifford has collaborated with seven of his departmental colleagues and one undergraduate student, leading to seven distinct publications. The topics of his collaborations are as varied as his colleagues, addressing problems that continue research initiated in his doctoral work, and further include problems in linear algebra and the geometry of polynomials, and an expository article in mathematics education. He has been a frequent speaker at national and regional mathematics meetings, and a contributor to seminar and colloquium series at our own university as well as regional colleges and universities.

Recent and Significant Publications:

Clifford, J. and Lachance, M., "Quartic Coincidences and the Singular Value Decomposition," *Mathematics Magazine*, Volume 86, No. 5 (Dec 2013), pp. 319-399.

Clifford, J., Le, T., and Wiggins, A., "Invertible Composition Operators: The Product of a Composition Operator with the Adjoint of a Composition Operator," *Complex Analysis and Operator Theory*, Published online (2013); to be published in print (2014).

Rathouz, M., Novak, C., and Clifford, J., "Transforming Shapes Physically and Analytically," *Mathematics Teacher*, Volume 107, Issue 2, (2013) pp. 150-155.

Clifford, J. and Lachance, M., "Extension of the Bocher-Grace Theorem," *Rocky Mountain Journal of Mathematics* (to appear-accepted April 2013).

Clifford, J., Levi, D., Narayan, S., "Commutator of Composition Operators," *Complex Variables and Elliptic Equations*, Volume 57, Number 6 (2012), 677-686.

Service: Professor Clifford is rated excellent in service. He has served on six search committees (one of which vetted over 400 candidates), attracting, screening, and hiring faculty who will serve our students and campus for many years to come. For many years, he coordinated the administration of gateway exams in the calculus sequence, was the organizer of and frequent speaker in the department's Colloquium/Seminar series, and is an ongoing presence in developing forums for the presentation of undergraduate mathematics research. He has served our teaching mission by developing a peer observation proposal for the department, and is presently on the department and college's Executive Committees.

External Reviewers:

Reviewer A: "In short, his research work in the area is of a high quality. He uses the most current strongest results as is clear from the references. Further, he is obviously sharing his ideas with some of the first rate analysts in the field."

Reviewer B: "Indeed, it is increasingly being said by world-renowned mathematicians (e.g. at the International Congress of Mathematicians recently concluded in Seoul) that it is our *professional duty* to [write and speak for audiences besides other professional mathematicians]. This has been my view for some time, and am pleased to see that John Clifford has been doing that and doing it in ways that look fresh, interesting, and appropriate for the audiences being addressed."

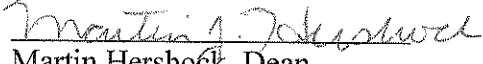
Reviewer C: "I consider Professor Clifford's work described here to be original and imaginative, of uniformly high quality, and to have a useful and coherent trajectory. I am also interested to learn he has a second mathematical personality as an expert on the geometry of polynomials, inscribed ellipses, and related matters."


Reviewer D: "I am impressed by the variety of publication John has done – both with respect to subject matter, but also with respect to intended audience. He has papers in standard research journals, intended for experts in the field, papers in journals such as the *American Mathematical Monthly* and *Mathematics Magazine* intended for a broader audience, and a paper in *Mathematics Teacher* intended for yet another audience."

Reviewer E: "I will close with saying that Clifford has done solid research in good journals. His work connects with the work of the leaders in the field and his placement lies with some active researchers. He has lots of technical skills and he is a wonderful writer. The arguments in his papers are a pleasure to read and follow."

Reviewer F: "His projects involve carrying research on composition operators over to products of a composition operator and the adjoint of another composition operator. This required solid background and good knowledge of the relevant portions of the extensive literature, and his work clearly demonstrates this. He asks the right questions and uses the appropriate tools to answer them. This certainly shows that his scholarship is of high quality."

Summary of Recommendation: Professor Clifford has been rated excellent in the areas of teaching, research, and service. He is an excellent representative of the teacher-scholar model, making contributions inside and outside the classroom that enhance opportunities for his students and his colleagues. We are very pleased to recommend, with strong support of the College of Arts, Sciences, and Letters Executive Committee, John H. Clifford for promotion to professor of mathematics and statistics, with tenure, Department of Mathematics and Statistics, College of Arts, Sciences, and Letters.


Martin Hershock, Dean
College of Arts, Sciences, and Letters


Daniel Little, Chancellor
University of Michigan-Dearborn

May 2015