

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

David K. Lubensky, assistant professor of physics, College of Literature, Science, and the Arts, is recommended for promotion to associate professor of physics, with tenure, College of Literature, Science, and the Arts.

Academic Degrees:

Ph.D.	2001	Harvard University
A.M.	1997	Harvard University
D.E.A.	1995	Université Louis Pasteur
A.B.	1994	Princeton University

Professional Record:

2006 – present	Norman M. Leff Assistant Professor and Assistant Professor , Department of Physics, University of Michigan
2004 – 2006	Post-doctoral Researcher, Department of Physics and Astronomy, Vrije Universiteit
2003 – 2004	Post-doctoral Research Associate, BioMaPS Institute, Rutgers University
2001 – 2004	Post-doctoral Member of Technical Staff, Bell Labs, Lucent Technologies

Summary of Evaluation:

Teaching – Professor Lubensky is a dedicated teacher who is committed to improving his teaching skills. He has taught lower and upper division courses, and student evaluations consistently praise his communication skills and describe him as energetic and knowledgeable. He has mentored post-doctoral scientists as well as graduate and undergraduate students in his laboratory. Two of his post-doctoral associates have received tenure or are on the tenure-track at major institutions in Europe.

Research – Professor Lubensky is a highly regarded theorist who focuses on the mechanisms of organization of spatial-temporal pattern formation in biological systems. His work is held in high esteem by his colleagues, who are impressed by the elegance and originality of his work. He engages closely with experimentalists and many leaders in his field expect him to have an important influence on the field. Professor Lubensky's publications are of very high quality and appear in the top journals in his field. He has received a National Science Foundation CAREER award.

Recent and Significant Publications:

- “Exchange of stability as a function of system size in a nonequilibrium system,” with S. Tănase-Nicola, *Physical Review E*, 86, 040103(R), 2012.
- “Coupling mechanical deformations and planar cell polarity to create regular patterns in the zebrafish retina,” with G. Salbreux, et al., *PLoS Computational Biology*, 8, e1002618 2012.
- “A dynamical model of ommatidial crystal formation,” with M. W. Pennington, et al., *Proceedings of the National Academy of Sciences USA*, 108, 11145, 2011.

“Robust circadian clocks from coupled protein modification and transcription translation cycles,”  
with D. Zwicker and P. R. Wolde, *Proceedings of the National Academy of Sciences USA*, 107, 22540, 2010.

Service – Professor Lubensky has performed service duties typical of those expected from tenure-track faculty at Michigan. He has served on a number of committees and helped found and run the highly successful biological physics luncheon series. He also organized a special campus-wide seminar series on synthetic life. His contributions nationally include reviewing papers for a variety of journals and serving as a panelist for several National Science Foundation reviews. He has been a guest editor for an issue of *PLoS Computational Biology* and has organized several symposia at meetings of the American Physical Society.

External Reviewers:

Reviewer (A)

“I am very impressed by his work; in particular work using physics style models that skillfully include just enough of the important biological information to understand deeply biological pattern formation. ...his work offers fresh ideas and evidence that can cause classical mechanisms to be re-thought. ...[his work] will certainly inspire experimental groups to do new experiments, and have wide impact in developmental patterning.”

Reviewer (B)

“...I am highly impressed with the quality of the work of Professor Lubensky. ...the depth and scholarship of the papers of Professor Lubensky will give these papers, I believe, long term impact and a great lifespan. The work of Professor Lubensky sets a gold standard of quality that benefits the whole field. In my institution, Professor Lubensky would most certainly receive promotion to tenure. I urge you to do the same.”

Reviewer (C)

“...David Lubensky is a brilliant and original scientist... ...[his] publications during his years at the University of Michigan are...superb, each with a significant physics lesson, and most with important biology attached. ...Lubensky is pioneering new areas of physics, his accomplishments are already profound...there is no one of his generation who is better.”

Reviewer (D)

“...David has developed into a truly excellent scientist...working on, and driving, the forefront in several areas of biology in which involvement of theoreticians is essential for progress on fundamental biological questions. ...Lubensky and his collaborators have been leaders - arguably *the* leaders...in developing understanding of the cyanobacterial clock. ...[he] would be a valuable addition to *any* department.”

Reviewer (E)

“...[Lubensky] is an extremely talented scientist... ...with very high standards. ... I would rate DKL to belong to the top 5% of scientists [of his cohort] working in his field. ... If DKL were to apply for an associate professorship at [my institution], he would surely come in the top list qualified for such a position.”

Reviewer (F)

"It is clear to me that David is extremely intelligent and extremely thorough in his thinking. His graduate work...in the area of molecular biophysics was very well received and is of lasting significance. He then re-emerged after several years with a new set of ideas regarding developmental processes... He has successfully made alliances with leading experimental groups...and has aimed to tackle difficult problems."

Reviewer (G)

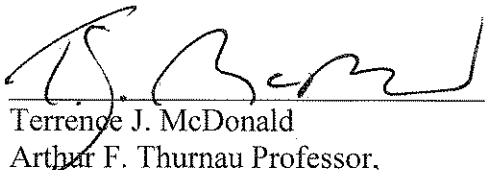
"...[his] papers are in the *very* top scientific journals and several of his papers are very highly cited. This is clearly a scientist who produces work of very high significance. ... the level of work produced by Professor Lubensky is of such high...quality that he definitely deserves this promotion."

Reviewer (H)

"David Lubensky is a brilliant perfectionist, with work characterized by extraordinary attention to detail. ...[his] remarkable depth and biological knowledge allow him to see deeper into potential blind alleys than virtually any biological theorist I know. ... I strongly urge you to promote him."

Summary of Recommendation:

Professor Lubensky 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 Assistant Professor David K. Lubensky be promoted to the rank of associate professor of physics, with tenure, College of Literature, Science, and the Arts.



Terrence J. McDonald  
Arthur F. Thurnau Professor,  
Professor of History and Dean  
College of Literature, Science, and the Arts

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