

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

Approved by the Regents  
May 14, 2009

Edward L. Ionides, assistant professor of statistics, College of Literature, Science, and the Arts, is recommended for promotion to associate professor of statistics, with tenure, College of Literature, Science, and the Arts.

Academic Degrees:

Ph.D.	2001	University of California at Berkeley
M.S.	1995	Cambridge University
B.A.	1994	Cambridge University

Professional Record:

2002 – present	Assistant Professor, Department of Statistics, University of Michigan
2001 – 2002	Visiting Assistant Professor, Department of Statistics, University of Michigan

Summary of Evaluation:

Teaching – Professor Ionides has been a very effective and dedicated teacher. He has taught courses at all levels and has made substantial contributions to the department’s curricula by developing and teaching new courses. He has a good record of doctoral student supervision and has been effective in managing his students’ progress toward the degree.

Research – Professor Ionides has developed a strong and independent research program. His interests cover the areas of stochastic modeling, time series analysis, and general statistical methodology. Much of his work is interdisciplinary in nature. He has introduced new, dynamical models for analyzing epidemiology and ecology of infectious diseases, developed novel statistical methods to address the associated inference issues, and done collaborative work in cell biology, neuroscience, and health and economic development. He has published eleven papers in high quality journals, including *Nature*, and in statistics and applications journals, including *Statistica Sinica*. He also has a conference proceeding and a book chapter. He has also been successful in obtaining research support.

Recent and Significant Publications:

“Inapparent infections and cholera dynamics,” with A. A. King, et al., *Nature*, 454, 2008, pp. 877-880.

“Truncated importance sampling,” *Journal of Computational and Graphical Statistics*, 17, 2008, pp. 295-311.

“Inference for nonlinear dynamical systems,” with C. Breto and A. A. King, *Proceedings of the National Academy of Sciences of the USA*, 103, 2006, pp. 18438-18443.

Maximum smoothed likelihood estimation,” *Statistica Sinica*, 15, 2005, pp. 1003-1014.

Service – Professor Ionides has contributed in multiple ways to the overall service mission of the Department. He has provided excellent service on several committees, is active on the

professional lecture circuit, and serves on the editorial boards of two journals, including the *Annals of Statistics*, the preeminent journal in the field for theoretical statistics.

External Reviews:

Reviewer (A)

“I give Ed the grade of A+ for establishing and implementing his own program of research. It shows an independence that many never achieve in their careers. ... I think that most of Ed’s publications would be on my list of significant accomplishments.”

Reviewer (B)

“...Professor Ionides has made significant contributions to the development of statistical theory and method and the applications of statistics in many important problems. It is evident that he will continue his productive research in the future.

Reviewer (C)

“He has a very broad background and in many ways represents the new-age statistician who is not only well grounded in traditional statistics, but has a strong background in a second scientific discipline—biology and health sciences in this case. ... Ed has a solid publication record, which is dominated almost exclusively by interdisciplinary/collaborative research efforts.”

Reviewer (D)

“...it’s not just good statistics that he’s doing, it’s good statistics that will have a big positive impact on how people analyze their data. ...Ed is recognized as a quickly-rising ‘star’ ...enormously valuable...and one of the best we’ve got. ...Ed’s recent papers on epidemic models are without a doubt some of the most significant recent papers in his field of expertise.”

Reviewer (E)

“...being able to develop statistical methods motivated by important applications is very important. ...Ionides has produced a number of recent high-profile publications, including a forthcoming paper in *Nature*, and a 2006 paper in *PNAS*. These two papers are related, and involve both development of statistical methods, and their application to an important scientific problem. The methodological work within the *PNAS* paper addresses an important question in computational statistics...and produces a novel approach, which may have wide applicability.”

Reviewer (F)

“...Dr. Ionides is an excellent statistical scientist [of his generation] with an international reputation and a very strong tenure case. ... He has a number of excellent papers...and an international reputation in this area (witness his central role in an international NSF working group on the problem). ...a very smart, productive applied statistician working in a series of important biological areas.”

Reviewer (G)

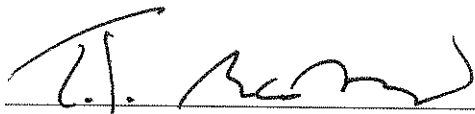
“...each paper is of high quality, and has been published in journals where one can expect substantial impact. His theoretical work has been published in good statistical journals, and there is sufficient (good) papers submitted that I would not hesitate to predict a very productive research career.”

Reviewer (H)

“...he thinks clearly and logically, and expresses himself carefully and coherently. These attributes come across from his papers—for example, paper P2 (a single author paper) is very well-written, carefully motivated and explained, and easy to read. ...Ed’s scholarly approach, together with his sound theoretical knowledge and broad scientific interests, augur very well for his career as an academic statistician.”

Summary of Recommendation:

Professor Ionides has established an excellent record of interdisciplinary work. He is a very effective teacher and an active citizen. The Executive Committee and I recommend that Assistant Professor Edward L. Ionides be promoted to the rank of associate professor of statistics, with tenure, in the College of Literature, Science, and the Arts.



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

May 2009