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

Approved by the Regents
May 17, 2007

Moulinath Banerjee, 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.	2000	University of Washington
M.Stat.	1997	Indian Statistical Institute
B.Stat.	1995	Indian Statistical Institute

Professional Record:

2001 – present	Assistant Professor, Department of Statistics, University of Michigan
2001	Lecturer, Department of Statistics, University of Washington

Summary of Evaluation:

Teaching – Professor Banerjee has made significant contributions to the educational mission of his department. He has taught a variety of undergraduate and graduate courses, and he has advised or is advising three doctoral students. He has helped students in other departments with statistical aspects of their research. He is currently helping redesign the department's undergraduate honors program. He is an active participant in student-run seminars and has provided guidance to several foreign students in adapting to the department.

Research – Professor Banerjee has established himself as one of the leading researchers within his cohort in the area of asymptotic theory and inference. His research is technically challenging and very delicate and it has many useful applications. His papers on applying the "universal limit law" to problems in his research area are considered a major contribution. His recent work on inference in decision trees and the asymptotic analysis of split points provides important theoretical understanding of many of the machine learning methods in the literature and will have very significant impact. He has published eleven papers in top journals and has 4 papers under review.

Recent and Significant Publications:

"Estimating optimal step-function approximations to instantaneous hazard rates," with I. W. McKeague, *Bernoulli*, forthcoming.

"A semiparametric binary regression model involving monotonicity constraints," with P. Biswas and D. Ghosh, *Scandinavian Journal of Statistics*, 33(4), 2006, pp. 673-697.

"Likelihood ratio tests under local alternatives in regular semiparametric problems," *Statistica Sinica*, 15(3), 2005, pp. 635-644.

"Score statistics for current status data: Comparisons with likelihood ratio and Wald statistics," with J. A. Wellner, *The International Journal of Biostatistics*, 1(1), 2005, pp. 1-28.

Service – Professor Banerjee has served on several committees, including multiple times on the departmental Graduate Admissions Committee. His efforts in setting and grading the theoretical portion of the department's qualifying review exams have been very valuable. He has provided excellent professional service referring work and organizing sessions at conferences. He has been invited to give numerous talks at many departmental colloquia, and he has been invited to national and international conferences. He has recently been invited to serve on the editorial board of the *International Journal of Biostatistics*.

External Reviews:

Reviewer (A)

"Professor Banerjee has a strong mathematical background and has proven himself to be quite innovative and original with a good appreciation for detail. ...I was impressed with his ability to find applications for his theoretical results in important substantive areas. ... The areas...promise to be central to theoretical statistics for the foreseeable future."

Reviewer (B)

"Dr. Banerjee is one of the most brilliant theoretical statisticians [of his generation] who has graduated in the past six or so years... The research he is working on...is definitely one of the most difficult of all research areas and very few researchers are willing to put [in] the time and energy necessary to work successfully in this area... His work is genuinely novel and deep."

Reviewer (C)

"The work is technical, sophisticated and deep, relying on a keen understanding of general empirical process theory and the issues of nonparametric estimation under monotonicity constraints. ... There can be little dispute about the quality of Dr. Banerjee's work... ...I am convinced that his research record is deserving of tenure at the University of Michigan."

Reviewer (D)

"...Dr. Banerjee possesses strong technical background, analytical tools, and computing skills. He is a strong scholar and prolific researcher, who has made important contributions to likelihood based inference for monotonic functions. He has branched out into other areas of statistics."

Reviewer (E)

"...I have attended a number of his professional presentations and am impressed with the focus, depth, and clarity of his lectures. ...Banerjee always submits his papers to statistical journals of the highest standard... An ultimate standard for tenure, which Banerjee clearly meets, is whether a candidate has high potential to become a leader in his field of study. I support his promotion."

Reviewer (F)

"I am impressed by the number and quality of the papers that Dr. Banerjee has produced [in] the last two years. The subjects treated are timely and highly urgent. ...he is a well known and appreciated speaker. ...experts of his kind are quite rare."

Reviewer (G)
"Dr. Banerjee's thesis work was a highly original tour-de-force in shape-restricted nonparametric inference. ... This was a major contribution, and has been well documented in the leading journals."

Reviewer (H)
"Dr. Banerjee is a serious scholar and a productive researcher with [an] international reputation. He is known for his works on interval censored data and order or shape restricted inference. ... These are extremely challenging areas because standard asymptotic analysis does not apply. ... The results Dr. Banerjee was able to derive are deep, original and elegant..."

Reviewer (I)
"It is clear that he has mastered the empirical process type of techniques required and has a very good publication record in top and reputable journals."

Reviewer (J)
"He has a stunning mastery of empirical process techniques... ...his work is cutting-edge, makes deep contributions to statistical methodology, and addresses important applied problems. ...Dr. Banerjee would have no trouble gaining promotion at [my university]..."

Summary of Recommendation:
Professor Banerjee has established himself as one of the leading researchers in asymptotic theory and inference. He is a good teacher and citizen. The Executive Committee of the College of Literature, Science, and the Arts and I recommend that Assistant Professor Moulinath Banerjee be promoted to the rank of associate professor of statistics, with tenure, in the 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

May 2007