# Approved by the Regents May 15, 2014

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

Moulinath Banerjee, associate professor of statistics, with tenure, College of Literature, Science, and the Arts, is recommended for promotion to 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:

2008 - 2011	Associate Professor, Department of Biostatistics, University of Michigan
2007 – present	Associate Professor, Department of Statistics, University of Michigan
2001 - 2007	Assistant Professor of Statistics, University of Michigan
2001	Lecturer of Statistics, University of Washington

## Summary of Evaluation:

<u>Teaching</u> – Professor Banerjee has played a critical role in teaching courses in statistical theory to undergraduate and Ph.D. students. These are some of the most fundamental courses that the department offers and are among the most challenging ones to teach. His research expertise makes him one of the most qualified faculty in the department to teach such courses. Professor Banerjee has an excellent record in supervising doctoral students at University of Michigan; he has co-supervised eight Ph.D. theses and has been a member of several dissertation committees. His students receive excellent training in research and usually begin their careers with multiple publications.

Research – Professor Banerjee is an expert in statistical large sample theory. His work broadens the scope of statistical theory and charts new directions for methodological developments in function estimation. He has an outstanding publication record with papers in the very top journals in statistics. Professor Banerjee has been active in the realm of interdisciplinary research. In addition to publishing in the contexts of biostatistics and economics, his collaboration with the astronomy group at Michigan on the gravitational effects of the Milky Way and mapping differential extinction in galactic globular clusters has yielded interesting results.

#### Recent and Significant Publications:

From Probability to Statistics and Back: High-Dimensional Models and Processes - A Festschrift in Honor of Jon A. Wellner, with F. Bunea, et al. (eds.), IMS Collections, Volume 9, 2013, ISBN: 978-0-940600-83-6.

<sup>&</sup>quot;Asymptotics for current status data under varying observation time sparsity," with R. Tang and M. Kosorok, *Annals of Statistics*, 40(1), 2012, pp. 45-72.

<sup>&</sup>quot;Threshold based on a p-value framework in dose-response and regression settings," with A. Mallik, et al., *Biometrika*, 98, 2011, pp. 887-900.

"Inconsistency of bootstrap: The Grenander Estimator," with B. Sen and M. B. Woodroofe, *Annals of Statistics*, 38, 2010, pp. 1953-1977.

Service – In the past four years, Professor Banerjee has served on the department's Qualifying Review and Admissions committees. His associate editorship with *Annals of Statistics* and the *Journal of the American Statistical Association* and membership on the IMS-APRM Scientific Program Committee represent important contributions to the profession and have helped the department gain national and international visibility.

## External Reviewers:

# Reviewer (A)

"...I find his work impressive and his standing appropriate to promotion to full professor. ...the paper in the annals of applied statistics seemed to go well beyond routine applications of statistical methods and indicated a serious collaboration with scientists which is necessary for good applied statistics."

#### Reviewer (B)

"...I regard Dr. Banerjee as an excellent and mature researcher. ... I am impressed by the breadth and quality of his cooperations with scientists from applied fields such as astronomy and biostatistics. ... our department would be very happy to hire Moulinath Banerjee as a full professor in statistics, and I am sure that the same is true for many other good places."

# Reviewer (C)

"Mathematical statisticians...at the level of Dr. Banerjee are in my view becoming rare. I am indeed very much impressed by [the] quality of the papers that Dr. Banerjee has produced over the last years. The subjects treated are moreover timely and highly urgent. ...I highly value Dr. Banerjee's scientific work, its mathematical deepness and unmatched originality. He is an [sic] splendid statistician..."

## Reviewer (D)

"Moullnath [sic] has been a powerful theoretician... He is also a wonderful expositor. I feel pretty sure he must be a very good teacher in different areas. He has also an excellent understanding and overview of Statistics..."

#### Reviewer (E)

"There can be little dispute about the quality of Dr. Banerjee's work and his taste in collaborators. The recent growth and development of his publication record are important in that they show that his range of skills have broader application than might appear to the uninitiated. The volume of his published papers is excellent, given the quality of journals he has chosen for outlets and the depth of the research... ...his overall record is deserving of promotion, and...his research will continue to blossom as he is exposed to the myriad areas of application available to him at Michigan."

# Reviewer (F)

"In a relatively short span of time, Mouli has established a very strong research program. ...[he] has made important contributions to several different areas of theoretical statistics..."

# Reviewer (G)

"...I would rank Dr. Banerjee among the top few experts in the world. His work is cutting-edge, makes deep contributions to statistical methodology, and is motivated by important applied problems in astronomy, engineering and biomedicine. ... Dr. Banerjee is an outstanding scholar with an international reputation. He has made a series of dazzling contributions over the last decade and has established himself as a world leader in the area non-standard asymptotics."

# Reviewer (H)

"Banerjee possesses unusually strong mathematical skills and depth. ... Banerjee's papers are by and large very nicely written, reflecting a well thought-out and well-informed approach. Several of the papers have a neat and innovative idea at the core that is developed carefully and comprehensively, especially in some of the more recent work."

# Summary of Recommendation:

Professor Banerjee is a leading scholar in his field and his record amply demonstrates a highly successful research career. He will be an asset in the quickly expanding undergraduate program in statistics and he has provided valuable service to his department and profession. The Executive Committee of the College of Literature, Science, and the Arts and I recommend that Associate Professor Moulinath Banerjee be promoted to the rank of professor of statistics, with tenure, College of Literature, Science, and the Arts.

Susan A. Gelman

Heinz Werner Distinguished University Professor,

Professor of Psychology and Interim Dean, College of Literature, Science, and the Arts

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