Elizaveta Levina, 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.	2002	University of California at Berkeley
M.S.	1997	University of Utah
B.S.	1994	St. Petersburg State University

Professional Record:

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

Summary of Evaluation:

Teaching – Professor Levina is an excellent teacher, advisor, and mentor. She has taught three courses at the undergraduate level and one at the graduate level, and received consistently strong evaluations from students. She has a very good record of doctoral student supervision and three of her current students have already published several papers. One of her students received the American Statistical Association best student paper award and a Yahoo! Ph.D. Fellowship – an unusual recognition since this has traditionally been given to students in electrical engineering and computer sciences.

Research – Professor Levina's research interests are primarily in the areas of high-dimensional inference and analysis of data with network structure. Both of these subfields receive a lot of attention within statistics and applications. Her research covers important methodological developments, theoretical insights, and innovative interdisciplinary collaborations. She has 18 papers that have been published or accepted, and most of them are in top-tier journals. She has also been successful in obtaining research grants.

Recent and Significant Publications:

"Local vote decision fusion for target detection in wireless sensor networks," with N. Katenka and G. Michailidis, *IEEE Transactions on Signal Processing*, 56(1), 2008, pp. 329-338.

"Sparse estimation of large covariance matrices via a nested lasso penalty," with A. J. Rothman and J. Zhu, *Annals of Applied Statistics*, 2(1), 2008, pp. 245-263.

"Estimating the number of pure chemical components in a mixture by maximum likelihood," with A. S. Wagaman, et al., *Journal of Chemometrics*, 21(1-2), 2007, pp. 24-34 (featured on SpectroscopyNow.com).

"Texture synthesis and non-parametric resampling of random fields," with P. Bickel, *Annals of Statistic*, 34(4), 2006, pp. 1751-1773.

Service – Professor Levina has contributed very good service to the Department on the Executive and Curriculum Committees, and has been very active on the Graduate Admissions

Committee. She has been an invited speaker at many conferences and colloquia, and serves on the editorial boards of two journals.

External Reviews:

Reviewer (A)

"Dr. Levina is doing excellent work, she is extremely influential... All of her topics are hot. Any modern statistics department needs people who work in these areas. ... this looks like a case that consists almost entirely of overwhelming strengths. She has a strong publication record...she is collaborating with some of the best people in the field... she has an interesting portfolio..."

Reviewer (B)

"She is a leader not only in regularized covariance matrix estimation but is making important contributions in a wide range of areas. ... If she were [at my university] I would be pushing hard for her promotion to tenure and am certain it would succeed."

Reviewer (C)

"...Levina is a well-established leader in the field of high-dimensional statistical inference. Liza's mathematical skills are very strong which enables her to work on mathematical and methodological aspects of other problems..."

Reviewer (D)

"...Levina has a broad range of research interests and her work would fit well with virtually any statistics department, especially in a well-balanced department like yours. I feel that her research record merits tenure."

Reviewer (E)

"...Dr. Levina is an exceptionally strong statistician, who has made remarkable and wide-ranging contributions to statistical theory, method, and application. Her work is highly regarded, admired and cited. She is an articulated [sic] and eloquent speaker and speaks frequently at various professional meetings and academic seminars. She has achieved international stature by her creative contributions and her conscientious professional services."

Reviewer (F)

"...this appears an extremely strong case to me... ...the questions Dr. Levina studies are likely to be central to the discipline for the foreseeable future. ...her standing in the area of covariance estimation is very high, I think her work (with collaborators) is among the best and most interesting in the field in the last few years. This is borne out by a constant stream of invitations to major conferences..."

Reviewer (G)

"She has compiled a terrific publication and funding record that would warrant promotion and tenure at any university. Her impressive list of recent invited talks speaks to her high visibility within the community. ... I am very impressed with the diversity of Elizaveta's research. Her work on high dimensional covariance estimation alone represents a significant and important body of work and involves an array of different collaborators. On top of this, she has made significant contributions to *two* other literatures – sensor networks and computer vision."

<u>Summary of Recommendation</u>:
Professor Levina has established herself as a leading researcher in the area of high-dimensional inference. She is an excellent teacher and mentor, and she has contributed valuable service to the Department and to the profession. The Executive Committee and I recommend that Assistant Professor Elizaveta Levina 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 2009