PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
SCHOOL OF INFORMATION

Qiaozhu Mei, assistant professor of information, School of Information, is recommended for promotion to associate professor of information, with tenure, School of Information [also assistant professor of electrical engineering and computer science, College of Engineering].

Academic Degrees:

Ph.D.	2009	University of Illinois at Urbana-Champaign
B.S.	2003	Peking University, Beijing, China

Professional Record:

2009 – present	Assistant Professor of Information, School of Information and Assistant Professor of Electrical Engineering, and Computer Science, College of Engineering, University of Michigan
2008	Research Intern, Yahoo! Research
2007	Research Intern, Microsoft Research
2006	Research Intern, Microsoft Research

Summary of Evaluation:

Teaching: Professor Mei's contributions to classroom teaching have been substantial and valuable, with his greatest contributions coming in his courses aimed at Master's and Ph.D. students interested in technical content related to Data Mining, Information Analysis, and Information Retrieval. He has been active in improving and extending his teaching within his core area of expertise. Professor Mei's statement of contributions to teaching indicates that his focus on curriculum development around Data Mining and Information Retrieval is intentional, and that he has ambitious goals for expanding his impact in this area. He continues to play a significant role in shaping the University of Michigan School of Information's (UMSI) current technical curriculum related to Data Analytics. Professor Mei has been also exceptionally active as a graduate mentor. His students have won international competitions and he is sought after as a member of dissertation committees. Professor Mei's expertise and mentorship is valued by students and colleagues in a variety of disciplines and at other universities.

Professor Mei has taught four different courses at the Master's level: SI 650/EECS 549: Information Retrieval (four times), SI 508: Networks: Theory and Applications (twice), SI 601: Data Manipulation (once), and SI 544: Introduction to Statistics and Data Analysis (once). He has also taught two courses at the doctoral level: SI 721: Data Mining and SI 708: Networks (a "doctoral shadow" course that Professor Mei taught in the Fall 2010 semester as an advanced companion seminar for SI 508).

SI 508 and SI 650 are technical courses that appeal to students specializing in Information Analysis and Retrieval as well as students in the College of Engineering (note the cross-listing of SI 650). Professor Mei redesigned both SI 508 and SI 650, adding innovative elements, such as an online "big data" competition in both SI 650 and SI 721. The competition allowed students to work on significant real-world data sets and to receive rapid automatic feedback on their performance relative to their peers. Student enthusiasm for this element of the courses contributed to strong teaching evaluations. Professor Mei designed and taught SI 721: Data Mining, a doctoral seminar. In addition to attracting UMSI doctoral students, the course's first offering attracted students from computer science, public health, the medical school, and the business school. The cross-disciplinary popularity of SI 721 and SI 650, as well as the high teaching evaluations, demonstrate Professor Mei's ability to translate information retrieval and analysis concepts across disciplines and demonstrate their interdisciplinary relevance.

Beyond classroom teaching, Professor Mei has been active as a graduate student mentor. At UM, he is the primary advisor for five current Ph.D. students and the co-advisor for a sixth. All of his doctoral students are fairly early in the program, with the first two expected to graduate in 2016. Professor Mei has been active recruiting students from two top Chinese universities and his efforts have resulted in a steady stream of top students applying to the UMSI doctoral program. In addition to advising his own students, Professor Mei is highly sought after as a member of dissertation committees across the UM campus and nationally. He has served or is currently serving on nineteen dissertation committees (including the committees he is chairing or co-chairing): four in UMSI, ten in computer science and engineering, one in statistics, one in electrical and computer engineering, and three at other universities (two at the University of Illinois at Urbana-Champaign and one at Vanderbilt University).

Additionally, Professor Mei has advised eleven significant Master's projects, four visiting doctoral student projects, and nine undergraduate projects. However, his research group is one of the largest in UMSI, and that he has been very active in co-publishing with his students (eleven conference papers with eight different advisees as co-authors). Furthermore, Professor Mei mentored the two members of his Foreseer research group who won the 2013 Text Retrieval Conference (TREC) competition in the Microblog Track. TREC is an annual workshop and competition for information retrieval research, organized by the National Institute of Standards and Technology since 1992.

Research: Professor Qiaozhu Mei is a prolific and influential researcher in the areas of text mining, information retrieval, and health informatics. Within these areas, he has made significant contributions around three themes: 1) temporal text mining, 2) semi-supervised learning and ranking of unlabeled data to do clustering and classification, and 3) big data graph representations and changes over time. What also distinguished Professor Mei's work is his focus on real-world problems and data.

Professor Mei is best known for his development of algorithms for temporal text mining. Previously text mining was done on static text, Professor Mei developed methods to understand how text and content evolve over time. His 2005 paper, "Discovering evolutionary theme patterns from text: an exploration of temporal text mining," on this temporal dynamics model has received the most citation of any of his work in Google Scholar (352) and established his unique scholarly contribution in this area. One letter writer called this work "seminal." A second area of in which Professor Mei has generated research contributions is in semi-supervised learning and ranking using unlabeled data to do clustering and classification. Here, his creative use of graph theory enabled insights into large corpuses of unlabeled data. Finally, Professor Mei has begun to explore how to make sense of "big data." Here, he has applied techniques he mastered in exploring temporal shifts in text and unlabeled data in order to create graphic representations of changes over time, as well as graphically representing the collective dynamics and human behavior over time. In the process Professor Mei has contributed findings as well as methodologically to this research.

Professor Mei has published over thirty articles, seven in journals and thirty-nine in conferences. The total number of journal articles is seven. Of these, two are in the *Journal of the American Medical Informatics Association*, one in *Nucleic Acids Research*, one in *Information Retrieval*, one in *Proceedings of the Very Large Databases Endowment* (PVLDB), one in *Information Processing and Management*, and one in *ACM TKDD*. These are all highly prestigious journals in their respective fields of health informatics, bioinformatics, information retrieval and database systems. Two of these seven articles have appeared based on work done at UM whereas the rest are related to work done previously at UIUC. All the papers are highly collaborative. It appears that Professor Mei is the primary author of two of the seven journal articles. Of the journal proceedings, twenty-six are in highly prestigious conferences (with archival value) and another 13 papers in tier 2 conferences. Approximately thirty of the conference papers have appeared since he joined UMSI. He has also published more than 10 workshop papers and

book chapters. Overall, Professor Mei has a total of 2378 citations and an h-index of 25 (Google Scholar, December 2013).

Professor Mei has received eleven research grants since coming to Michigan, an unusually high number for an assistant professor. These grants are from a variety of sources, such as the National Science Foundation, the National Institutes of Health, the Defense Advanced Research Projects Agency, Yahoo!, and internally from UM. Professor Mei has raised over $3.5 million to support his research. He has another four grants that are currently under review (from the National Science Foundation and the Air Force Office of Research).

Professor Mei is highly collaborative in his research. It is here that we see the most in-depth applications of his considerable research skills to real world problems in the areas of health, social computing, and behavioral economics. These collaborations have given him access to data to which he would not otherwise have had access. Furthermore, his contributions to these research collaborations are apparent and his work added new perspectives and depth to the analyses in the resulting articles.

Service: Professor Mei has contributed more in service to the school and university that would be expected of a junior faculty member: serving on several different school committees, and even chairing a sub-committee; and representing the university with a Hathi trust working group. Moreover, he has done so with creativity: drawing ideas from his research to build a model of Ph.D. applicants to assist the Ph.D. committee in making selection decisions. Professor Mei co-founded the campus wide special interest group Michigan Data Sciences (MIDAS) and co-organized the MIDAS seminar series. This series is on-going, and very well attended. The MIDAS group and other related efforts on campus are being rolled into a Michigan Institute of Data Science (MINDS), and Professor Mei is a founding member, serving on the steering committee.

Due to privacy concerns, it is not easy for researchers to have access to electronic health records (EHR). Yet, without data, it is hard to identify health outcomes, effective medicines, and best practice interventions. To overcome this barrier, Professor Mei has collaborated with others to create a Clinical Electronic Data Analysis Resource (CEDAR), which provided researchers the access EHRs while abiding by the legal regulations. This resource will of course help Professor Mei in his own research, but it is also of benefit to many others on campus.

Externally, Professor Mei has served on the program committees of all the major conferences in his field and has served as area chair for a few conferences as well as on National Science Foundation panels.

External Reviewers:
Reviewer A: "…, I enthusiastically recommend [Professor] Mei for promotion. He is one shining gem that any top research institution would love to hire and keep."

Reviewer B: "I would expect Professor Mei to receive tenure at [my intuition], or indeed at any research-intensive university in the [United] States or internationally. The depth and quality of his research places him in the ranks of the best researcher in his area to have received tenure within the past few year."

Reviewer C: "[Professor Mei] is very dedicated, productive, effective, and has very strong capability at innovative research. Therefore, I recommend him very highly for promotion to associate professor with tenure in your university."

Reviewer D: "…,[Professor Mei's] research has been strong and broad, and he has had substantial impact on the field. I valuate his research accomplishment to put him in a good position for tenure at a top-tier school."

Reviewer E: "[Professor Mei] has a solid track record of external grants and professional services. Considering the difficulty of securing funding in recent years, obtaining many federal grants is phenomenal. I believe that [Professor Mei] is definitely a rising star in the field."
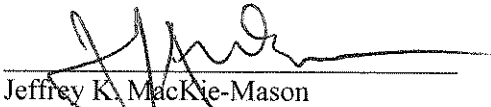
Reviewer F: "..., Professor Mei has made important and deep contributions to a wide range of problems. His work is having significant impact among his peers."

Reviewer G: "...,[Professor Mei] has a solid, strong case and I recommend that he be appointed as an associate professor with tenure at your school."
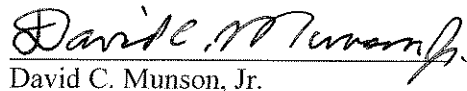
Reviewer H: "[Professor Mei] has an outstanding record of high quality scientific output, and a strong interesting and ability to push for developing state-of-the-art machine learning methodologies in various applications."

Summary of Recommendation

Professor Mei's service has been above the level expected of junior faculty members. With the overwhelming support of the promotion and tenure committee of the School of Information, I enthusiastically recommend Qiaozhu Mei for promotion to associate professor of information, with tenure, School of Information.

Jeffrey K. MacKie-Mason
Arthur W. Burks Collegiate Professor of
Information and Computer Science, and
Dean, School of Information

David C. Munson, Jr.
Robert J. Vlasic Dean of Engineering
College of Engineering

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