PROMOTION RECOMMENDATION THE UNIVERSITY OF MICHIGAN SCHOOL OF INFORMATION

Lada A. Adamic, 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. 2001 Stanford University, Stanford, CA

B.S. 1997 California Institute of Technology, Pasadena, CA

Professional Record:

2008 – present Assistant Professor, Electrical Engineering and Computer Science.

College of Engineering, University of Michigan

Adjunct Assistant Professor, Study of Complex Systems, College of 2006 – present

Literature, Science, and the Arts, University of Michigan

Assistant Professor, School of Information, University of Michigan 2005 – present

2001 - 2005Research Scientist, Hewlett-Packard Labs

Summary of Evaluation:

Teaching: Since Professor Adamic joined the School of Information faculty in 2005, she has taught four different courses, most of them multiple times (Search and Retrieval; Neworks; Statistics; Data Manipulation). She designed two of these; she made significant modifications to a third, adding a large hands-on component. She has been a conscientious and effective teacher in the classroom, and she attracts students from a range of disciplines; for example, her Networks course (SI 508) draws students not only from SI, but also from biology, bioinformatics, industrial and operations engineering, sociology, economics, computer science, political science, natural resources and environment, and business.

Professor Adamic encourages active learning in different ways. In her Networks course, the students use social network analysis software to explore network structure and dynamics and gain intuition for fundamental concepts. In her Data Manipulation course, she teaches students the programming skills needed to fetch data from the Internet and to perform simple data analysis themselves. In Statistics, she shows students that they have the ability to rigorously and objectively analyze the world around them, by guiding them through replication (and questioning) of some of the results that other faculty have reported in recent studies.

Professor Adamic has received good to excellent teaching scores in nearly all of her classes; at least as important, they have been improving over the years: her ratings in Statistics have gone from (Q1 3.5, Q2 3.94) in F06 to (Q1 4.13, Q2 4.07) in W09; her Data Manipulation ratings have gone from (Q1 3.83, Q2 3.5) in F07 to (Q1 4.56, Q2 4.43) in F08; in Networks they have always been high.

Professor Adamic has supervised doctoral and master's students, as well as post-doctoral fellows. More specifically, she has chaired or co-chaired four doctoral dissertation committees, including that of a student who has graduated and is now a post-doctoral fellow at Stanford University. She has served on 11 other dissertation committees at the University of Michigan and other institutions.

Professor Adamic has actively participated in the open courseware effort by making the interactive online demos in her Networks course available to the public and the full content of that course available on the Michigan Open Courseware site.

Research: Professor Adamic is a successful and highly visible researcher, working on the very important and current topic of analyzing online communities and social networks. She has also done substantial work on issues of basic network theory. She has published 32 peer-reviewed journal articles and conference presentations, about 20 of which postdate her move to the University of Michigan in 2005. Google Scholar lists 24 papers with 50 or more citations. She has an h-index for citation impact of 25, which is quite high for a pre-tenure faculty member. She has also been very successful at obtaining research funding: 10 grants since she joined the University of Michigan, including a prestigious NSF CAREER grant, another NSF grant, a DOD grant, and two grants from the Army Research Institute.

Professor Adamic is very widely sought after to give invited talks and to serve on major program committees. Her work is well-known and well-cited, especially for a junior faculty member. Amongst her principal research results are an analysis of the substantial effect that skewed node degree distributions can have on the efficiency of search; the identification of a strong polarization of the "blogosphere" into liberal and conservative camps, with little linking between camps; and the development of a method for summarizing a social network by identifying a small "synopsis:" a set of important vertices that summarizes some key properties of the network as a whole.

The external reviews, from important thought-leaders in the field of social and information network analysis—and, significantly, from several disciplines—provide strongly positive assessments of her research impact. At least a couple reviewers mention that they would like to hire her away from the University of Michigan.

Recent and Significant Publications:

- Shi, X., Adamic, L.A., Tseng, B., and Clarkson, G.S. (2009). "The Impact of Boundary Spanning Scholarly Publications and Patents." *PLoS One* 4(8): e6547.
- Bakshy, E., Karrer, B., and Adamic, L.A. (2009). "Social Influence and the Diffusion of User-Created Content," *ACM Electronic Commerce (EC-09)*, pp. 325-334.
- Shi, X., Bonner, M., Adamic, L.A., and Gilbert, A.C. (2008). "The Very Small World of the Well-Connected," *ACM Hypertext '08*, pp. 61-70 (Best Paper Award).
- Adamic, L.A., Zhang, J., Bakshy E., and Ackerman, M.S. (2008). "Knowledge Sharing and Yahoo! Answers: Everyone Knows Something," *WWW2008*, Beijing, China.
- Zhang, J., Ackerman, M.S., and Adamic, L.A. (2007). "QuME: A Mechanism to Support Expertise Finding In Online Help-seeking Communities," *UIST2007*, Newport, RI.
- Adamic, L.A., and Glance, N. (2005) "The Political Blogosphere and the 2004 U.S. Election: Divided They Blog," *LinkKDD Workshop*.

Adamic, L.A., and Adar, E. (2005). "How to Search a Social Network," *Social Networks*, 27(3): pp. 187-203.

Adamic, L.A., and Huberman, B.A. (2000). "Power-Law Distribution of the World Wide Web," *Science*, 287(5461), p. 2115.

Service: Professor Adamic has provided significant service both internally, to the School of Information, the Complex Systems Program, and the University of Michigan, and to the profession more broadly. Within SI, she has served on the Doctoral Committee for three years and the Computing Advisory Committee for one year. For several years, she ran for a well-attended workshop on networks at UM, bringing a steady stream of prominent scholars to campus. She is also the co-adviser for Information Analysis and Retrieval specialization within the School, and she serves the school in a number of other ways, including helping with the faculty search process.

Externally, Professor Adamic has been active in service to the international World Wide Web conference (a top tier conference with an acceptance rate of around 10%), serving as deputy chair and as co-chair of the Social Networks track. She has also served on a number of program committees for other conferences and has done an enormous amount peer-reviewing for conferences, journals, and funding agencies (81 papers and proposals in a recent 12-month period). Professor Adamic has also been involved in outreach activities, especially with the Women in Computing Day at Oakland University and the Ann Arbor Hands-On Museum education project, for which she is building interactive demos related to networks.

External Reviewers:

Reviewer A: "She seems to be phenomenally creative, have fantastic taste, and be at the center of some of the most interesting work on social networks currently being done. She has clearly distinguished herself as a current leader in the increasingly important field of social network analysis, and I have every reason to believe she will continue to be a leader."

Reviewer B: "Lada is one of the leaders in social networks research, with high impact work on influence propagation, community detection, power law graphs, to name a few."

Reviewer C: "Lada has a keen and curious mind, a good sense of taste in research and the ability to deal with enormous sets of data."

Reviewer D: "Lada is a very creative researcher who has made several important contributions. Her research provides an interesting lens into phenomena regarding the structure and functioning of a variety of networks."

Reviewer E: "Lada is outstanding in many dimensions and I cannot see how any university would fail to promote her to tenure."

Reviewer F: "Dr. Adamic is one of the leading figures in the area developing around the study of complex social and information networks; she has been doing fundamental work in this area since its rise to visibility in the late 1990s, and her creativity and innovative research have helped to shape the field."

Reviewer G: "Her work is well-cited and has been influential in the fields of social computing, social network analysis, and more generally in understanding the dynamics of the Web. Through her work, she has developed an international reputation in the field."

Reviewer H: "Let me skip to the chase: Professor Adamic should be granted tenure. Her case should be a slam dunk."

Reviewer I: "Considering her (relatively few) years in the profession, she is very well known in the field of information networks. ... A key strength of Adamic is her ability to function in [a] multidisciplinary environment."

Reviewer J: "I consider Professor Adamic to be a top rate researcher with several outstanding contributions to the field of social and information networks, and I believe that her research activity is having an impact in diverse scientific areas including physics, social science and computer science. Professor Adamic's research portfolio is outstanding and some of her papers have contributed in the making of the modern era of network science."

Reviewer K: "I consider Lada to be one of the leading researchers in the field of network science and a pioneer in the use of the Web to do interesting social and information science. She is broad in her research interests; original in her choice of problems; creative in her use of data; and sophisticated in her methodology—a winning (and rare) combination of talents and attribute."

<u>Internal Review:</u> The promotion and tenure subcommittee that produced Professor Adamic's casebook described her as an active and highly visible researcher and a conscientious and effective teacher, and they unanimously recommended her promotion. The full promotion and tenure committee of the School, consisting of all governing faculty at or above the rank of associate professor, also voted unanimously for promotion.

Summary of Recommendation: Professor Adamic teaches required and elective courses that are central to our educational mission. Her research in social networks and related topics is at the heart of our research mission "to bring together people, information and technology in more valuable ways." She already does a significant amount of valuable professional service. It is with the unanimous support of the promotion and tenure committee of the School of Information that I enthusiastically recommend that she be promoted to associate professor of information, with tenure, School of Information.

Martha E. Pollack

Dean, School of Information

David C. Munson, Jr.

Robert J. Vlasic Dean of Engineering

Davide Munon of

College of Engineering