Approved by the Regents
May 20, 2021

PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF LEARNING HEALTH SCIENCES
SCHOOL OF INFORMATION

Vinod V. Vydiswaran, Ph.D., assistant professor of learning health sciences, Department of Learning Health Sciences, Medical School, and assistant professor of information, School of Information, is recommended for promotion to associate professor of learning health sciences, with tenure, Department of Learning Health Sciences, Medical School, and associate professor of information, without tenure, School of Information.

Academic Degrees:

Ph.D.	2012	University of Illinois, Urbana-Champaign
M.Tech.	2004	Indian Institute of Technology
B.E.	2002	University of Pune, India

Professional Record:

2015-present	Assistant Professor of Learning Health Sciences, University of Michigan
2015-present	Assistant Professor of Information, University of Michigan
2014-2015	Research Investigator of Information, University of Michigan
2011	Research Assistant, Intelligent Systems Laboratory, Palo Alto,
2004-2007	California Research Engineer, Yahoo! Research and Development Center, Bangalore, India

Summary of Evaluation

Teaching: Dr. Vydiswaran's teaching and mentoring activities are extensive and noteworthy. Since his appointment in the Department of Learning Health Sciences (DLHS) in September 2015, Dr. Vydiswaran has taught four courses in the DLHS Health Infrastructures and Learning Systems masters and Ph.D. program, and two courses in the School of Information. To date, 349 students have enrolled in these courses for a total of 645 credit hours of instruction by Dr. Vydiswaran. He also collaborated with three other faculty colleagues to develop and offer a five-course data science specialization on Applied Data Science with Python as a Massively Open Online Course (MOOC) on Coursera. In September 2017, he received the Most Popular New Specialization Award at the annual Coursera conference and in 2018, he along with his fellow instructors, received the Outstanding Educator Award for Innovation at the Coursera conference. Also in 2018, Dr. Vydiswaran received the Basic Sciences Teaching Award, awarded by the Endowment for the Basic Sciences at the Medical School. His mentorship of students at all levels is outstanding, with current and past mentees of three post-doctoral research fellows, 24 graduate students, including six doctoral students (serving for five as chair of their dissertation committee), and 14 undergraduate students.

Research: Dr. Vydiswaran's research focuses on transforming unstructured narrative health data into actionable knowledge while addressing critical issues of context, scale, and information quality. He has been very successful in securing funding for his research, including federal, foundation and industry sources. He is currently a multiple principal investigator on three

externally-funded grants and co-investigator on five others. Dr. Vydiswaran has two NIH and one Robert Wood Johnson Foundation grants under review in which he will serve as one of two multiple principal investigators on each proposal. To support his research, Dr. Vydiswaran leads the *NLP4Health* research group, consisting of post-doctoral researchers, doctoral, graduate, and undergraduate students, and research staff trained in computer science, information science, linguistics, and machine learning. The members of the group come from a diverse mix of gender, nationality, and traditionally under-represented communities. Dr. Vydiswaran has published 47 peer-reviewed articles, and has been invited to present his research on 20 occasions regionally, nationally, and internationally.

Recent and Significant Publications:

Vydiswaran VGV, Romero DM, Zhao X, Yu D, Gomez-Lopez I, Lu JX, Iott B, Baylin A, Jansen EC, Clarke P, Berrocal VJ, Goodspeed R, Veinot T: Uncovering the relationship between food-related discussion on Twitter and neighborhood characteristics. *J Am Med Inform Assoc* 27(2):254–264, 2020.

Vydiswaran VGV, Strayhorn A, Zhao X, Robinson P, Agarwal M, Bagazinski E, Essiet M, Iott BE, Joo H, Ko P, Lee D, Lu JX, Liu J, Murali A, Sasagawa K, Wang T, Yuan N: Hybrid bag of approaches to characterize selection criteria for cohort identification. *J Am Med Inform Assoc* 26(11):1172–1180, 2019.

Zhao X, Yu D, Vydiswaran VGV: Identifying adverse drug events mentions in tweets using attentive, collocated, and aggregated medical representation. In *Proceedings of the Fourth Social Media Mining for Health Applications (#SMM4H) Workshop & Shared Task 4*, pp. 62–70, 2019. DOI: 10.18653/v1/W19-3209

Vydiswaran VGV, Reddy M: Identifying peer experts in online health forums. *BMC Med Inform Decis Mak* Apr:19(Suppl 3):68, 2019.

Guetterman T, Chang T, DeJonckheere M, Basu T, Scruggs E, Vydiswaran VGV: Augmenting qualitative text analysis with natural language processing: methodological study. *J Med Internet Res* 20(6):e231, 2018.

Service: Dr. Vydiswaran has a strong record of service contributions to the biomedical informatics field, serving on editorial boards and program committees as well as reviewing manuscripts for some of the field's top conferences and journals. He currently serves as a member of the editorial board and as review editor for the *Journal of the Association for Information Science and Technology* and as a member of the editorial board for the *Journal of the American Medical Informatics Association*. Additionally, he presently serves on the Program Committee and reviewer for the Institute of Electrical and Electronics Engineers International Conference on Healthcare Informatics and the American Medical Informatics Association Annual Symposium. He will serve as a senior member of the Program Committee for the Association for Computing Machinery India Joint International Conference on Data Science and Management of Data meeting in 2021.

External Reviewers:

Reviewer A: "…Dr. Vydiswaran's research is outstanding - in terms of quality and focus (making useful contributions in different aspects of his research areas), quantity, (highly impressive; demonstrating continued work each year in terms of writing/publications, working on and securing large grants, and collaborating in teams), and scholarly impact. As of September 2020, Dr. Vydiswaran's research has been cited 977 times as per Google Scholar."

Reviewer B: "Overall, I can state that Dr. Vydiswaran is a rising academic leader in biomedical informatics and is highly worthy of being promoted to Associate Professor with Tenure at your institution. He has already produced a strong body of academic work, and I am very confident that he will continue to make important research and educational contributions to medicine going forward."

Reviewer C: "An examination of Dr. Vydiswaran's publication profile indicates a clear track record of independent research achievements in the areas of text mining for biomedicine and healthcare…For over half the papers published, he is first or principal contributor. This is a clear indication of his solid research productivity as a PI."

Reviewer D: "Beyond the scholarly advances associated with NLP, information retrieval, and machine learning applications in healthcare, Vinod has been successful in attracting significant research grants. Although by themselves they do not directly represent scholarly advance, the grants are key recognitions of the originality, utility, and the potential healthcare impact of his work."

Reviewer E: "Vinod has been successful with external research funding from federal agencies and other organizations, has been granted patients for his early work, serves on editorial boards of field journals, and is contributing actively to journal and conference paper reviewing and service on national and international conference/workshop program committees. Vinod is thus visible in the healthcare informatics community, where he is able to straddle the two fields of healthcare informatics and computer science with his multi-disciplinary research."

Reviewer F: "Biomedical informatics is a challenging area to pursue and maintain a thriving research program…Given this setting, Dr. Vydiswaran has maintained a rigorous research program. He draws upon his expertise in computer science to both develops [sic] models and answer critical research questions in the clinical informatics and consumer health informatics areas. He has maintained his core research expertise while also building his collaborative portfolio. This is evident from the funding he has obtained from various sources."

Reviewer G: "In summary, it is evident that Dr. Vydiswaran has built a highly successful academic career on a foundation of outstanding institutional credentials. Over the course of his career to date, he has excelled in all mission areas, serving as a rare triple threat and role model for trainees and faculty alike."

Summary of Recommendation:
Dr. Vydiswaran has distinguished himself as a leading scholar and researcher in the field of biomedical informatics. He has been highly productive in the areas of research, teaching, service and presentation of his work. I am pleased to recommend V.G. Vinod Vydiswaran, Ph.D. for promotion to associate professor of learning health sciences, with tenure, Department of Learning Health Sciences, Medical School, and associate professor of information, without tenure, School of Information.

Marschall S. Runge, M.D., Ph.D.
Executive Vice President for Medical Affairs
Dean, Medical School

Thomas A Finholt
Dean, School of Information

May 2021