Approved by the Regents May 15, 2014

PROMOTION RECOMMENDATION
University of Michigan
College of Engineering
Department of Civil and Environmental Engineering
Department of Electrical Engineering and Computer Science

Jerome P. Lynch, associate professor of civil and environmental engineering, with tenure, Department of Civil and Environmental Engineering, and associate professor of electrical engineering and computer science, without tenure, Department of Electrical Engineering and Computer Science, College of Engineering, is recommended for promotion to professor of civil and environmental engineering, with tenure, Department of Civil and Environmental Engineering, and professor of electrical engineering and computer science, without tenure, Department of Electrical Engineering and Computer Science, College of Engineering.

Academic Degrees:

M.S.	2003	Stanford University, Electrical Engineering, Stanford, CA
Ph.D.	2002	Stanford University, Civil and Environmental Engineering, Stanford, CA
M.S.	1998	Stanford University, Civil and Environmental Engineering, Stanford, CA
B.E.	1997	The Cooper Union for the Advancement of Science and Art, Civil and Environmental Engineering, New York, NY

Professional Record:

2009–present	Associate Professor (with tenure), Department of Civil and Environmental Engineering, University of Michigan
2009–present	Associate Professor (without tenure), Department of Electrical Engineering and Computer Science, University of Michigan
2003–2009	Assistant Professor, Department of Civil and Environmental Engineering, University of Michigan
2003–2009	Assistant Professor, Department of Electrical Engineering and Computer Science, University of Michigan

Summary of Evaluation:

Teaching: Professor Lynch has taught six courses since joining the Department of Civil and Environmental Engineering (CEE) faculty, a combination of introductory and advanced courses, with small and large enrollments. He has consistently received very high course evaluations. In fact, Professor Lynch's Q1/Q2 averages 4.64 and 4.86 overall, and 4.73 and 4.88 while in his current rank, some of the highest teaching evaluation scores among the CEE faculty. Professor Lynch is also an outstanding mentor. He has graduated six Ph.D. and eight M.S. students. Five of his former Ph.D. students are faculty members and one is the CEO of a startup company. Professor Lynch is currently mentoring eight Ph.D. students and one M.S. student. His graduate students consider him a model of an ideal teacher and someone who cultivates an enhanced learning experience. His former graduate students credit him for success in their current careers. For Professor Lynch's outstanding teaching, has been recognized with the American Society of Civil Engineers (ASCE) University of Michigan Student Chapter Professor of the Year Award in 2005, 2009, and 2010, the College of Engineering's (CoE) *1938E* Award in 2008 (while an assistant professor), and the CoE John F. Ullrich Education Excellence Award in 2013.

Research: Professor Lynch is an expert in smart civil infrastructure systems. Since receiving tenure in 2009, he has developed a world-renowned research program on intelligent monitoring systems, novel sensors, and enhanced system identification techniques. Professor Lynch's extraordinary research quality places him at the very top among researchers in related fields of research, nationally and internationally. He has been recognized as the leader and pioneer of intelligent structural health monitoring systems in his department. Professor Lynch has been a prolific author of refereed journal papers, with over 50 published or accepted for publication, in addition to 193 refereed or symposium proceeding papers. His papers are in high impact journals, and are highly cited. Four of his papers, co-authored with his graduate students, have won Best Paper Awards. Professor Lynch has also been highly active in technology transfer, with two awarded and one provisional U.S. patents and seven submitted invention disclosures. Professor Lynch co-founded and serves as the executive vice-president of a startup company called Civionics. To support his research program, Professor Lynch has raised over $4.8 million (counting only his share). Further evidence of the impact of his work is evidenced by the large number of invited keynote lectures at major national and international conferences, and invited seminars at top universities worldwide.

Recent and Significant Publications:

Lynch, J. P. and Loh, K. J. (2006), "A summary review of wireless sensors and sensor networks for structural health monitoring," *Shock and Vibration Digest*, 38(2): 91-130.

Lynch, J. P., Sundararajan, A., Law, K., Kiremidjian, A. and Carryer, E. (2004), "Embedding damage detection algorithms in a wireless sensing unit for operational power efficiency," *Smart Materials and Structures*, 13(4): 800

Lynch, J. P. (2007), "An overview of wireless structural health monitoring for civil structures," *Philosophical Transactions of the Royal Society A*, 365(1851): 345-372.

Loh, K. J., Kim, J., Lynch, J. P., Kam, N. W. S. and Kotov, N. (2007), "Multifunctional layer-by-layer carbon nanotube–polyelectrolyte thin films for strain and corrosion sensing," *Smart Materials and Structures*, 16(2): 429.

Lynch, J. P., Wang, Y., Loh, K. J., Yi, J. H., and Yun, C. B. (2006), "Performance monitoring of the Geumdang Bridge using a dense network of high-resolution wireless sensors," *Smart Materials and Structures*, 15(6): 1561.

Service: Professor Lynch has demonstrated exemplary performance in service. Externally, he has been sought out for leadership and service roles nationally and internationally through a variety of organizations serving the intelligent infrastructure field. As example, he has served as secretary and since 2010, as the president of the Executive Committee of the U.S. Panel of the International Association on Structural Control and Monitoring. In addition, he has served as the editor-in-chief of the journal *Earthquake and Structures* since 2009 and is on the editorial boards of six other journals. Professor Lynch's internal service record is equally impressive at the university, the college, and the department levels. In addition to a most extraordinary list of service commitments, he provides formal and informal mentoring to our junior faculty and graduate students, and reaches out to our student organizations in various ways. Professor Lynch has shown unusual dedication and creativity in all levels of service.

External Reviewers:
Reviewer A: "I have examined the document that…describes his activities…I found this document very impressive. In fact I do not recall that I have ever seen a case that was supported by stronger documentation. In my view Dr. Lynch's promotion should be a foregone conclusion."

Reviewer B: "Dr. Lynch is a gifted scholar and researcher with a very broad research portfolio. His research requires a deep understanding of electrical engineering, computer science, materials science, systems engineering, and civil engineering…there are so few people doing work that is as broad and interdisciplinary as him…he is clearly the best."

Reviewer C: "When I consider all of the outstanding full professors that I interact with (both domestically and internationally), I believe that in almost all cases Jerry exceeded their research, education and service accomplishments…he will set a very high standard for those people that will be considered for your department's promotions in the future."

Reviewer D: "…Dr. Lynch exceeds the requirements for promotion to Full Professor at [my institution]. As dean, I would be thrilled to present such a case to the university-level review committee. Based on my experience…as department chair, Dr. Lynch would fly through promotion to Full Professor at [my institution]."

Reviewer E: "…I believe that Professor Jerry Lynch significantly exceeds the criteria for promotion to Full Professor at any university, including mine."

Reviewer F: "I personally consider Dr. Lynch to be the leading researcher internationally in the area of intelligent sensing..."

Reviewer G: "Among all the researchers in the same area, in terms of contributions and impact, he is in the position of the highest rank (above 2%)."

Reviewer H: "I consider Professor Lynch to be one of the world's leading researchers in the field of structural health monitoring in civil engineering…Importantly, his work demonstrates originality of thought and he has shown an ability to generate new ideas and approaches to solving some of the most intractable problems that have stumped many others in the field."

Reviewer I: "Dr. Lynch has made important contributions in three areas…intelligent monitoring systems, novel sensors, and enhanced system identification techniques. His impact in each of these areas, if evaluated separately, would exceed expectations for promotion. His combined impact is phenomenal…I would be hard pressed to name another person within the structural engineering community with as diverse a research portfolio."

Summary of Recommendation: Professor Lynch is a national and international leader in the field of smart civil infrastructure, particularly in intelligent monitoring systems, novel sensors, and enhanced system identification techniques. He is an outstanding teacher and mentor of undergraduate and graduate students. His service at the university and professionally is equally distinguished. Professor Lynch's research, teaching, and service accomplishments have been recognized with numerous honors. It is with the support of the College of Engineering Executive Committee that I recommend Jerome P. Lynch for promotion to professor of civil and environmental engineering, with tenure, Department of Civil and Environmental Engineering, and professor of electrical engineering and computer science, without tenure, Department of Electrical Engineering and Computer Science, College of Engineering.

David C. Munson Jr.

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

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