

**Approved by the
Regents
May 21, 2015**

PROMOTION RECOMMENDATION
The University of Michigan
College of Engineering
Department of Civil and Environmental Engineering

Vineet R. Kamat, associate professor of civil and environmental engineering, with tenure, Department of Civil and Environmental Engineering, College of Engineering, is recommended for promotion to professor of civil and environmental engineering, with tenure, Department of Civil and Environmental Engineering, College of Engineering.

Academic Degrees:

- Ph.D. 2003 Virginia Polytechnic Institute and State University, Civil Engineering, Blacksburg, VA
M.S. 2000 Virginia Polytechnic Institute and State University, Civil Engineering, Blacksburg, VA
B.S. 1998 Goa University, Civil Engineering, Taleigao, India

Professional Record:

- 2013 - present Chief Science Officer, Perception Analytics & Robotics LLC, Ann Arbor, MI
2009 - present Associate Professor (with tenure), Department of Civil and Environmental Engineering, University of Michigan
2003 - 2009 Assistant Professor, Department of Civil and Environmental Engineering, University of Michigan
2003 Adjunct Assistant Professor, Department of Civil and Environmental Engineering, University of Michigan

Summary of Evaluation:

Teaching: Professor Kamat is an outstanding teacher from whom students receive great inspiration and motivation. At the University of Michigan, Professor Kamat has amassed a strong teaching record having taught cutting-edge graduate courses and fundamental undergraduate courses. His teaching scores are representative of his effectiveness as an educator. Over the last five years in his current rank, his Q1/Q2 scores have averaged 4.50 and 4.61, respectively. Professor Kamat is also a caring mentor of students conducting research under his direction. He has graduated six Ph.D. students with three more in the pipeline. In addition to providing his Ph.D. advisees with every opportunity to excel in their education, he also exhibits a passion for engaging undergraduate students in research projects. The majority of undergraduate students he has mentored in his research have all gone on to pursue graduate degrees at the top-ten graduate programs in the field (including Michigan).

Research: Professor Kamat is an internationally recognized pioneer of the field of visualization and automation in construction engineering. Professor Kamat's success as a leading multi-disciplinary authority on the topic is due to his versatility to conduct both rigorous theoretical work while performing full-scale validation experimentation in the field. Evidence of the prominence that Professor Kamat has attained is his selection to receive the 2012 American Society of Civil Engineers Daniel W. Halpin Award for Scholarship in Construction; the highest award bestowed on members of the construction engineering discipline. In addition, he has received numerous Best Paper awards and was selected for the FAITECH Outstanding Early Career Researcher Award

(2010), the Outstanding Young Alumnus Award from the Myers-Lawson School of Construction at Virginia Polytechnic Institute and State University (2006), and the NSF CAREER award (2004). Professor Kamat is a highly productive scholar. He has over 50 journal articles in an impressive array of venues. In addition, he has amassed a robust level of funding with \$3.1 million dedicated exclusively to his research program. In addition to being an exemplary researcher, he embodies an entrepreneurial spirit that is evident from his role as founder and chief science officer of PeARL LLC, a University of Michigan high-tech spinout.

Recent and Significant Publications:

- Feng, C., Taguchi, Y. and Kamat, V.R., (2014), "Fast Plane Extraction in Organized Point Clouds using Agglomerative Hierarchical Clustering," *Proceedings of the 2014 IEEE International Conference on Robotics and Automation (ICRA 2014)*, IEEE, Piscataway, NJ.
- Behzadan A.H. and Kamat, V.R., (2013), "Enabling Discovery Based Learning in Construction Using Telepresent Augmented Reality," *Automation in Construction*, 33(2013), Elsevier Science, New York, NY, 3-10.
- Talmaki, S.A., Kamat, V.R. and Cai, H., (2013), "Geometric Modeling of Geospatial Data for Visualization-Assisted Excavation," *Advanced Engineering Informatics*, 27(2), Elsevier Science, New York, NY, 283-298.
- Dong, S., Feng, C. and Kamat, V.R., (2013), "Sensitivity Analysis of Augmented Reality-Assisted Building Damage Reconnaissance Using Virtual Prototyping," *Automation in Construction*, 33(2013), Elsevier Science, New York, NY, 24-36.
- Dong, S., Feng, C. and Kamat, V.R., (2013), "Real-Time Occlusion Handling for Dynamic Augmented Reality Using Geometric Sensing and Graphical Shading," *Journal of Computing in Civil Engineering*, 27(6), American Society of Civil Engineers, Reston, VA, 607-621.

Service: Professor Kamat has illustrated his leadership through an extensive record of service to the university and professional communities. He has left an indelible mark on the international construction engineering community by serving on the board of directors of the International Association for Automation and Robotics in Construction (IAARC), on the board of governors of the American Society of Civil Engineers (ASCE) Construction Institute (ASCE-CI) and as chair of the Executive Committee of the Construction Research Council. Within the university, Professor Kamat has been an enthusiastic member of a number of departmental committees, in addition to serving as the leader of the Construction Engineering and Management group in the department. In particular, his active role in the establishment of the endowed Tishman Construction Management Program, the UM Construction Industry Alliance Program (UMCAIP), and the recruitment of the field's youngest stars as faculty members has completely reinvigorated the Construction Engineering and Management group and has propelled this group to a high level of international prominence.

External Reviewers:

Reviewer A: "He does high-quality research. The nature and scope of Dr. Kamat's research is creative and timely, encompassing the areas of automation, robotics, real-time monitoring, visualization and simulation. These areas have significant and recognizable impact on the academic and industrial sectors."

Reviewer B: "Dr Kamat is clearly ahead of most professors in civil engineering at this stage of his career. He has emerged at an early age as one of the leaders in the field of construction engineering and management in the US. His array of awards, which are well deserved, support that assessment. Overall, Dr Kamat is a true scholar with a broad and solid set of accomplishments."

Reviewer C: "In short, Dr. Kamat's ability to bring advanced computing hardware and software technologies to develop practical solutions to civil and construction engineering is truly unique among researchers in this field."

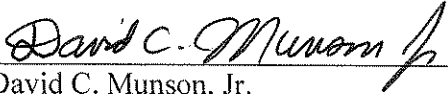
Reviewer D: "This proven track record of research quality and productivity highlights his capabilities and strongly indicates that he will continue to be the leader in his field of research. His research work focuses on important and timely areas in civil engineering and construction that are in urgent need for in-depth research in the next decades."

Reviewer E: "Vineet has also been exemplary in engaging undergraduate students in research. Vineet has supervised over 15 undergraduate students in active research during his career, and all of them appear to have remained engaged in engineering, which is a confirmation of Vineet's love for and dedication to the field and the way it affects everyone who has the chance to work with him."

Reviewer F: "Dr. Kamat has demonstrated the utmost integrity in his service as a *JCCE* associate editor. This is a quality that I value highly. As noted earlier, he was the most valued editor during our joint time together with the *JCCE*."

Reviewer G: "The research done by Dr. Kamat has been outstanding. He has demonstrated the ability to identify relevant problems and work closely with his research team to address the problem appropriately to generate high quality publications. Over the years he had built a solid reputation for innovative solution approaches and high-impact publications."

Summary of Recommendation: Professor Kamat is a prominent international leader of the civil and environmental engineering field who has made significant intellectual contributions to the study of visualization and automation technologies applied to construction engineering. He is a charismatic educator who has a distinguished record of motivating and promoting the aspirations of his students. His service record is outstanding with Professor Kamat playing key leadership roles in the international construction engineering research community. It is with the support of the College of Engineering Executive Committee that I recommend Vineet R. Kamat for promotion to professor of civil and environmental engineering, with tenure, Department of Civil and Environmental Engineering, College of Engineering.


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

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