Approved by the Regents
May 21, 2020

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

Odest Chadwicke Jenkins, associate professor of electrical engineering and computer science, with tenure, Department of Electrical Engineering and Computer Science, College of Engineering, is recommended for promotion to professor of electrical engineering and computer science, with tenure, Department of Electrical Engineering and Computer Science, College of Engineering.

Academic Degrees:

Ph.D.	2003	University of Southern California, Computer Science, Los Angeles, CA
M.S.	1998	Georgia Institute of Technology, Computer Science, Atlanta, GA
B.S.	1996	Alma College, Computer Science and Mathematics, Alma, MI

Professional Record:

2015 – Present	Associate Professor (with tenure), Department of Electrical Engineering and Computer Science, University of Michigan
2012 – 2013	Visiting Research Scientist, Willow Garage, Inc., Menlo Park, CA
2010 – 2015	Associate Professor, Department of Computer Science, Brown University, Providence, RI
2004 – 2010	Assistant Professor, Department of Computer Science, Brown University, Providence, RI
2003 – 2004	Post-doctoral Researcher, Robotics Research Lab, Computer Science Department, University of Southern California, Los Angeles, CA

Summary of Evaluation:

Teaching: Professor Jenkins has taught both undergraduate and graduate Robotics courses, including significant development of an undergraduate and graduate course as an accessible entry point to students with little experience in robotics. He has integrated a strong "growth mindset" approach in his courses, an important element of a strong classroom climate. Students are uniformly positive in their evaluation of his classroom instruction, describing an enthusiastic instructor committed to the success of each student. Students were similarly impressed with his performance as a research mentor. Professor Jenkins currently supervises seven Ph.D. students (including three who are expected to defend in 2020). He has graduated one Ph.D. at Michigan and guided three to completion at Brown.

Research: Professor Jenkins' research program while at Michigan has been centered on the manipulation of objects by robots: sensing via camera, frameworks to represent intentions by lay users, and agent reasoning to meet those intentions given the visual input at hand. This work spans theoretical foundations through to practical implementations—an approach with inherent risk that not many are willing to take. The work is lauded as being highly impactful, providing important building blocks for others. This includes a framework to mathematically represent the human in human-robot interaction research. As further evidence of his impact, he and his

research group have developed a number of open-source packages for the Robot Operating System (ROS). External reviewers cite his ability to span theory and practice, and link the main areas of core robotics research of sensing, perception, and action. He is frequently cited as a recognized leader in his field. His achievements were recognized by his selection as fellow of the American Association for the Advancement of Science (AAAS).

Recent and Significant Publications:

O. C. Jenkins, M. J. Matarić, "A Spatio-Temporal Extension to Isomap Nonlinear Dimension Reduction," *Intl. Conference on Machine Learning (ICML '04)*, 441-448, 2004.

D. H. Grollman, O. C. Jenkins, "Incremental Learning of Subtasks from Unsegmented Demonstration," *IEEE/RSJ Intl. Conference on Intelligent Robots and Systems (IROS '10)*, 261-266, 2010.

M. Vondrak, L. Sigal, O. Jenkins, "Physical Simulation for Probabilistic Motion Tracking," *IEEE Conference on Computer Vision and Pattern Recognition (CVPR '08)*, 1-8, 2008.

Z. Zeng, Z. Zhou, Z. Sui, O. C. Jenkins, "Semantic Robot Programming for Goal-Directed Manipulation in Cluttered Scenes," *IEEE International Conference on Robotics and Automation (ICRA '17)*, 8 pages, 2018.

K. Desingh, S. Lu, A. Opipari, O. C. Jenkins, "Estimation of Articulated Objects Using Efficient Nonparametric Belief Propagation," *International Conference on Robotics and Automation (ICRA '19)*, 9 pages, 2019.

Service: Professor Jenkins has been an exemplary citizen of the university and of his broader scholarly community and has been particularly dedicated and accomplished at mentoring and attracting students from under-represented groups. He has served on a number of high-profile program committees in the most respected publication venues in his area. This includes serving as a program chair for the ACM/IEEE Human-Robot Interaction Conference. He also established the first journal in robotics sponsored by ACM, and currently serves as its editor-in-chief. Professor Jenkins has a particular focus on bridging the robotics and AI communities. He serves on the boards of a number of national and international research organizations. His efforts at broadening participation in computing are without peer. He participates in this both formally—attending NSBE, Tapia, and the GEM Grad Lab—and informally, by hosting weekly "minori-teas" with students involved or interested in CSE.

External Reviewers:

Reviewer A: "I am most impressed by his multi-disciplinary knowledge and deep breadth in robotics … coupled with a great ability to see the big picture and map a fruitful path to reach that outcome."

Reviewer B: "His work is an important part of the emerging sub-field of AI for HRI [human-robot interaction]."

Reviewer C: "I would say that Dr. Chad Jenkins has had a sustained record of leadership in research, teaching, and service…. I would say that Dr. Chad Jenkins appears to be a first rate member of the community. Dr. Jenkins would be a viable candidate for promotion at my own institution."

Reviewer D: "Chad's research program over the years has comprised a coherent and systematic development of theory, algorithms, and implementations for the application of machine learning to the broad field of robotics … Much of this work has been pioneering…"

Reviewer E: "I have been continually impressed with Prof. Jenkins' rigor, productivity, and creativity."

Reviewer F: "I consider Chad to be the best human-robot interaction scholar, with a tremendous well-recognized impact, contributions, and service in the field of HRI."

Summary of Recommendation: Professor Jenkins is an established leader in the robotics field. His advisement of graduate and undergraduate students is commendable. His service contributions are outstanding. It is with the support of the College of Engineering Executive Committee that I recommend Odest Chadwicke Jenkins for promotion to professor of electrical engineering and computer science, with tenure, Department of Electrical Engineering and Computer Science, College of Engineering.

Alec Gallimore

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Alec D. Gallimore, Ph.D.
Robert J. Vlasic Dean of Engineering
College of Engineering

May 2020