Approved by the Regents
May 17, 2018

PROMOTION RECOMMENDATION
The University of Michigan-Dearborn
College of Engineering and Computer Science

Luis E. Ortiz, assistant professor of computer and information science, Department of Computer and Information Science, College of Engineering and Computer Science, is recommended for promotion to associate professor of computer and information science, with tenure, College of Engineering and Computer Science.

Academic Degrees:

Ph.D. 2002	Computer Science, Brown University, Providence, RI
M.Sc. 1998	Computer Science, Brown University, Providence, RI
B.S. 1995	Computer Science, University of Minnesota, Twin Cities, Minneapolis, MN

Professional Record:

2015 – present	Assistant Professor, University of Michigan-Dearborn
2008 – 2015	Assistant Professor, Stony Brook University, Stony Brook, NY
2007 – 2008	Assistant Professor, University of Puerto Rico-Mayagüez, San Juan, Puerto Rico
2004 – 2006	Post-doctoral Lecturer, Massachusetts Institute of Technology, Cambridge, MA
2002 – 2004	Post-doctoral Researcher, University of Pennsylvania, Philadelphia, PA
2001 – 2001	Consultant, AT&T Laboratories-Research, Florham Park, NJ

Summary of Evaluation:
Teaching: Professor Luis Ortiz is rated excellent in teaching. He is an excellent educator with a very good record in various areas of education, including classroom instruction, course development, and student advising. Since joining UM-Dearborn in September 2015, he has taught three different lecture courses and one lab course, two of which were new courses developed by him. He received very good student evaluations that placed him in the top tier of the department. The students praised him in various aspects of his teaching, including knowledge of subject, passion of teaching, adaptability to conditions, and personal interaction outside classes. He has also contributed to the new multi-disciplinary M.S. in data science program through his committee membership. In addition, he is an excellent graduate advisor who knows how to motivate and bring up quality students. He has served as the advisor/co-advisor for three Ph.D. students and two M.S. students after joining UM-Dearborn. A total of six Ph.D. students graduated under his supervision as advisor/co-advisor at his previous institutions. Some of his previous Ph.D. graduates now hold faculty positions at very good universities such as Purdue, Bowdoin, and Colorado.

Research: Professor Luis Ortiz is rated significantly capable in research. His primary research interests include artificial intelligence, machine learning, computational game theory and economics, graphical models, computational probability and statistics, computational biology, computational finance, and applications to complex systems. He has a very good publication record in the most competitive journals and conferences of his areas. His funding record is very impressive. Most notably, he is the recipient of an NSF CAREER award, which is the most prestigious grant for early-career faculty. He has also secured a competitive grant from the MIDAS Big Challenge Competition with colleagues at UM-AA after joining UM-Dearborn. He is well recognized for his high-quality

research achievements and contributions by peers in his areas. He was invited to give approximately 40 talks in various venues.

Recent and Significant Publications:

Ortiz, Luis E. RESEARCH NOTE: On Sparse Discretization for Graphical Games. *Journal of Artificial Intelligence Research (JAIR)*, Accepted.

Chan, Hau, Ceyko, Michael, Ortiz, Luis. Interdependent Defense Games with Applications to Internet Security at the Level of Autonomous Systems. *Games*, 8(1), 13, 2017.

Ortiz, Luis E., Irfan, Mohammad T. Tractable Algorithms for Approximate Nash Equilibria in Graphical Games with Tree Structure. In *Proceedings of the Thirty-First AAAI Conference on Artificial Intelligence (AAAI-17)*, February 4-9, 2017, San Francisco, CA, USA.

Honorio, Jean, Ortiz, Luis. Learning the Structure and Parameters of Large-Population Graphical Games from Behavioral Data. *Journal of Machine Learning Research (JMLR)*, 16(Jun):1157-1210, 2015.

Yamaguchi, Kota, Kiapour, M. Hadi, Ortiz, Luis E., Berg, Tamara L. Retrieving Similar Styles to Parse Clothing. *Pattern Analysis and Machine Intelligence (TPAMI), IEEE Transactions on*, Vol. 37, no. 5, pp. 1028-1040, May 2015.

Service: Professor Ortiz is rated excellent in service. He has made excellent service contributions to the UM-Dearborn community through serving on various committees at all levels. In particular, he served on the Provost Faculty Advisory Group and several curriculum committees (including undergraduate and graduate data science program committees, CIS undergraduate committee, and CIS ABET and assessment committee), co-organized students/faculty social events, and gave an invited presentation to share his experience with proposals for the prestigious NSF CAREER Program. He has also been very active in the professional community by serving as a panelist for multiple NSF review panels, an action editor for a top journal (*Journal of Machine Learning Research*) in his field, and a program committee member for a number of conferences. He received the "AAAI-17 Outstanding Program Committee Member Award" for his exemplary service to this flagship conference.

External Reviewers:

Reviewer A: "I myself am mostly familiar with his work on computational game theory, since that is a topic on which I also work. Dr. Ortiz has been working on this topic for a long time, going back to his 2002 NIPS paper with Michael Kearns on Nash propagation… This was cutting-edge work at the time and by now this is a well-cited paper with 68 citations (according to Google Scholar)… Within the broader field of artificial intelligence, Dr. Ortiz forms an important bridge between researchers working on topics in machine learning and reasoning under uncertainty, and researchers working on computational game theory. He consistently publishes in top venues for the multiple communities in which he works."

Reviewer B: "Overall, Professor Ortiz has built a significant record of publications in top-tier conferences such as NIPS and AAAI, which also happen to be highly competitive accepting just 1 in 4 papers or less. This shows that he deeply understands the method and rigor of scientific investigations, as is required of him… This leads me to his most significant scholarly contribution, which pertains to strategic behavior in influence networks… I view this model as important for network science, and will be adopted for various analyses by other researchers and practitioners as Professor Ortiz continues to demonstrate its applicability."

Reviewer C: "His research developments concern both theoretical contributions with a foundational character as well as operational technical solutions to practical problems in different applications areas… The results obtained so far by Dr. Luis E. Ortiz, are very good in terms of both quality and quantity with respect to his level of experience. His publication track record is of an excellent quality and covers major top ranked (A*, A) venues in AI (*Artificial Intelligence Journal*, JAIR, AAAI, NIPS, …), Machine Learning (*Journal of Machine Learning*) and Computers graphics (IEEE PAMI, CPVR)… He is regularly invited to serve in PC of major conferences (AAAI, AAMAS, UAI, ICML) and editorial board journals (JMLR) in AI."

Reviewer D: "Dr. Ortiz is a leading, well-recognized researcher in the areas of artificial intelligence and machine learning, and especially as they apply to questions in game theory, political science and economics… The quality, quantity, focus and scholarly impact of his technical papers is good. To my count, Dr. Ortiz has published more than 30 papers in the very best conferences and journals in our field… This work on influence models, learning from behavioral data, and computational game theory, illustrates the strengths of Dr. Ortiz. This breadth of expertise coupled with the creativity to ask interesting, applied questions about voting power in political voting networks, is what sets Dr. Ortiz apart as a researcher. The result is convincing, well-reasoned scholarship, with core computational contributions, and attention to important, challenging applications in data science including large-scale learning from behavioral data."

Reviewer E: "I envy Professor Ortiz's mathematical sophistication. During the past two years, he exhibited that sophistication by solving a 15-year old open problem involving the computation of single approximate mixed-strategy Nash equilibria on a tree graphical game (Tractable Algorithms for Approximate Nash Equilibria in Generalized Graphical Games with Tree Structure, with Irfan). His approach opens the door to inference in systems much larger than possible before."

Summary of Recommendation:
Professor Ortiz is a dedicated, passionate and conscientious researcher and educator, whose academic achievements are of excellent quality. We are pleased to recommend, with strong support of the College of Engineering and Computer Science Executive Committee, Luis E. Ortiz for promotion to associate professor, with tenure, Department of Computer and Information Science, College of Engineering and Computer Science.

Anthony W. England, Dean
College of Engineering and Computer Science

Daniel Little, Chancellor
University of Michigan-Dearborn

May 2018