Candidate for Member-at-Large
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Lydia Tapia
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BIOGRAPHY

Lydia Tapia earned the Bachelor of Science degree in Computer Science from Tulane University in 1998 and the Ph.D. in Computer Science from Texas A&M University in 2009. Her dissertation was Intelligent Motion Planning and Analysis with Roadmap Methods for the Study of Complex and High-Dimensional Motions. After holding a Computing Innovation Postdoctoral Fellowship at the University of Texas at Austin, she joined the University of New Mexico, where she is a Professor of Computer Science and previously served as Department Chair. In those roles, she led significant faculty growth, hiring 25 percent of the faculty, secured departmental accreditation, and mentored over 30 research trainees. She also served as Faculty in Residence at Google, working in robotics and engineering education.

Her research applies machine learning to problems in robotics, games, and computational biology, where systems must reason about complex movements and decisions. She has authored or coauthored more than 65 peer-reviewed papers and holds a U.S. patent. Her work has been recognized with a National Science Foundation CAREER Award, the Borg Early Career Award from the Computing Research Association, and a Best Paper Award. She helped found an ACM-W chapter as a graduate student and has since been active in ACM conferences, including SIGBIO- and SIGGRAPH-affiliated venues. She has a long record of professional service, including elected service on the Computing Research Association Board, leadership of graduate mentoring initiatives, editorial roles for major robotics journals and conferences, and organization of the international Becoming a Robot Guru undergraduate workshop series introducing students to graduate study in robotics and strategies for success.

STATEMENT

My professional experience as a teacher, researcher, administrator, and national service leader has been shaped by periods of rapid change in education and technology. Educators are at the front lines, advances in artificial intelligence (AI) are currently reshaping expectations for graduates, faculty workloads, and the structure of computing programs. These shifts now directly affect employability: students are expected to graduate with both strong foundational knowledge and practical fluency in AI-based tools and workflows. Departments and instructors are being asked to deliver this preparation while maintaining rigor, fairness, and long-term educational value.

As a Member at Large of the Association for Computing Machinery, my goal would be to help ACM address the education-workforce transition in a clear and practical way. ACM is well positioned as both a leader in open access research and a hub for professional development. I believe ACM can provide leadership on how AI should be integrated into computing education, supporting both undergraduate and graduate programs as well as retraining and continuing education for current professionals, without narrowing learning to short-term tool adoption. My focus would be on advancing evidence-based curricular guidance, clarifying professional expectations in an AI-mediated workplace, and strengthening pathways from computing education to meaningful employment. I aim to help ACM remain a trusted voice that supports members at all career stages while preserving the core principles of computing as a discipline and profession.