The Charles W. Davidson College of Engineering
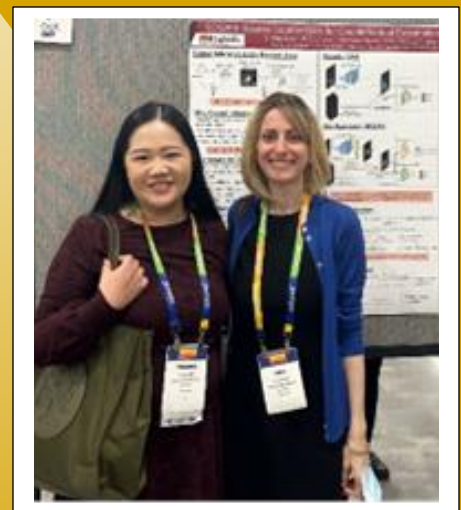
2024 Faculty Award for Excellence in Teaching

Dr. Ayca Erdogan

Dr. Ayca Erdogan is an Associate Professor and Graduate Program Director of MS ISE and MS ISE-Operational Analytics Programs at SJSU ISE department. She joined SJSU as an Assistant Professor in 2014. She received her PhD in Operations Research from North Carolina State University, and B.S. in Industrial Engineering from Istanbul Technical University, Turkey. Before joining SJSU ISE, she worked as a postdoctoral research associate at Stanford University Medical Center and visiting assistant professor at University of Southern California Viterbi School of Engineering.

Dr. Erdogan's research interests are applications of optimization, simulation and predictive modeling related to design and operations of complex systems under resource limitation. Specific project areas she worked on include healthcare operations with patient and provider scheduling optimization, healthcare facility location optimization, public health policy decision making, supply chain optimization of subscription-based business models, wildfire suppression, and political redistricting. During her postdoctoral work at Stanford, she worked on a collaborative project on building lung cancer progression and screening models which contributed to shape the US Preventative Services Task Force recommendation on lung cancer screening in the US. After joining SJSU, she continued her research efforts collaborating with SJSU faculty and students with funding from SJSU, IBM, and the Veterans Administration. This work resulted in numerous academic conference and journal publications. Several students she advised were awarded as Star Fellows and Davidson Scholars. More recently she has started working on analytics projects that involve "social good" problems, including foster care placement prediction and matching, and combatting modern slavery in supply chains.

Dr. Erdogan and Siqiong Zhou at the INFORMS conference, Phoenix, AZ October 2023

![ISE Industrial & Systems Engineering San Jose State University logo]

Dr. Ayca Erdogan, cont.

At the SJSU ISE department, she devotes most of her time serving students by teaching operations research, design of experiments, and analytics classes and by advising MS ISE students. Dr. Erdogan pioneered development of new analytics courses to enrich undergraduate and graduate curriculum in Big Data &Analytics. She also developed a new graduate program MS ISE-Operational Analytics which has recently been approved. She served in College of Engineering Research Committee, Graduate Studies Committee, Sabbatical Committee and co-chaired SJSU Senate Faculty Diversity Committee. She serves as a referee for many industrial engineering, operations research, disaster preparation & response, medical and bioinformatics journals. She has worked in organizing sessions in INFORMS, IISE, and Silicon Valley Women in Engineering Conferences.

Dr. Erdogan enjoys reading, baking, and playing board games with her family and friends.

Dr. Erdogan and officers of the IISE Student Club. ISE
Department Alumni Social, 2023