IEEE Women in Engineering

WIE

ALBUQUERQUE SECTION

IEEE

Assistive Robots for People with Impairments

MARIA KYRARINI, PH.D.

Assistant Professor

Wed, Sept 28

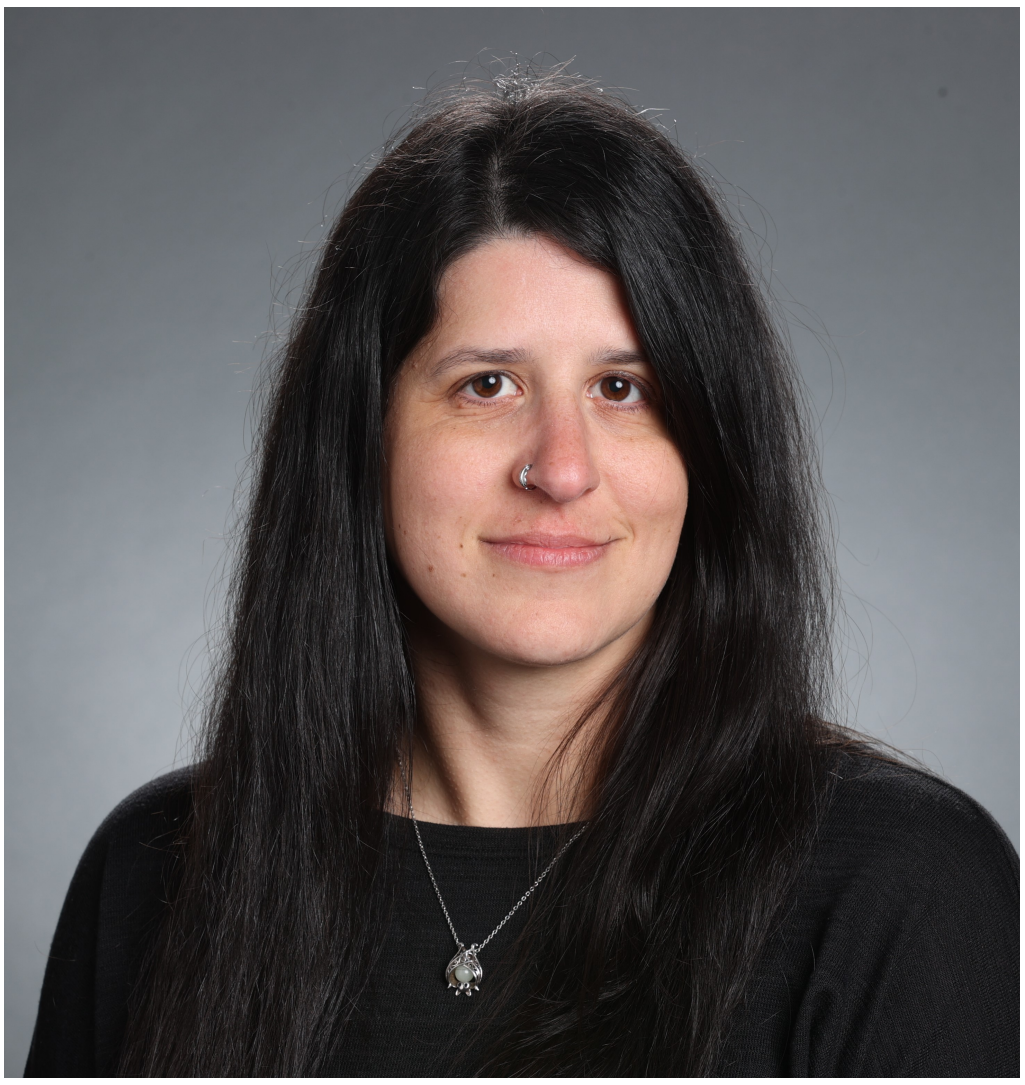
5:30PM (MT)

ZOOM VIRTUAL MEETING

Free and Open to the Public

Pre-registration required

https://unm.zoom.us/j/94348625338



Maria Kyrarini is an Assistant Professor in the Electrical and Computer Engineering Department at Santa Clara University (SCU). Prior to SCU, she was a postdoctoral research fellow at the University of Texas at Arlington under the advisement of Professor Dr. Fillia Makedon. She also served as the Assistant Director of the Heracleia Human-Centered Computing Lab. In 2019, Maria received her Ph.D. in Engineering from the University of Bremen under the supervision of Professor Dr.-Eng. Axel Gräser. The title of her Ph.D. thesis is: "Robot learning from human demonstrations for human-robot synergy". Before that, she received her M.Eng. degree in Electrical and Computer Engineering and her M.Sc. degree in Automation Systems both from the National Technical University of Athens (NTUA) in 2012 and 2014, respectively. Her primary research interests are in the fields of Robot Learning from Human Demonstrations, Human-Robot Interaction, and Assistive Robotics with a special focus on Enhancing Human Performance. She also leads the HMI2 research group which has been supported by federal (NSF) and SCU internal grants.

IEEE Albuquerque WIE Affinity Group
Chair: Aisha B Rahman
Advisor: Prof. Eirini Eleni Tsiropoulou

Abstract:

Assistive robotic manipulators have the potential to support individuals with impairments to regain some of their independence in performing Activities of Daily Living. For individuals with impairments, interaction with assistive robotic manipulators is a very challenging task. In this talk, I will present several interaction approaches to enable a person with impairments to collaborate with an assistive. The first approach focuses on enabling people with tetraplegia to teach the robot how to assist them with drinking. The second approach focuses on an autonomous multi-sensory robotic system, which assists with straw-less drinking. The third approach focuses on a walking robot that assists a patient with walking. Experimental results for the three approaches will be presented. Furthermore, I will conclude the talk with a brief discussion of future research challenges.

Albuquerque IEEE WIE Public Talk
Co-sponsored by the Albuquerque Section of the Institute of Electrical & Electronic Engineers (IEEE) and IEEE Women in Engineering (WIE)