Auburn graduate student and MRI Research Center assistant Dr. Martha Forloines has accepted a position at the University of California, Davis, and will be continuing her career in cognitive neuroscience research in the UC Davis Neuroscience of Cognitive Aging Program.

“I’ll be able to take my interest in navigation as well as my interest in aging, and how that changes across age.” With the Neuroscience of Cognitive Aging Program, Dr. Forloines will be conducting her own research under program junior mentor and spacial navigation expert Dr. Arne Ekstrom, and primary mentor and Alzheimer’s expert, distinguished Dr. Charles DeCarli. “Oddly enough, there’s not a ton of research on how navigation is affected through MCI and Alzheimers. There’s not really any research into what mechanisms are happening there.” Over the next two years, Dr. Forloines will be conducting structural analyses on anatomical images, in addition to new analysis techniques in the functional realm. “One of the new analysis techniques I’m going to be looking at is multi-voxel pattern analysis” This will involve comparing trials featuring “incorrect” answers, versus those with “correct” answers, and examining the participant differences. Neurological response versus behavioral patterns, and patterns of activation as they relate to errors in responses. As Martha put it, “Why are you doing that weird thing you’re doing?” With this research, she hopes to help develop improved diagnostic measures for conditions such as Alzheimer’s. “I feel like there’s so much we don’t know about something that affects everybody. Simple memory”

“Going to work with these guys is going to be amazing. I’m excited about it.”

After earning her bachelor’s degree in Psychology at Armstrong Atlantic State University in Savannah, and her master’s in Experimental Psychology at Georgia Southern University, Martha came to Auburn in 2012 to complete her doctorate in Cognitive and Behavioral Science. Since 2015, she’s worked as a research assistant and recruitment coordinator, doing everything from data collection to working with volunteers for MRI scanning.
With the MRI Research Center and her doctoral work, Dr. Forloines has focused on spacial navigation. “Navigation, how we get from A to B without getting utterly lost, and what tools we use to do so.” Utilizing the MRI Research Center’s 7T scanner, in the last few years, she’s worked with developing and implementing video games in volunteer trails consisting of undergraduate students and Center faculty, along with examining canines through Auburn University veterinary departments in comparative experiments.

Looking back on her time at Auburn, Dr. Forloines expressed her favorite memories were those of shared experiences at the MRI Research Center, “Sitting at the 7T with Nouha, and Meredith, and Tom, and Ron, and being able to learn so much from each person that I’ve interacted with at the center and being able to get involved in opportunities like scanning knees. I mean what psychologist gets to scan knees?” In particular, being able to learn from experts in fields that psychologists don’t typically interact with was very valuable exposure. “It forever changes the way you look at your own research”, she said.

When asked on how she feels about moving 2,000 miles across the country, Dr. Forloines replied, “It’s terrifying, right? It has to be.” Born in Texas and raised in Philadelphia, she’s known the east coast her whole life. Fortunately the journey won’t be alone, as Martha will have her partner and pets for the move too. “It’ll be great, it’ll be a really neat chapter.”

“The curiosity is what keeps me going. Like why? How? What is even happening here? There’s so much still to learn.” – Martha Forloines, Ph.D, Cognitive & Behavioral Science

Thank you for you hard work and dedication, and best wishes for the future, from all of us at the Auburn University MRI Research Center.

– Dylan Clark, Website Content Developer