Dr. Toler-Franklin is an Assistant Professor in the Computer & Information Science & Engineering Department at the University of Florida where she directs the Graphics, Imaging & Light Measurement Laboratory (GILMLab). Dr. Toler-Franklin earned a Ph.D. in Computer Science from Princeton University. She obtained a Master of Science degree from the Cornell University Program of Computer Graphics and a Bachelor of Architecture degree from Cornell University. Prior to joining the faculty at UF, Dr. Toler-Franklin was a University of California President's Postdoctoral Fellow in the Computer Science Department at UC Davis and a researcher at the CITRIS Banatao Institute at UC Berkeley. Dr. Toler-Franklin has considerable industry experience, having worked at Autodesk, Adobe and Google.

Dr. Toler-Franklin's research areas are Computer Graphics and Vision, focusing on 3D Data Acquisition, Physically-Based Appearance Modeling, Imaging Spectrometry, Machine Learning, Matching Algorithms and Non-Photorealistic Rendering. Dr. Toler-Franklin's algorithms have been deployed in real-world settings for practical applications in Bio-Diversity, Bio-Medical Research and Archaeology.

Her Ph.D. work focused on the acquisition and analysis of the shape and appearance of complex real-world objects. Her data acquisition pipeline and multi-feature matching system is used today by archaeologists at the Akrotiri Excavation Laboratory of Wall paintings in Santorini Greece to reconstruct the Theran Frescoes. Her work has fostered international collaborations with researchers in the fields of paleontology, archaeology, museum conservation and biological imaging. Dr. Toler-Franklin was awarded the 2013 NSF iDigBio Visiting Scholar Award to support her current projects developing new optical capture techniques and image processing algorithms to analyze biological specimens from rare collections at the American Museum of Natural History Vertebrate Paleontology and Mammalogy collections and the Duke University Lemur Center, Fossil Primates Division.

Dr. Toler-Franklin's MS thesis project leveraged new hardware technology to develop a software system for improving computer-assisted architectural design. Her MS thesis, A Computer-Based Approach to Teaching Architectural Drawing, was introduced into the classroom for undergraduates at Cornell and received the Shreve Award for excellence and originality. Her undergraduate thesis design project was An On-site Museum of Oral History, in Nassau, Bahamas. She was awarded The Eschweiler Prize for outstanding academic accomplishments.

After leaving Cornell, Dr. Toler-Franklin spent several years working in industry. As a Software Engineer on the 3D Graphics Team at Autodesk, in San Francisco, CA, she was responsible for implementing platform enhancements to the 3D Graphics System of AutoCAD. Dr. Toler-Franklin was awarded the Autodesk 2002 Software Developer Award for her contribution to AutoCAD 2002. While at Autodesk, Dr. Toler-Franklin had a unique opportunity to create and lead a pilot project between Autodesk and two international architecture firms, HOK and Gensler. She worked with executives within the architecture firms and Autodesk to encourage the adoption of new technologies and to improve software solutions for design industries.

In 2005, Dr. Toler-Franklin received the National Science Foundation (NSF) Graduate Research Fellowship to pursue her doctoral studies. She was also awarded the Presidential Fellowship, from Princeton University and a Merit Award from the Computer Science Department at Princeton. In 2011, Dr. Toler-Franklin became the first African American to receive a Ph.D. in computer science from Princeton University.

In collaboration with the UF Shands Medical Hospital and the Florida Museum of Natural History, the Toler-Franklin Lab at UF, GILMLab, is developing new optical imaging technology and analysis algorithms to improve the way we analyze biological specimens with complex shapes and materials. The goal is to improve diagnostics techniques in Bio-Medical Research.