The human body is capable of dexterous manipulation in many different environments. However, some environments are challenging to access because of distance, scale, and limitations of the body itself. In many of these situations, telerobots can effectively restore access. Dexterous manipulation through these telerobots can only occur when the operator receives sensory feedback of the telerobot's interactions in the environment. In this talk, I will discuss recent work from our lab on the application of haptic feedback in the context of telerobotics. I will begin with an overview of two different telerobotic applications, telesurgical robots, and upper-extremity prosthetic devices. I will then discuss lessons learned from our attempts at haptic interaction design for these applications in a manner applicable to researchers hoping to incorporate haptics into robotic, XR, and HCI applications.