In a single glance of a face, we know the person’s identity, their gender, their race, and even their emotional state. For most of us, these face perceptions are spontaneous, effortless and executed with little forethought or deliberation. However, for individuals with autism, finding the meaning conveyed in the face is not always easy. How do we recognize a face and what happens when the face recognition system breaks down? Is it possible to improve face recognition abilities through training? In my talk, I will discuss recent work exploring the cognitive and neural mechanisms of face recognition and demonstrate innovative computer treatments for improving face recognition skills of children with autism.