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Title: 3D Tactile Picture Books for Children with Visual Impairments

Abstract: Tactile pictures and graphics are critical to the development of emergent literacy skills for children with visual impairments. However the practices of designing and producing tactile graphics have previously been limited to a small community due to the cost of manufacturing processes and bounded expertise in tactile graphic design and 3D modeling. In this talk, I will present findings from seven workshops, conducted to identify and evaluate the barriers stakeholders encounter when designing 3D printable tactile picture books, along with a series of design guidelines to reduce or eliminate these barriers. Moreover, I will describe a set of 3D-printable models designed as building blocks for creating movable tactile pictures that can be touched, moved, and understood by children with visual impairments. Examples of these models are canvases, connectors, hinges, spinners, sliders, lifts, walls, and cutouts.