

Eye-hand coordination in neglect: preliminary data from a project with augmented reality

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Eye-hand coordination is an omnipresent mechanism in our daily life that allows to interact with the objects in our environment. A wealth of research has investigated eye-hand coordination in neurologically healthy individuals, identifying mechanisms by which the eyes guide the hand. Surprisingly however, studies concurrently measuring eye and hand movements and their interaction in stroke patients are extremely rare, even more in patients with spatial neglect. In this talk, the development of a reach-grasp-collect paradigm will be described, as implemented in an augmented reality device able to concurrently track eyes, hands, and head. The feasibility of this approach in neglect patients will be demonstrated by preliminary data, showing specific disturbances in eye-hand coordination patterns in this patient population and providing first hints on their role in spatial neglect.