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At the interface of cognitive and integrative neuroscience and developmental psychology, she investigates the mental representations of action and the construction of the body schema in a developing brain from infancy to adolescence. Her developmental studies are rooted in the internal model's theory, based on the early perception-action coupling. Using tendon vibrations protocol, her work revealed that the neural bases of the body schema are already established from the age of 7, although there is an immaturity, reflected by a reduced activation of the parietal and somatosensory regions, as well as a functional reorganization of the proprioceptive integration network, based on a functional pruning, starting during adolescence, and continuing until adulthood. This knowledge of the neural bases of sensorimotor representations has been helpful in examining the importance of the comorbidity of dyslexia and dyspraxia in children and young adults with learning disabilities. To question the quality of internal representations directly, during typical and atypical development, from the earliest stages of life, led Christine Assaiante to recently develop protocols for babies and to participate in the creation of a babylab, combining behavioral recording and brain exploration. In parallel to developmental studies, access to microgravity, in partnership with the CNES, is another relevant experimental model, which she uses to study short-term adaptations of internal representations of action.

Christine Assaiante is a member of section 26 "Brain, cognition, behavior" of the CoNRS (president for the period 2021-2026).