



## **JAMES RUDD**

Professor



James Rudd is a Professor in Motor Learning and Pedagogy at the Norwegian School of Sport Sciences; his research interests are in the area of motor learning theory and the practical applications of this for skilled behaviour. James applies his work across three settings and contexts: children's movement learning and development, clinical and elderly populations and skill learning in hazardous and potentially dangerous environments.

James heads up the Exploration research group at the Norwegian School of Sport Sciences. The group supports the development of physical literacy in children through designing and evaluating PE curriculums and sports programmes with a focus on developing enriched environments where children are able to become highly adaptable and skilled movers and learn to be creative and seek out physical activity regardless of their setting i.e., urban or countryside. You can learn more about this work in a recent book titled, Physical literacy the importance of play, that James led and was commissioned by Routledge.



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Movement learning offers huge potential to enhance the quality of life and safety of individuals in all walks of life. The Exploration research group appreciate this and has emerging strands of research into the concept of re-learning and movement skill learning in hazardous and dangerous environments. Currently, our group is pioneering a project with leaders in the Norway health technology industry to develop ARCCHIE – Autonomised Rehabilitation Coach Creating Habitual Intelligent Environments – a human machine interface comprised of an adaptive and autonomous AI coach embedded in a virtual reality environment that designs and implements training strategies for movement re-learning in stroke patients. This is based on principles of movement learning with an emphasis on inducing exploratory behaviours. The development of this technology has huge potential to improve stroke rehabilitation. Strokes are the third most common cause of death and severe disability in Norway, and the second most common in the wider western world. Our final area of research is to support companies and governmental agencies to create safe environments for skilled learning within potentially hazardous environments, this ranges from water safety to the energy sector.