

## **Technology to decode, predict and enhance human movement**

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### **Abstract:**

People with disabilities are the largest minority group in the world. There is a wide heterogeneity in their motor performance, underlying motor control, treatment goals and outcome expectations. The strategies one employs in movement patterns are often very complex; while some well-understood relationships can explain movement pattern to a certain extent, there are still many other less well-understood influencing factors. In this lecture, I will discuss the challenges to tackle in decoding what factors affect movement strategies in the long and short term, and how we use model-driven and data-driven approaches to predict and enhance one's intended movements and movement ability.