

## Adamantios Arampatzis



Adamantios Arampatzis (PhD) is Professor of Movement Science, head of the Department of Training and Movement Sciences and Spokesperson of the Berlin School of Movement Science at the Humboldt-University Berlin. He received his PhD in Movement Science and Sports Medicine in 1995 and finished his habilitation in Biomechanics in 2002 at the German Sport University Cologne.

His research deals with the interaction of the central nervous and peripheral systems, how these systems develop over the lifespan and adapt to changing environmental demands. In this context the main areas of his research focus on the adaptation of the muscle-tendon unit, neuromuscular control, locomotor adaptation and dynamic stability control in healthy and pathological conditions. His workgroup aims to identify effective mechanical stimuli to promote muscle and tendon properties and tries to deepen the current understanding of the underlying processes of mechanotransduction.

Furthermore, his group focus on the investigation of the underlying mechanisms of neuromuscular and mechanical functioning of the lower limb during steady and unsteady locomotion. The different functional organization level, e.g. muscle fascicle, muscle-tendon unit, neural control and joints are considered, aiming to understand their underlying dynamical interplay that governs effective and stable human gaits. Through an interplay of analytical, computational and experimental methods, his research group endeavour to improve the understanding of how neural pathways for locomotion are organized. In an attempt to transfer fundamental research findings to daily life, the group expand its analyses to locomotion in both steady and unsteady conditions.