

Active@Home – a project of Ambient Assisted Living Association

“Developing a new technology-based training game for fall prevention, health and well-being”

Age-associated physiological but also cognitive changes cause gait impairments and a higher risk of falls in elderly. The number of falls is strongly associated with loss of independence which significantly reduces quality of life. To prevent these occurrences, fall prevention programs try to combine physical and cognitive exercises, but are often not sustainable and fail to motivate people over a long period of time. Novel technologies allow interactive game based training, so called exergames, that simultaneously challenge cognitive and motor functions. In a process that incorporates neuropsychological, physiological and computer technology expertise, such games can be designed to meet the constraints and needs of older people and deliver a fun way to keep active.

Active@Home is an international project of the Ambient Assisted Living (AAL) Association including different European countries (the Netherlands, Portugal, and Switzerland). Its main goal is to develop such a game for older people (65+) using Tai Chi, dancing and physical activity with cognitively challenging dual-tasks. This is supposed to improve strength, balance, coordination and general physical functioning. Interacting with a virtual coach on a large screen (e.g. TV), users will follow instructions and perform specific movements. Body worn sensors on ankles and wrists record the movements which can be monitored by the virtual coach and therapists. This will also allow feedback and adaptation of the difficulty level.

