

Supervisor's contact details

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Title of the project

Physical and natural environments as determinants of movement behaviors

MSCA-PF Research Panel

- Chemistry (CHE)
- Social Sciences and Humanities (SOC)
- Economic Sciences (ECO)
- Information Science and Engineering (ENG)
- Environment and Geosciences (ENV)
- Life Sciences (LIF)
- Mathematics (MAT)
- Physics (PHY)

Description of the project

We are looking for a postdoc with an earlier experience with accelerometer and GPS measurements and knowledge on epidemiological research. The postdoc will work in the Finnish Retirement and Aging study (FIREA), which is an ongoing epidemiological study following aging workers into their retirement years with repeated surveys, accelerometers and clinical measurements. More information and recent publications can be found at our website: <https://sites.utu.fi/firea/en/>

In the FIREA study, movement behaviours have been examined with 24-hour accelerometer and GPS measurements, which capture sleep, sedentary time and physical activity as well as activity locations. More than 1200 participants have used the wrist-worn ActiGraph accelerometer annually 3-5 times in total. A subgroup of the FIREA participants have also worn annually waist-worn device including both an accelerometer and GPS (SenseDoc). We are able to link several characteristics of the physical and natural environment with the sensory data by using information from the national registries and satellite data. This rich data resource offers an excellent opportunity to examine interrelationship of environmental characteristics and movement behaviours in a longitudinal setting.

The postdoc will participate in analysing the accelerometer and GPS data by using different analytical techniques. The specific research questions will be discussed and decided together with the fellow.

Understanding determinants 24-h movement behaviour is important, because insufficient sleep, excessive sedentary time and inadequate physical activity are very common and constitute probably the most relevant modifiable behavioural and lifestyle risk factor of our time. There is need for further evidence to develop effective individual and community level interventions to increase physical activity in our societies.

Research objectives or research questions of the project

The purpose of this project is to examine how physical and natural environmental characteristics determine accelerometer and GPS measured movement behaviours among late middle-aged and older adults.