

## **Physical Activity and Aging**

### **An interdisciplinary workshop**

#### *Organizers*

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A joint workshop by the Center for the Interdisciplinary Study of Gerontology and Vulnerability (CIGEV) and the Faculty of Psychology and Educational Sciences of the University of Geneva and the Swiss National Center of Competences in Research LIVES – Overcoming vulnerability: life course perspectives

#### **Program Overview**

Thursday, November 15, 2018

Room B02.2526, Centre Médical Universitaire (CMU)

09:30	Michel Audiffren: <i>Cognitive Strategies and Physical Activity in Older Adults: A Discriminant Analysis</i>
11:00	Coffee break
11:30	Michael Rapp: <i>Physical Activity and Mental Health in Old Age</i>
13:00	Lunch
14:00	Poster Session
15:30	Coffee break
16:00	Bruna Gouveia and Rúbio Gouveia: <i>Physical Activity and Healthy Aging</i>
17:30	Apéro

## *Cognitive Strategies and Physical Activity in Older Adults: A Discriminant Analysis*

**Prof. Michel Audiffren**

University of Poitiers, Research Centre on Cognition and Learning, Poitiers, France

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Although a number of studies have examined sociodemographic, psychosocial, and environmental determinants of the level of physical activity (PA) for older people, little attention has been paid to the predictive power of cognitive strategies for independently living older adults. However, cognitive strategies have recently been considered to be critical in the management of day-to-day living. Data were collected from 243 men and women aged 55 years and older living in France using face-to-face interviews between 2011 and 2013. A stepwise discriminant analysis selected five predictor variables (age, perceived health status, barriers' self-efficacy, internal memory, and attentional control strategies) of the level of PA. The function showed that the rate of correct prediction was 73% for the level of PA. The calculated discriminant function based on the five predictor variables is useful for detecting individuals at high risk of lapses once engaged in regular PA. This study highlighted the need to consider cognitive functions as a determinant of the level of PA and, more specifically, those cognitive functions related to executive functions (internal memory and attentional control), to facilitate the maintenance of regular PA. These results will be discussed in relation to successful aging.

## *Physical Activity and Mental Health in Old Age*

**Prof. Michael Rapp**

University of Potsdam, Department of Sport and Health Sciences, Potsdam, Germany

<https://www.uni-potsdam.de/soz-praev-med/mitarbeiter/michael-rapp.html>

Physical activity has shown beneficial effects on both cognitive and affective pathology in older adults. We present an overview of current and recent RCTs on mental health in old age with a specific focus on cognitive decline, mild cognitive impairment, dementia, depression and anxiety disorders. As far as available, meta-analytic evidence will be reviewed. We will discuss conceptual issues with respect to physical activity interventions, including differential effects of types of exercise, as well as design and data analysis strategies for RCTs including physical activity in older adults. Prevention and implementation strategies at the public health level will be presented from two recent examples.

## *Physical Activity and Healthy Aging*

### **Prof. Bruna Gouveia**

Health Administration Institute, Autonomous Region of Madeira, Funchal, Portugal

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### **Prof. Rúbio Gouveia**

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For the first time in history, most people can expect to live into their 60s and beyond. By 2050, 1 in 5 people will be 60 years or older. A longer life brings great opportunities. Yet the extent to which older people and the society can benefit from these extra years depends, essentially, on their health. Therefore, the promotion of healthy aging has become a priority for many countries. Healthy Aging is defined as the process of developing and maintaining the individual's functional ability. Functional ability in its turn is determined by the person's intrinsic capacity (the combination of all his physical and mental capacities), relevant environmental factors, and the interaction between the two. Alongside with this challenge, there is a growing interest on physical activity and exercise, as means to confer favorable health outcomes across the lifespan. In fact, there is evidence that regular physical activity is associated with a reduction in obesity, weight gain, coronary heart diseases, type II diabetes mellitus, age-related cognitive impairments and Alzheimer's disease. In addition, physical activity has been consistently linked to decreased all-cause mortality rates, higher probability of late survival, good health and function during older age, as well as, to better cognitive performance. This confirms that physical activity plays an important role in healthy aging. However, current public-health and social approaches to the demographic aging seem to be ineffective. Health systems are not designed to provide the care that older populations require and physical and social environments present multiple barriers and disincentives to both health and participation of older people. For this reason, it is important to increase research on this topic, to better understand and act in the promotion of healthy aging. More effective strategies are necessary to reduce the burden of disease and disability and the healthcare costs related with aging declines. This talk addresses these issues by presenting results from some studies developed in the Autonomous Region of Madeira, Portugal. These studies aimed to describe the characteristics of the older adult population, to analyze the relations between PA and PF components and a number of covariates, and to evaluate the effect of specific interventions designed to contribute to a healthier aging.