

AIDEM 2020

First International Symposium on Artificial Intelligence for Dementia Prevention, Intervention and Care

Topic

Recently, advanced techniques have been explored in neuroimaging as well as in neuropsychological and other data sources to effectively monitor brain health to detect early onset of dementia (Mortamais et al., 2017). Advances in Big Data and AI technologies coupled with increasing speed in data generation has seen exponential growth in research and development of these technologies within the context of dementia prevention. Taking advantage of Big Data technologies, data driven approaches are developed in dementia prevention initiatives and are able to process and manage these data with high throughput (Doubal et al., 2017). Projects aim to generate not only large and high quality, but also phenotypically deep, data sets and are employing state-of-the-art Big Data technologies to process and make these data available through secured analytics environment for hypothesis testing. Current examples of such initiative include the ongoing European Prevention of Alzheimer Disease, EPAD (Solomon et al., 2018) and PREVENT research programme (Ritchie et al., 2012).

The increasing number of older adults with dementia poses a major challenge for public health worldwide. At the same time, the limited number of informal and professional caregivers available to support this rapidly growing population is of mounting concern. Not only does population aging limit the number of potential caregivers, but extant caregivers often lack skills and knowledge to provide a high quality of care. The integration of intelligent assistive technologies (IAT), including devices, robotics and sensors in many forms, into care of people with dementia, may offer opportunities to support caregivers and enhance healthcare services while improving the quality of life among older adults with mild to severe cognitive deficits. However, many caregivers and their care recipients lack access to these technologies. The reasons for this reduced access are multifactorial, including the digital divide, sociocultural factors, and technological literacy. The AIDEM symposium investigates the emerging use of AI-enabled IAT available to caregivers and older adults with cognitive deficits and explores the challenges in socioeconomic status and technological literacy as well as ethical and legal implications that should be considered in the design and development of IAT for older adults with cognitive deficits. Drawing from existing state-of-the-art, AIDEM will suggest novel technologies and services for the design and adoption aimed at increased and equitable access for this vulnerable population.

AIDEM welcomes contributions on Artificial Intelligence in various segments of dementia research and services, topics of interest include but are not limited to, AI-based monitoring to explore early changes in dementia progression, Biomarker identification for prevention and early detection, Assistive technologies and intervention, Multimodal analytics of interaction, AI and modifiable risk factors, AI and recommender systems in dementia, big data analysis in the context of dementia prevention, monitoring & intervention.

Organisation

Chairs	Lucas Paletta	JOANNEUM RESEARCH Forschungsgesellschaft mbH, Austria
	Sandra Schüssler	Medical University of Graz, Austria
	Björn Schuller	University of Augsburg, Germany
	Bettina Husebø	University of Bergen, Norway
Local Chair	Stefanie Auer	Danube University Krems, Austria
Demonstration Chair	Maria Fellner	digitAAL Life GmbH, Austria

Program

09:30	Welcome note	Lucas Paletta, Sandra Schüssler
09:45	Keynote 1: mHealth for Neuro Degenerative Diseases: Something to Remember Björn Schuller Imperial College London & University of Augsburg	Chair: Lucas Paletta
10:30	Coffee break	
10:45	Session 1: Foundations of AI in Dementia Care	Chair: Björn Schuller
12:00	Lunch break	
13:00	Keynote 2: Sensing and BPSD Monitoring Bettina Husebø University of Bergen	Chair: Sandra Schüssler
13:45	Session 2: AI-enabled Applications & Big Data in Dementia	Chair: Bettina Husebø
15:00	Coffee break	
15:15	Keynote 3: Dementia, Diversity, and Disparities: A Perspective from the United States Jennifer Schlesinger Alzheimer's Los Angeles	Chair: Maria Fellner
16:00	Demonstration Session	Chair: Maria Fellner
17:00	Goodbye note & end of Symposium	