

(eng)aging!

5th International Conference on Ageing & Technology Fair
**ACTIVE AGEING THROUGH INNOVATION:
LEARNING FROM THE COVID-19 PANDEMIC**

June 8–9, 2022, Prague & ONLINE

CONFERENCE REPORT

Organizers:



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KEYNOTE LECTURES

LESSONS FROM THE COVID-19 PANDEMIC

Alexandre Sidorenko opened the session and introduced Professor Sarah Harper who was available via video conference.

Sarah Harper's presentation was titled "Covid, Ageism and Long-Term Care." She pointed out that as countries work to reform and reshape their long-term care systems it is essential to refocus these efforts around the values and goals of dignity, respect, solidarity and empowerment. She observed these goals as in contrast to the treatment the aging received due to Covid-19 measures. She stated that evidence suggests the older population was locked away en masse, and although other social groups were vulnerable, none of them were similarly locked away. She advocated agency for older people in determining future health measures, and insisted we must ensure older people, their families, and their communities are meaningfully engaged in the design of care services. Finally, she emphasized that just as we care for children while encouraging them to grow and develop, it is necessary to continue encouraging growth at all life phases and that as

a global society, we are failing to empower older people to grow through care.

During the following panel discussion, **Jaroslava Hasmanova Marhankova** added that any management of a pandemic must take into account what it means to be a social being. She declared chronological age as crucial and persistent in determining social policy, and therefore functioning as a category of stratification. **Alexandre Sidorenko** argued that ageism is caused by our fear of becoming old, dispensable, and not contributing to society.

Astrid Eich-Krohm detailed her experiences in overseeing the care for the older people and the social component of their suffering during the pandemic, as they were isolated from their loved ones. Jaroslava agreed that a better measurement of the qualitative nature of older people care could be gained by listening directly to the voices of those older people concerning their emotional and social well-being.

IMPLEMENTATION OF THE INTERNATIONAL POLICY FRAMEWORKS ON AGEING: TIME FOR REVISION?

Alexandre Sidorenko presented an overview of the history of national and international efforts to create policy around ageing and demographic change, as well as the consideration of the human rights of the older people. He mentioned the acceleration in growth of the ageing population in developed nations and was critical of the lack of initiative taken in managing the demographic shift. He referenced that the majority of 61 polled UN member countries cited lack of funds as a reason for not tackling the issues related to ageing.

While initiatives such as the Madrid Plan of Action focuses on combating the issues of ageing among both developed and

developing countries, only three professionals in the UN are overseeing the global implementation process. Furthermore, international policy documents on ageing are not legally binding. He expressed disappointment in the lack of financial and human resources, and a lack of political will regarding international policy. For the future he envisions that reactive methods to meet the needs of older people should be complemented by proactive measures to adapt society to demographic transition and build a society for all ages

He believes that the policy of ageing must be replaced by the policy of longevity.

AGEISM AND TECHNOLOGY GAP

Claudia Mahler, whose background focuses on ensuring the human rights of older people, explained the consequences of social distancing measures, which caused many older individuals to be denied access to their normal networks. She stated her full support for the idea of a new human rights instrument: to protect the human rights of older age.

She defined ageism as stereotyped, prejudiced, or discriminatory practices against persons of older age based on the chronological age or perceived older defaults and criticized its prevalence in policymaking. In the interest of

supporting the rights of older people she asserts technology as a possible equalizer. She notes that while some older persons are technologically proficient, a high proportion of older women are offline because they did not get introduced to technology during their careers. She advocates for better acknowledgment of the digital divide as an issue that has a negative effect on all human rights. She insists we must address that older persons have been the target of hate speech on social media and that very often older people are not included in the development of apps or other technological tools.

ACTIVE AGEING BY ROBOTIC AMBIENCE

In a presentation moderated by **Piotr Szukalski**, Professor **Thomas Bock** discussed his lifework and the inspirations he as an architect and engineer used to imagine mechatronic rooms to support the care of the older people. Drawing from both NASA designs and Transformer toys, Bock designed life support systems for the older people with award-winning interactive interiors he calls “mechanically and robotically enhanced environs.” Aspects of his designs take into account the needs of a mostly independent person, using sensors

in furniture and walls to monitor temperature, fatigue, hypertension, accidents, and other health-related concerns. Moreover, these rooms and furniture pieces are enhanced to provide mobility assistance with day-to-day tasks, such as getting dressed, or remote work and employ mechatronic transformations to do so. They are relatively low-cost in the technology they use and are a glimpse into the possible future of supported independent living for the older people.

LESSONS FROM THE COVID-19 PANDEMIC

IS PROTECTING OLDER ADULTS FROM COVID-19 AGEISM? A COMPARATIVE, CROSS-CULTURAL, CONSTRUCTIVIST GROUNDED THEORY STUDY FROM THE UNITED KINGDOM AND COLOMBIA

Elfriede Derrer-Merk, PHD student at the University of Liverpool, presented the results of a comparative study involving participants in the United Kingdom and Colombia. She noted that in Colombia, older adults are referred to as elderly or grandparent. Her study indicated that in both

countries, many participants complain about sensed loss of autonomy due to their country's age-related Covid-19 measures. She emphasized that the challenge of technology for older adults has further complicated feelings of limited social connectivity and promoted experiences of isolation.

FEELINGS AND COPING STRATEGIES OF OLDER ARABS VOLUNTEERS DURING THE FIRST WAVE OF THE COVID-19 PANDEMIC IN ISRAEL

Dafna Halperin, Head of the Department of Community Gerontology at the Yezreel Academic College, stated that Covid-19 was perceived as primarily a threat to older people because of the high morbidity and mortality rates among people over 60 years old. Her interviews with volunteers uncovered negative feelings engendered by the effects of the pandemic on workload and a common sense of longing for the daily routine volunteers had before, as well

as for their children and grandchildren. Coping strategies included a redesigning of a structured daily routine to meet new demands, and the use of technology as a source of information. In light of these adjustments made by older volunteers Halperin suggests future preparation for volunteers include an emphasis on the structure of daily routine and increased digital literacy.

DELIVERING DAYCARE@HOME TO OLDER NOVICE TECHNOLOGY USERS DURING THE COVID-19 PANDEMIC: THE IMPACT OF STAKEHOLDER HETEROGENEITY

Suzanne Cullen Smith, from the Research Center of the Dundalk Institute of Technology, depicted the closure of community daycare services and the subsequent forced separation of older people from the community during Covid-19. In her research, she found that older people are willing to engage in new technology to combat isolation when supported to do so. She mentioned that while older people are gaining technology competency, they are not a homogenous group. It has been suggested a digital divide

is shifting from the young-and-the old to the old-and-the-older. Female members were more likely to have access to the internet compared to men. In regard to daycare service accessibility, visual or auditory impairments made access difficult for some service users. She argues that responsive and sensitive inclusion does not necessitate seismic project changes, but rather requires patience, compassion, trust and creativity as well as adaptive actions to address stakeholder needs as they are identified.

MAPPING EMERGING TECHNOLOGIES IN AGED CARE: RESULTS FROM AN IN-DEPTH ONLINE RESEARCH

Annachiara Fasoli and **Giorgia Beretta**, project managers in the ElderTech Project “Emerging Technologies and Vulnerabilities in Aged Care,” assessed the impact of emerging technologies on older people care. Particularly, they focused on the contribution of technological devices to the preservation of seniors' social interactions. Their stated goal was to explore the types, functions, and devices on the market to determine their effect on older people care. In order to do so they classified each identified technology into one of four categories: Conventional Monitoring Techniques,

Unconventional Monitoring Techniques, Virtual Reality Technologies, and Socially Assistive Robots. According to their assessments, most technologies were developed before the Covid-19 pandemic, and 96% were developed by private companies. In contrast, research institutes were only responsible for 5% of technologies. They emphasized that critical aspects, potential threats, and ethical concerns are often overlooked when designing and implementing technologies for the older people.

GRANDPA IN ISOLATION: THE REPRESENTATION OF GRANDPARENTS EXPERIENCING THE PANDEMIC ON SOCIAL MEDIA

Ruth Gehrmann, a researcher from the Obama Institute for Transnational American Studies, described the modern world as dangerous to grandparents. She elaborated that age is not only a biological phenomenon but should also be

understood as a social construct. She focused on the shifting rhetoric surrounding the social construct of grandparents as the care of older people became an important topic during the Covid-19 pandemic.

IMPACT OF THE OUTBREAK OF THE COVID-19 PANDEMIC ON FORMAL AND INFORMAL CARE OF COMMUNITY-DWELLING OLDER ADULTS: CROSS-NATIONAL CLUSTERING OF EMPIRICAL EVIDENCE FROM EUROPEAN COUNTRIES (INCLUDING ISRAEL)

Aviad Tur-Sinai, an Associate Professor of Health and Social Economics from Yezreal Valley College, focused his presentation on his comparative study of informal support received by older adults in the beginning of the Covid-19 pandemic. His study found that in the first wave of the outbreak, a significant proportion of older adults in

European countries received informal help. In most countries, difficulties in receiving formal home care services were reported. During the first wave of the outbreak, there was an increase in the frequency of informal help received from children, grandchildren, neighbours, and other relatives to compensate for the failing of formal home care services.

FRAMEWORKS FOR POLICY ACTIONS ON AGEING

ADAPTING INTERNATIONAL AND NATIONAL AGING POLICIES IN V4 COUNTRIES AND IN GERMANY TO PANDEMIC AND POST-PANDEMIC REALITY

Marcela Petrová Kafková, a sociologist from Masaryk University focusing on Active Aging pointed out that social isolation has significant adverse effects on individual health. During the pandemic, measures concerning older people were based on prohibitions and orders, not recommendations. The result was a decrease in life expectancy of approximately one year and a significant increase in psychological care demands. **Bogusława Urbaniak** contrasted Czech policy towards aging with that of Poland. She mentioned the initiative “Active+,”

whose main objective is to increase participation of older people in all areas of social life by supporting activities of non-governmental organizations working on behalf of older citizens. She stated that there is a great task for teachers, NGOS and other social models to make efforts to prepare the next generation to treat people of all ages equally regarding not only policy but social attitudes towards ability and autonomy. **Laszlo Patyan** discussed the decision-making processes in policy on aging in Hungary and the unfortunate

exclusion in recent years of older people advocacy groups. He added that meaningful discussion on the side of older

people is necessary because they have the ability to explain their needs and rights.

RE-DESIGNING SENIOR POLICIES AFTER THE COVID-19 PANDEMIC: LESSONS LEARNED FROM THE GOVERNMENTAL INTERVENTIONS IN POLAND

Kaja Zapędowska-Kling from the faculty of the University of Lodz, discussed a significant change in public discourse and the rhetoric of the authorities surrounding older people during the Covid-19 pandemic: For the first time the older people were characterized as a group deserving of social support and public care. Regarding Poland's governmental responses, she mentioned "Medical Care at Home," which was a governmental program addressed to people aged 55+ who tested positive for SARS-CoV-2. It included a PulseCare app enabling the monitoring of blood oxygen saturation at home and reporting them to a 24-hour monitoring centre. The first national, governmental program was financed from the

public budget which combined the potential of telemedicine and ICTs in healthcare. It also did not deepen the digital divide between the older people and the general population. She was critical of Senior Priority Hours which elicited a certain "ghettoization" of the older people, that could deepen negative stereotypes and social exclusion of senior citizens. She also indicated that the quality of mental health care is not sufficient, psychogeriatrics should be designated a separate medical speciality in Poland. She stated that effective policy towards assisting the older people is developed on executive levels as opposed to through legislative bodies.

FINDING LOCAL REMEDIES FOR THE GLOBAL PROBLEM: HEARING THE OLDER VOICES IN THE TURMOIL OF ABUSE AND NEGLECT

Lucie Vidovičová, a faculty member from Masaryk University's Office of Population Studies, presented her and **Marcela Petrová Kafková's** paper on implementing restorative justice as a method of rectifying elder abuse. She defined elder abuse as a single or repeated act or inaction against a person of higher age typically in a relationship of reasonably expected trust. The consequences of abuse

include threat to property, health, life, liberty or human dignity, or the creation or aggravation of vulnerability. Restorative justice aims to meet the needs of the victim, hold the offender accountable for the consequences of the crime and engage the community to create an opportunity of healing for victims beyond simply witnessing the offender face punitive measures.

AUTOETHNOGRAPHIC REFLECTIONS AND NARRATIVE GERONTOLOGY IN CRITICAL GEROGOGY AND BEYOND

Ieva Stončikaitė, a researcher at the University of Lleida, began her presentation by pointing out that prejudices that affect older people continue to persist in contemporary societies. According to Stončikaitė, positive aging rhetoric has done little to eradicate ageism and has only softened its claims by presenting an image of happy old age without taking into account individual narratives. She advocated that autoethnography can help answer questions such as how individuals experience adult education differently or how age discrimination can affect the quality-of-life among older persons.

This is crucial considering that decisions made regarding older people seldom take into account their own concerns or desires. Rather, decisions are based on the desires of other age groups. She states that lifelong learning is a core pillar of active aging which reinforces wellbeing and enables older people to stay healthy and engaged in society. Auto ethnography is learning more about yourself. It can give us a better understanding of what cannot be expressed by empirical data alone and makes a person into a subject instead of an object that does not matter. Personal stories of those involved in later life learning could benefit the field by highlighting unequal power structures.

OLDER WORKERS' PARTICIPATION IN THE LABOR MARKET

THE IMPACT OF COVID-19 ON OLDER WORKERS' PARTICIPATION IN THE LABOR MARKET OF V4 AND FUTURE PROSPECTS

Bogusława Urbaniak, professor of economy at the Department of Labour Economy and Social Policy of the University of Lodz, opened the panel discussion. She began with a presentation on post-pandemic shifts in labor participation of older workers in V4 countries. She observed that employment rates of the older people aged 60-64 increased in Czechia, Poland, Slovakia and Germany. In ages 65-70 these rates increased or stayed the same everywhere but Slovakia. She stated that Poland's labor market was relatively unaffected by the COVID-19 pandemic, whereas Czechia and Hungary have labor shortages due to digital illiteracy in new labor market entrants. Only in Slovakia have job vacancies increased.

Piotr Szukalski, a professor at the Institute of Sociology at the University of Lodz, discussed the effects of pensions as a motivation towards working for the older population. He stated that Covid-19 was not a stimulus to withdraw from the labor market because of low pensions. Furthermore, due to protective programs related to the pandemic there have been no changes in wages in the public sector which motivates people to move to the private sector. He urges us to consider

the long-term results of the pandemic: we can observe positive effects of the pandemic in encouraging laborers to reevaluate their skillset. He also mentioned that prohibited access to healthcare and COVID-19 cases experienced by the older people during the pandemic may lead to increased health problems which could affect the labor market. He also added that the shadow economy is profitable for the older people as a source of additional income besides a pension.

Michal Páleník, a researcher at Slovakia's Employment Institute, focused his presentation on the particulars of demographic aging and its effects on Slovakia's labor market. He referenced the fact that Slovakia is one of the fastest aging countries in the European Union, which creates problems in the health-care sector and long-term care. He stated that overall, the older people was not economically affected by COVID-19 as pensions did not decrease. He described the latest generation of older people as IT capable but facing precarious labor contracts. He suggested a solution of supplementing pensions through encouraging part time work for the older people.

AGE MANAGEMENT EXCELLENCE AWARD CEREMONY & WORK ABILITY MANAGEMENT IN V4 COUNTRIES WORKSHOP

Ferenc Kudász, an Occupational Medicine Specialist for the National Public Health Center of Hungary, discussed the history of Age Management there into the modern era. He explained that regime changes in 1989 triggered dependence on the government's disability benefit scheme and burdening the state budget. In response, the mandatory retirement age was raised to 65, early retirement schemes were abolished, and disability benefits were supervised. Currently Hungary experiences labor shortages, as many Hungarians choose to work elsewhere in the EU. To address this, retired persons can work without paying any social contribution. Employment rates of the Older people have

increased to reflect the mandatory retirement age, tripling since 2010. However, ageist discrimination is prevalent in the labor market. Those who are aged 55+ are twice as likely to be discriminated against compared to those under 25. Lifelong learning, which could help address skill gaps in older workers, is also low. The result is that the 55+ demographic requires training in their employment but receives less than younger employees. Kudasz argues that workplaces should be adjusted to meet the needs and encourage the growth of older workers. Legal protections should also be extended to better protect vulnerable employees.

AGEISM AND TECHNOLOGY GAP

AI AGEISM: NEW FORMS OF AGE DISCRIMINATION IN THE ERA OF ALGORITHMS AND ARTIFICIAL INTELLIGENCE

Justyna Stypińska, a researcher from FU Berlin, noted that in comparison to research findings on unwanted bias relating to gender and race in AI systems, the category of age has been largely neglected in existing research. AI based age estimation has been generally performing poorly on older age groups (60+), an effect which was compounded by gender and race - the age estimation worked disappointingly on older women of color.

This bias extends to the world of tech development. Stypińska mentions that Mark Zuckerberg in 2007 famously

admitted that tech companies should not hire people over 30 because 'young people are just smarter.' She believes the absence of research regarding old age as observable in two forms: invisibility of old age as an object of discussion, and lack of representation of older persons as subjects in those discourses (as members of NGOs or informal groups.) She states that the relationship between ageing as a process, ageing population as a demographic group, and AI systems is a multifaceted one and needs to be theorized more thoroughly. Therefore, empirical research on the impact of AI systems on age equality is necessary.

DIGITAL LITERACY AND OLDER MEN IN IRELAND - A QUALITATIVE STUDY

Darragh McCashin, Assistant Professor at Dublin City University's Faculty of Science and Health, began his presentation by stating that literature which directly captures the voice of older adults and their attitudes towards technology in rural Ireland is limited.

Finding willing participants was one of the most difficult aspects of his research. He made use of 'Men's sheds' as a key strategy in fostering a willingness to participate among men. He discovered there is a very positive support system

regarding digital literacy for older men; either through 'men sheds' or through family. He pointed out the necessary literacy used to operate a smartphone requires prior knowledge which some older adults may not have.

He concluded that there is a complex relationship between older men in rural Ireland with digital technology, and that there will always be a topology of older men in rural Ireland which will not want to engage.

A SINGLE CASE EXPERIMENTAL DESIGN TO EVALUATE A DIGITAL ACT INTERVENTION FOR IMPROVING SELF-MANAGEMENT BEHAVIORS IN CARDIAC PATIENTS

Julie Doyle, Director of NetwellCASAL, presented the results of a case-study involving Digital ACT and medical self-management. She provided the context that more than 30% of those with one or more chronic health conditions also experience mental health concerns such as depression or anxiety. Importantly, anxiety impacts self-management behaviours and treatment adherence. She asserts that

psychological support is important to manage symptoms and increase motivation, but in-person interventions are difficult to access, particularly for those with reduced mobility. However, she observed promising outcomes for Acceptance and Commitment Therapy on reported self-management, as well as well-being and quality of life.

ECME-CR: A DIGITAL PLATFORM FOR REMOTE REHABILITATION IN CARDIOVASCULAR DISEASE

In her next presentation, **Julie Doyle** evaluated the use of digital technology for remote rehabilitation. She noted that the effective management of those with cardiovascular disease is a big challenge for society and healthcare systems. Traditionally, cardiovascular rehabilitation takes place at

the hospital despite the difficulties faced by patients such as challenges with mobility which does not allow them to get to hospital. This makes digital and remote rehabilitation an appealing option for the monitoring and enforced improvement of cardiovascular health.

BREAKING THE TABOO WITH VR: AN EXPLORATORY STUDY OF VIRTUAL REALITY'S POTENTIAL AS A SUBSTITUTE FOR INTIMACY IN CARE HOMES

Marek Háša, CEO of Kaleido, presented the feasibility of using virtual reality to address the intimacy needs of older adults. He described his product Kaleido as a versatile, single-platform health prevention tool comprising six lines for healthy lifestyle. He stated that fulfilment of sexuality in older persons is an ongoing problem which was made worse during the Covid-19 pandemic. He also mentioned the inadequacies of person-centred nursing care in addressing

lack of privacy, negative staff attitudes, focus on safety and lack of a sexual partner. Particularly, care homes typically only address the sexuality of their clients when a serious problem arises. Háša envisions the possibility of providing a healthy and privacy-oriented outlet for the sexuality of older people in care homes, further working to dismantle the ageist taboo of older people sexual engagement.

AGEISM AND TECHNOLOGY GAP

Astrid Eich-Krohm, Project Coordinator of Autonomy in Old Age, used her native region of Saxony as a case-study in the existing gap between older adults and the general population in internet use. She detailed differences existing within the demographic of older people internet users according to age, ethnicity, and education. Besides poorly developed infrastructure in rural Saxony, other barriers to more widespread use of the internet by the older people include low levels of computer literacy, technophobia, and physical and cognitive deficits. She also highlighted the many possible benefits of expanding internet use as providing opportunities for cognitive stimulation, increased social interactions, enhanced independent living and access to care services. Inspired by the UNECE 2021 policy brief on ageing she encourages the promotion of localized digital education

involving peer to peer and family support. She supports age friendly design of internet platforms with consideration for colours, letter size, ease of use, and relevant information.

Lucie Vidovičová opened that an overall sense of "Gerontechnology Optimism" obscures the challenges faced in continuing to keep up with fast changing technological developments. We ourselves are not immune to falling behind in awareness of digital trends, as we emerge from our youth. However, the implementation of even imperfect technology shows promises towards promoting active ageing through opportunities for unexpected individual and social engagement, as demonstrated through the playful dialogue between older women and a humanoid robot.

TECHNOLOGY FAIR

LIST OF PRESENTATIONS

ADAPTIVE REHABILITATION OF AGE-RELATED MOTORIC IMPAIRMENTS

Marek Bundzel explained how neurological rehabilitation was possible through video games. Components measuring the electrical potential in muscles operate the playthrough of the games and can be adjusted to match a patient's progress or for diagnostic purposes.

URBANAGE: A NEW ERA OF TECHNOLOGY ENABLED AGE-FRIENDLY CO-DESIGN (SILVIA URRÁ URIARTE)

Urbanage is a project that investigates how digital tech can ascertain the needs of aging people in an urban environment. It consists of a data driven support tool adopted by both public servants and stakeholders as a participatory urban planning device. This in turn leads to a process of co-creation in identifying challenges and solutions which address the self-reported needs of aging users.

digitAAL LIFE

Peter Helesic began by cautioning that estimates of Alzheimer's and dementia are expected to increase to 100 million cases worldwide in coming years, with serious implications towards healthcare and social costs. While drug research has not offered any promising leads, a behaviour-oriented therapy approach is recommended by the WHO. DigitAAL Life can provide this with multimodal training which can be individual or social, and used with little outside support.

OSCAR ENTERPRISE (LUCIE CHLUBNÁ)

Oscar Senior aims to provide telecare services for aging users across a series of environments from homes to larger facilities. Through Oscar Senior, a user can be remotely checked upon or assisted and can also make calls which prevents social isolation. Telecare has the potential to increase efficiency and reduce costs of monitoring vulnerable users while prolonging their independence.

INTERACTION WITH OLDER PEOPLE USING SOCIAL ROBOTS

Ján Magyar's presentation highlighted the ways that social robots can support the care of the older people who are facing increasing rates of dementia. Conversational dialogue offered by social robots can help combat the worsening of dementia, and the needs of individual users can be met through the personalization of AI responses.

THE DIGITAL ODYSSEY

Jolana Hájková explained that despite Czechia having 2 million older citizens, only 1/3 of them have a smartphone, and only 11 percent use it for the internet. Commonly listed barriers towards more widespread smartphone use include lack of affordability, fear of misuse, and having no one to offer instructions. Digital Odyssey offers free courses online and face to face to support older people smartphone use and family members who hope to instruct them. They also enable smartphone purchases for older people in financial need.

ACCESSIBLE SOFTWARE INTERFACES FOR EDUCATIONAL AND ENTERTAINMENT PURPOSES DESIGNED FOR OLDER PEOPLE

Adam Kaczmarek noted that as a generation of digitally savvy people begin to enter older age, continued education and cognitive stimulation could take the familiar form of video games, which have been designed to integrate real world environments and have slower game motions, larger text fonts, and reduced moving elements. It is also possible to use video games as a diagnostic tool for the older people.

PARKINSON'S DISEASE AFTER 50

Attila Zoltán Jenei focused on the use of speech as an indicator of Parkinson's, an incurable degenerative disease with no exact diagnostic method. Using machine learning through positive vocal samples can help create a diagnostic tool that functions alongside others for an adequate diagnostic method.

ACTIVE AGING WITH THE TURNTABLE SOLUTION (BENEDEK SZAKONYI)

The Turntable project aims to promote active ageing through physical and mental activity, decreased social isolation and proper nutrition. In order to do this, it has developed software around gardening, which has been proven to have positive effects on older adults. Trial uses and co-creation sessions with potential users have yielded positive feedback.

APH-ALARM: COMPREHENSIVE SAFETY SOLUTION FOR PEOPLE WITH APHASIA (MOHAMMED SALAL AL-RADHI)

APH-ALARM is designed to combat issues of language impairment affecting the accessibility of emergency services. As aphasia stemming from strokes is relatively common, this alarm system makes use of pictograms to help vulnerable users reach the police, ambulance, or fire brigade in a timely manner.

ACCESSIBILITY INSIGHTS! EFFECTIVENESS OF BANK WEBSITES FOR THE SENIOR CITIZENS

Jinat Ara's research highlighted the lack of accessibility of banking websites for the older people in 43 countries. Because of the Covid-19 pandemic, online banking has become a necessity for many older people who were otherwise accustomed to doing their banking in person. Ara recommends that banking websites make use of images, alternative and larger fonts, as well as replace current templates to increase ease of use by older clients.

HOW TO ASSESS ASSISTIVE TECHNOLOGIES

Lenka Lhotská emphasized the failure in adequate analysis of hardware usability for older people, referencing that only 1/3 of hardware sold to older adults is usable long term without issue. She added that products must be assessed for differences in environment such as whether they are used indoors, outdoors, at home, or in care facilities.

A NEW METHOD FOR TELEREHABILITATION

Tibor Guzsvinecz pointed out that as rates of strokes increase, access to traditional, in-patient rehabilitative care becomes more difficult to attain. He suggests "telerehabilitation" as a remote option using simple AI for less advanced computer systems. Using telerehabilitation, patients can monitor and adjust their course of treatment by assessing their progress through the accuracy of assigned movements and tasks.

REACH PROJECT

Rongbo Hu elaborated on his work with Professor Thomas Bock in creating smart care environments for older adults which can limit costly health expenditures. He described these environments as ecosystems with physical and digital elements, capable of increasing socialization, monitoring nutrition, and helping older adults establish personalized activity patterns. Currently the REACH project is in the process of standardizing larger scale production and implementation.

CONVERSATIONAL AI-POWERED DIGITAL PERSONAS WHO CARE: EMPATHETIC COMPANIONS FOR OLDER ADULTS (JAN PICHL, BARBORA ŠIPOŠOVÁ)

Barbora Šipošová demonstrated the potential of using AI-powered digital personas to enhance the mental well-being of older users who may face social isolation. These personas are capable of complex communicative skills involving listening, reflective responding, and basic memory which allows for a personalized experience. Personas may provide assistance, companionship, entertainment, and opportunities for deepening community among older adult users.

KEYNOTE SPEAKERS

SARAH HARPER (UK)

Director, Oxford Institute of Population Ageing.

Sarah is Clore Professor of Gerontology at the University of Oxford and the Director of the Oxford Institute of Population Ageing. She has a background in Anthropology and Population Studies holding a MA from Cambridge University and a DPhil from the University of Oxford. Her research focuses on societal change arising from population ageing, with a specific interest in healthy life expectancy, the family

and intergenerational relationships. Sarah was appointed a CBE for services to Demography in 2018. Sarah served on the UK Prime Minister's Council for Science and Technology, which advises the Prime Minister on the scientific evidence for strategic policies and chaired the Government Review into the Future of the UK's Ageing Population. She is Editor of the Journal of Population Ageing, Springer Nature.

ALEXANDRE SIDORENKO (AT)

Expert in International Policy on Ageing

Alexandre Sidorenko is a prominent researcher in the field of international policy on ageing and the chairman of the (eng)aging! steering committee. His research focuses on developing evidence-based policy to address demographic changes and providing advisory services regarding policy to

governments. Besides publishing a variety of articles in both English and Russian, Alexandre was formerly the Chief of the United Nations Program on Ageing. He advocates for an international agency on research for ageing.

CLAUDIA MAHLER (AT)

Independent Expert on the enjoyment of all human rights by older persons, UN Human Rights Council

Dr. Claudia Mahler is the current Independent Expert on the enjoyment of all human rights by older persons. She was appointed in March 2020 by the UN Human Rights Council. Dr. Mahler has been working for the German Institute for Human Rights as a senior researcher in the field of economic, social and cultural rights since 2010. She is also a visiting professor at the Alice Salomon Hochschule. From 2001 to 2009, Ms. Mahler conducted research at the Human Rights Centre of the University of Potsdam where her main fields

were in human rights education, minority rights and the law of asylum. In 2000, she was appointed as Vice President of the Human Rights Commission for Tyrol and Vorarlberg. She has also worked as a lecturer in the field of human rights law and as a consultant to OHCHR in Geneva. From 1997-2001, she held the position of an assistant at the Leopold-Franzens-University Innsbruck, Austria in the field of Criminal Law and Criminal Procedures. Ms. Mahler received her doctoral degree in 2000.

THOMAS BOCK (GER)

Chair for Building Realisation and Robotics, Technical University Munich

Thomas Bock's research activities have centered for 45 years around robotic construction as design, prefabrication, on site robotics, robotic building maintenance and recycling. His notion of robotic ambience empowers the older people towards independent life, work and mobility. He studied at the University of Stuttgart, IIT in Chicago and the University of Tokyo. At the CNRS in France he established the first European construction robotics commission in Europe. In 1989 he became professor for automation in construction management at the civil engineering faculty of Karlsruhe University before becoming chair professor for building realization and robotics in 1997 at TU Munich. He is the co-founder and director of IAARC, Asian Habitat Society etc. and

advises international ministries and academies. In 2017 he obtained the DFG Seibold award for 35 years of pioneering research in construction robotics. He co/authored about 500 articles in English, French, Japanese, Russian and German and holds various honorary professorships, doctorship, fellowship, visiting and special assigned professorships, is involved in editing several journals "Automation in Construction", "Innovation in Construction", "Construction Robotics" etc., published the world wide first book series on "Construction Robotics" with Cambridge University Press in 2015 and edited a special edition on active healthy aging at Journal of Population Aging of Oxford University Press in spring 2020.

YOSHIYUKI SANKAI (JP)

Director of F-MIRAI Center/ President and CEO of CYBERDYNE

Yoshiyuki Sankai earned a Ph.D. in Engineering from University of Tsukuba in Japan in 1987. He has progressed from being a research fellow at the JSPS to assistant professor, associate professor, and then professor at the Graduate School of Systems and Information Engineering for the University of Tsukuba. Dr. Sankai was also a visiting professor at Baylor College of Medicine in Houston, Texas in the United States. Currently, he is a professor, the Executive Research Director at the Center for Cybernetics Research and the Director at the F-MIRAI, University of Tsukuba; and the President and CEO of CYBERDYNE Inc. He successively held the position of Leader/ PM for the FIRST program and ImPACT program, both initiated by the Japanese Cabinet Office, and the Business producer

of the Program for Building Regional Innovation Ecosystem by MEXT. He also served as an Executive Board Member of Advanced Robotics, and a member of the Global Agenda Council on Robotics & Smart Devices of the WEF. Now, he is an Executive Board Member of the Japan Society of Embolus Detection and Treatment, and a fellow of the Robotics Society of Japan ("RSJ") and the Society of Instrument and Control Engineers ("SICE"). He is a Center Partner of the Center for the Fourth Industrial Revolution, a member of Global Future Council of Production, and a member of Global Precision Medicine Council of the WEF. He is also appointed as an International Fellow of the Royal Swedish Academy of Engineering Sciences ("IVA").

CONFERENCE FACT SHEET

The 5th (eng)aging! Conference was held on June 8–9, 2022 under the title "Active Ageing through Innovation: Learning from the COVID-19 Pandemic". The Conference sessions were held in person as well as streamed online for those unable to attend. This year's edition discussed how to overcome the uncertainties and challenges posed to older people by the COVID-19 pandemic and presented technological products and solutions (robots, VR, gadgets, mobile applications, wearables, etc.) which have the potential to improve the lives of older people.

During these two days, the event hosted a wide range of respected experts from a number of fields – representatives of governments, technological companies, researchers, scholars, NGOs, geriatrics, gerontologists, providers of healthcare and social services and representatives of senior organisations. The Conference consisted of presentations of academic papers, keynote lectures, and a technological fair.

This year's (eng)aging! Conference was attended by, among others, the Director of the Oxford Institute of Population Ageing, Sarah Harper (UK), the former Chief of the United Nations Program on Aging, Alexandre Sidarenko (AT), the Independent Expert on the enjoyment of all human rights by older persons, Claudia Mahler (AT), the Chair for Building Realisation and Robotics at the Technical University Munich, Thomas Bock (GER), and the Executive Research Director at the Center for Cybernetics Research, Yoshiyuki Sankai (JP).

The COVID-19 pandemic has affected various aspects of individual and societal life, including public policies. Health and social policies and other policies targeting older people, including active ageing policies, have been among those most affected.

The Technology Fair showcased 15 technology projects, products and innovations aimed at older people and their specific needs.

THE CONFERENCE ON SOCIAL MEDIA



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STEERING COMMITTEE:

Yeal Benvenisti, CEO, Mediterranean Towers Ventures, Israel

Radim Boháček, Coordinator of SHARE, Academy of Sciences, Czech Republic

Astrid Eich-Krohm, Senior Research Associate, Institute for Social Medicine and Health Systems Research, Otto-von-Guericke-University Magdeburg, Germany

Rosette Faruggia-Bonello, Deputy Director, International Institute on Ageing United Nations, Malta

Juhani Ilmarinen, Former Director, Department of Physiology, Finnish Institute of Occupational Health (FIOH), Finland

Stephen Johnston, Co-founder, Aging2.0, UK/USA

Alexandre Sidorenko, Former Chief of United Nations Program on Ageing, Austria

Vladimír Špidla, Former Prime Minister, Former European Commissioner for Employment, Social Affairs and Equal Opportunities, Czech Republic

Ilona Štorová, Chairwoman, Age Management z.s., Czech Republic

Petr Wija, Director, Institute for Social Policy and Research, Czech Republic

PARTNERS

The conference took place under the auspices of Marian Jurecka, Minister of Labour and Social Affairs, and was co-organized by the Centre for Active Ageing and the KEYNOTE company.

The partners of the conference were International Visegrad Fund, Czech-German Future Fund, JTI, Embassy of Japan in the Czech republic, Česká spořitelna, Technical University of Košice, Budapest University of Technology and Economics, Gdańsk University of Technology, Czech Institute of Informatics, Robotics and Cybernetics (CIIRC, CTU), Age Management z.s., University of Lodz, and the Slovenská Asociácia Age Managementu.

The project was co-financed by the Governments of Czechia, Hungary, Poland, and Slovakia through Visegrad Grants from International Visegrad Fund. The mission of the fund is to advance ideas for sustainable regional cooperation in Central Europe.

The event was co-financed by the Czech-German Future Fund. The Fund helps build bridges between Czechs and Germans. It purposefully supports projects that bring people from both countries together, that enable and deepen insights into their worlds, their common culture and history. Learn more about the Czech-German Future Fund project.

Organizers:



General Partner:



Main Partner:



Partners:



Auspices:



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