

### Sunday, April 6

- 15:30-16:00     **Registration at Äkäshotelli (Auditorium)**
- 16:00-16:15     **Opening words**  
*Matti Laine, Minna Lehtonen, Juha Salmi*
- 16:15-17:00     **Keynote Lecture 1**  
*Martin Lövdén: When should we intervene to promote cognition and well-being in older age?*
- 17:00-17:10     *Coffee break*
- 17:10-18:10     **Symposium 1 – Singing in the brain: Behavioural and neural benefits of music and singing across life**  
*Organizer: Teppo Särkämö*
- 17:10-17:30     *Paula Virtala: Music interventions to support neural speech sound processing and language development in dyslexia-risk infants*
- 17:30-17:50     *Nella Moisseinen: Singing across adulthood: Neural, cognitive, and socioemotional mechanisms to promote healthy ageing*
- 17:50-18:10     *Teppo Särkämö: Singing in the aphasic brain: Clinical and neural benefits and learning effects induced by singing-based rehabilitation in post-stroke aphasia*
- 18:10-19:10     **Poster session 1 (Äkäskabinetti)**
- Cully, SA, Garzón, B, Helms, G, Lövdén, M, Olivo, G: Divergence between estimates of short-term grey matter volume changes over time in images acquired with MP2RAGE vs. MP2RAGE.*
- Kandia, D-M, Menn, K, Mürbe, D, Dalla Bella, S, Männel, C: Neural tracking of speech at preschool age is modulated by familial musical background: Insights from neural and behavioural measures.*
- Laakso, E, Oksanen, E, Moisseinen, N, Kauramäki, J, Pitkäniemi, A, Sihvonen, A, Särkämö, T: Efficacy of music-based telerehabilitation after stroke: Research plan.*
- Liu, X, Tervaniemi, M, Huotilainen, M: Interactions between music and learning Chinese as a foreign language.*
- Oksanen, E, Pentikäinen, E, Pitkäniemi, A, Siponkoski, S-T, Laitinen, S, Särkämö, E-R, Kauramäki, J, Makkonen, T, Särkämö, T: Training-induced neural enhancement of novel song learning in chronic aphasia.*
- Papadaki, E, Koustakas, T, Lindenberger, U: Plasticity of the singing brain: A planned longitudinal study on the effects of choir training in children.*

*Railo, H, Halla, M, Peromaa, E:* Speech feedback control can be modified using conditioning: A potential new tool for rehabilitation?

*Rumetshofer, T, Mårtensson, J:* Rapid grey matter plasticity changes after a language learning task and the effect of motor involvement.

*Taieb, E, Houdé, O, Borst, G, Iuculano, T, Altarelli, I:* Identifying the manifold cognitive sources of poor reading.

*Uimonen, J, Merzon, L, Villarreal, S, Laari, S, Arola, A, Ijäs, P, Hietanen, M, Salmi, J:* Real-world virtual reality task with eye tracking for the detection of mild spatial neglect.

19:20-20:20     **Welcome Reception and registration at Äkäshotelli (Yläbaari)**

## Monday, April 7

14:40-15:25     **Keynote Lecture 2**

*Daphne Bavelier:* The scientification of video games: Lessons for learning and transfer

15:25-15:35     *Short break*

15:35-16:55     **Symposium 2 – Cognitive interventions in clinical and healthy child populations: from design to implementation**

*Organizer: Julia Föcker*

15:35-15:55     *Noga Cohen, Reout Arbel, Atheer Massarwe:* Training to provide emotional support to others as a way to enhance resilience

15:55-16:15     *Julia Föcker, Polly Atkins, Jonathan Waddington, Patrick Dickinson:* Multisensory Braille letter identification in children with visual impairment and blindness

16:15-16:35     *Mor Nahum, Ornella Dakwar-Kawar, Noam Mairon, Shachar Hochman, Roi Cohen Kadosh, Itai Berger:* Harnessing non-invasive brain stimulation and cognitive control training for pediatric ADHD

16:35-16:55     *Simone Gori, Sara Bertoni, Sandro Franceschin, Andrea Facoetti:* Action-like video game playing induces short- and long-term plasticity on salience processing in children with and without neurodevelopmental disorders

16:55-17:55     **Poster session 2 + coffee (Äkäskabinetti)**

*Aquilino, B, Tauriainen, S, Vishwanath, G, Seppälä, A, Leppämäki, S, Henriksson, L, Vartiainen, J, van Vliet, M, Parkkonen, L, Salmi, J:* XR-EPELI: Mobile-EEG and MEG-EEG assessment of attention in naturalistic environments.

*Dawson, C, Batra, P, Huotilainen, M, Simola, J:* Shared emotions, cognitive presence, and academic self-efficacy in paired digital collaborative learning.

*Martinčević, M, Vranić, A:* Superhero's day: The interactive story reading as a cognitive enhancement tool in dementia.

*Mauri, C, Lampis, V, Giubergia, A, Maccarone, F, Peruzzo, D, Montano, F, Mistò, P, Salandi, A, Dondena, C, Cantiani, C, Mascheretti, S:* Neurofunctional correlates of a multi-componential treatment for dyslexia: An fMRI pre-post training analysis.

*Nikula, M, Saartoala, P, Saure, E, Mäntymaa, M, Uusimaa, J, Salmi, J:* Virtual Reality in rehabilitation of executive functions in children with ADHD and TBI. A systematic review and meta-analysis.

*Ronkainen, P, Karjalainen, S, Parviainen, T:* Anxiety as a brain and body state – Investigating neural and physiological markers and brain-body interactions: First findings from ongoing MEG study.

*Simola, J, Julku, H, Dawson, C, Österman, S, Elovaara, K, Häikiö, T:* State curiosity and evidence quality affect eye movements during reading of health-related statements.

*Tolonen, T, Roine, T, Leppämäki, S, Alho, K, Tani, P, Koski, A, Laine, M, Salmi, J:* Brain connectivity and related working memory training effects in adult ADHD.

*Walton, L, Domellöf, M, Stigsdotter Neely, A:* The experience of process-based cognitive training for people with Parkinson's disease: Ingredients for transfer to everyday life.

17:55-19:35     **Symposium 3 – Multicomponent path to reading success: cognitive, linguistic, and socio-emotional interventions**  
*Organizer: Angela Pasqualotto*

17:55-18:15     *Sophie Bouton:* RnDys: leveraging hearing to treat dyslexia

18:15-18:35     *Chiara Pecini:* RAN intervention and reading decoding: good news

18:35-18:55     *Andrea Kogler:* Evaluating a combined intervention for second graders with reading and social-emotional difficulties

18:55-19:15     *Sara Mascheretti:* Gene x environment interaction in early treatment of reading-related skills in pre-readers

19:15-19:35     *Angela Pasqualotto:* Enhancing reading skills with a video game-based intervention incorporating executive functions and action-based mechanics

## Tuesday, April 8

14:30-15:15     **Keynote Lecture 3**

*Tiia Ngandu:* Interventions to promote cognition in aging: experiences from the FINGER trial

15:15-15:25     *Coffee break*

15:25-16:45     **Symposium 4 – The benefits of cognitively stimulating activities to promote brain health across the lifespan**

*Organizer: Susan Jaeggi*

15:25-15:45	<i>Susan Charles</i> : Activity variety's association with cognitive functioning and decline
15:45-16:05	<i>Maruša Laure</i> : Stimulating rhythmic abilities in early childhood through music-movement interventions: The role of live versus recorded music
16:05-16:25	<i>Psyche Loui</i> : Gamma music-based intervention for mild Alzheimer's disease
16:25-16:45	<i>Anja Pahor</i> : Exploring the role of gamification and individual differences in working memory training
16:45-17:45	<p><b>Poster session 3</b> (Äkäskabinetti)</p> <p><i>Ahola, H, Laakso, M, Mäkinen, L</i>: Impact of linguistic small group activities in early childhood education on L2 vocabulary and narration by children with immigrant backgrounds.</p> <p><i>Aronsson, I, Stigsdotter Neely, A, Gavelin, HM</i>: Rehabilitation for improved cognition in patients with stress-related exhaustion disorder: A four-and-a-half-year follow-up.</p> <p><i>Denkinger, S, Joessel, F, Green, CS, Bavelier, D</i>: Game mechanics promoting attentional control.</p> <p><i>Di Segni, M, Babicola, L, Ielpo, D, Mauri, C, Ciceri, T, Peruzzo, D, Lampis, V, Bertoni, S, Facchetti, A, Mascheretti, S</i>: Action video game training in reading acquisition: Insight on functional markers of GXE interplay.</p> <p><i>Gradi, N, Teixeira, S, Shmuel, S, Chopin, A, Bavelier, D, Shechner, T, Pichon, S</i>: Evaluating the effect of action-like video game play and of casual video game play on anxiety in adolescents.</p> <p><i>Moisseinen, N, Kaila, LM, Martínez-Molina, N, Sairanen, V, Melkas, S, Kleber, B, Sihvonen, AJ, Särkämö, T</i>: Choir singing is associated with enhanced structural connectivity in the ageing brain.</p> <p><i>Otieno-Leppänen, S, Salmeron, L, Juma, S, Mumbo, H, Wafula, C, Okaya, E, Bota, K, Khan, A, Shah, S, Leppänen, PHT</i>: Enhancing adult cognition and well-being through digital apps: A systematic review.</p> <p><i>Sandberg, P, Nilsson, M, Bertilsson, F</i>: Mnemonics in the curriculum—Effects of partaking in an upper secondary course in mnemonics in a Swedish gymnasium.</p> <p><i>Voits, T, Olivo, G, Lövdén, M</i>: State-of-the-art in human rapid plasticity research: A scoping review.</p>
18:00-19:00	<b>Social Program (TBA)</b>
19:00-	<b>Get-together dinner (self-funded) at Äkäshotelli Restaurant</b>

## Wednesday, April 9

### 8:30-9:30 **Poster session 4** (Äkäskabinetti)

*Bertoni, S, Basso, M, Molini, A, Franceschini, S:* Cognitive enhancement induced by High Intensity Interval Training on action and perceptual brain streams.

*Domellöf, ME, Walton, L, Johansson, J, Nyberg, L, Bäckström, D, Forsgren, L, Boraxbekk, CJ, Stigsdotter Neely, A:* Evaluating a fronto-striatal working-memory updating-training paradigm in Parkinson's Disease.

*Facoetti, A, Puccio, G, Franceschini, S, Gori, S, Pievani, T, Trezza, V, Bertoni, S:* Rough-and-tumble play nullifies the hemispheric specialization for handedness in pre-schoolers.

*Korkmaz, G, Lorenzi, RM, Lampis, V, Peruzzo, D, Arrigoni, F, Pischedda, D, D'Angelo, E, Palesi, F, Mascheretti, S, Gandini Wheeler Kingshott, CAM:* Altered cortico-cerebellar effective connectivity of the visuo-attention system is associated with READ1 deletion in developmental dyslexia.

*Mascheretti, S, Arrigoni, F, Toraldo, A, Giubergia, A, Andreola, C, Villa, M, Lampis, V, Giorda, R, Villa, M, Peruzzo, D:* Alterations in neural activation in the ventral frontoparietal network during complex magnocellular stimuli in developmental dyslexia associated with READ1 deletion.

*Salakka, I, Hotti, J, Kaila, L, Pitkäniemi, A, Särkämö, T:* The effect of cognitive functioning on processing familiarity of music in neurodegenerative disorders: Preliminary EEG-results.

*Seipäjärvä, SM, Leukkunen, J, Kumpulainen, S, Piitulainen, H, Parviainen, T:* The effect of cycling exercise on rhythmic activity of the brain and perceived mental state.

*Sihvonen, A, Brownsett, S, Copland, D, Walsh, A, Davis, SM, Donnan, GA, Carrey, LM:* Neural circuits underpinning poststroke cognition and depression.

*Szmalec, A:* Content and language integrated learning: Dual objective, dual gain?

### 9:30-10:15 **Keynote Lecture 4**

*Alan Kingstone:* The interplay between mind perception, cognition, and behaviour and how it may impact human wellbeing

### 10:15-11:35 **Symposium 5 – Understanding the dynamics between body, brain, and mind in promoting wellbeing**

*Organizer: Tiina Parviainen*

10:15-10:35 *Tiina Parviainen:* Body–brain coupling and its significance for individual differences in experience

10:35-10:55 *Tahnee Engelen:* Interoceptive signals shape emotion

- 10:55-11:15 *Suvi Karjalainen*: Cardiac signals and respiration modulate brain activity
- 11:15-11:35 *Lauri Parkkonen*: Methods for studying heart-brain coupling and coping with interindividual variability in brain signals
- 11:35-11:45 **Closing the meeting**