Learning and Plasticity Meeting 2026

Sunday, March 29

15:00-15:45   **Registration at Äkäshotelli (Auditorium)**

15:45-16:00   **Opening words:** *Matti Laine, Minna Lehtonen, Juha Salmi*

16:00-17:20   **Symposium 1: Computational Approaches to Understand Underlying Mechanisms of Learning** – *Organizer: Susanne Jaeggi*

16:00-16:20   *Qianru Xu:* Neural differentiation underlying perceptual grouping benefits in visual working memory

16:20-16:40   *Chaoxiong Ye:* When repeated presentation of visual feature bindings does and does not result in learning

16:40-17:00   *Marc Yangüez-Escalera:* A diffusion-decision model to capture individual differences in mechanisms of n-back training

17:00-17:20   *Alexandru Iordan:* Network-based high-definition transcranial current stimulation (HD-tDCS) for social-behavioral symptoms in behavioral variant frontotemporal dementia (bvFTD)

17:20-17:50   **Break & coffee 30 min**

17:50-19:10   **Symposium 2: New Vistas in Monitoring and Treating ADHD: From Cognitive and Neural Functions to Interventions** – *Organizer: Juha Salmi*

17:50-18:10   *Jahla Osborne:* Inhibitory Control in ADHD: Evidence for Delayed Goal-Directed Processing

18:10-18:30   *Mor Nahum:* Beyond the Lab: Everyday Dynamics of Cognitive Control and Emotional Lability in ADHD

18:30-18:50   *Juha Salmi:* VR2Real: Real-World Digital Phenotyping in ADHD

18:50-19:10   *Anja Pahor:* How Adaptive Algorithms Shape Learning and Transfer in Working Memory Training

19:20-   **Welcome reception at Äkäshotelli** (Yläbaari)

Monday, March 30

14:30-15:15   **Keynote 1: Reasoning Development: Neurocognitive Underpinnings and Educational Relevance** – *Silvia Bunge, University of California, Berkeley*

15:15-15:35   **Short break 20 min**

15:35-17:15	**Symposium 3: Plasticity of Large-scale Neural Networks in Neurodegenerative and Vascular Diseases - Towards New Therapeutic Strategies** – *Organizer: Monica Toba & Antoni Valero-Cabré*

15:35-15:55	*Lara Migliaccio*: Connectivity loss and compensatory reorganization of large-scale neural networks in neurodegenerative diseases
15:55-16:15	*Bénédicte Batrancourt:* At-home digital phenotyping of neuropsychiatric symptoms in bvFTD and AD
16:15-16:35	*Valentina La Corte:* Electrophysiological markers of episodic memory predicting Alzheimer's Disease progression
16:35-16:55	*Monica Toba:* Cerebral interactions among brain network nodes in stroke - Neural plasticity and impact on rehabilitation interventions
16:55-17:15	*Antoni Valero-Cabré*: Invasive and noninvasive modulation of plasticity to explore, boost or restore cognitive function in the human brain: From elasticity to plasticity; from excitability to synchrony; from causal explorations to more effective therapies

17:15-18.15	**Poster session 1** (Äkäskabinetti) ***and coffee***

Jetro J. Tuulari: skiftiTools: An R package for reading, writing, analysing, and visualising tract-based spatial statistics (TBSS) derived diffusion MR images.

Sina A. Schwarze, Ulman Lindenberger, Silvia A. Bunge, Yana Fandakova: More modular functional brain networks predict training-related improvements in task switching in children.

Juan Lupiáñez: The ANTI-Vea: A Tool to Measure Attention and Vigilance Across Different Contexts and Environments.

Rosa Salmela, Tomi Rautaoja, Lars Bokander, Timi Niemensivu, Timi Tervo, Raymond Bertram & Minna Lehtonen: Developing Lexize-SWE: A tool for efficient assessment of Swedish vocabulary proficiency in adults and children.

Jahla Osborne: Assessing the Impact of Motivational Coaching on Executive Function Training

Johanna Knechtges, Helene Killmer, Martin Pfeiffer: Self-initiated repair in chronic aphasia: preserved adaptive mechanisms and implications for learning and rehabilitation.

Lassi Kannel, Tuija Aro, Juho Polet, Paavo Leppänen: Moderating Effects of Emotional-Behavioral Well-Being on Academic Emotions and Learning at School Entry.

Miriam Napadow, Håkan Fischer, Maria Sandgren, Máté Magyar, Zsuzsanna Lénárd, László Harmat, Örjan de Manzano: Singing for memory: neural and cognitive effects of a choral intervention in older adults.

18:15-19:55 **Symposium 4: From Development to Aging: Cognitive Plasticity and Learning Mechanisms Across the Lifespan** – *Organizers: Maruša Laure & Julia Föcker*

18:15-18:35 *Maruša Laure:* Early development of computational thinking: a mixed-methods examination of learning conditions and intervention readiness in early childhood

18:35-18:55 *Martin Buschkuehl:* Integrating executive-function supports into math fact fluency: a classroom-based field trial of MathFluency+

18:55-19:15 *Julia Föcker:* Tactile gamified activities for visually impaired, blind, and sighted children: Possible implications for inclusion

19:15-19:35 *Alice Reinhartz:* No transfer after processing speed training across the adult lifespan: insights from drift-diffusion modelling

19:35-19:55 *Susanne Jaeggi:* Designing cognitive interventions to maximize participant engagement and learning

Tuesday, March 31

14:30-15:15 **Keynote 2: Braincharts for the Human Lifespan: From Populations to Individuals and Clinical Implications** – *Richard Bethlehem, University of Cambridge*

15:15-16:35 **Symposium 5: The Learning Brain Across the Lifespan: Neural Resources, Imaging Indicators and Relevance for Cognitive Competence** – *Organizers: Tiina Parviainen & Riikka Möttönen*

15:15-15:35 *Tiina Parviainen:* Markers of cortical responsiveness, thickness and surface area and their role for cognitive competence in middle childhood years

15:35-15:55 *Riikka Möttönen:* Language learning from childhood to adulthood: the cognitive cost hypothesis

15:55-16:15 *Weiyong Xu:* Neural correlates of retrospective memory confidence during face–name associative learning

16:15-16:35 *Marcus Meinzer:* Modulation of brain networks for learning and memory by transcranial electrical brain stimulation: A systematic, lifespan approach

16:35-17:35 **Poster session 2** (Äkäskabinetti) ***and coffee***

Matti Laine, Tilda Eräste & Anton Kunnari: Adaptive mnemonic strategy use under varying task conditions.

Alexandra Hering, Grazia Cerullo, Nicola Ballhausen, Mauro Gaspari, Sabrina Cipoletta, Giovanna Mioni, Matthias Kliegel, & Franca Stablum:

Training older adults problem-solving skills: The impact of playing alone or in teams.

Kuuluvainen, S., Juopperi, K., Daikoku, T., & Möttönen, R.: Does the left auditory motor cortex contribute to statistical language learning? A rTMS study.

Louisa Richter, Jascha Rüsseler, Greg Poarch, Merel Keijzer: Never too old to learn: investigating language learning-induced resting-state EEG changes in older adults.

Sergio Navarrete-Arroyo, Tanja Linnavalli, Minna Huotilainen: Developmental Trajectories of Cognitive-Linguistic Abilities and Their Evolving Links to Mismatch Responses from 5 to 6 Years.

Elmo P. Pulli, … Jetro Tuulari: Exposure to Maternal Pre- and Postnatal Psychological Distress: Associations with Brain Structure in 5-year-old Children.

Amanda Rosanna Alves Barboza, Marine Chazalon, Alice Abbondanza, Manuel Felline, Nikolay Radkov, Serge N. Schiffmann, Helena Janickova: Role of nicotinic acetylcholine receptors expressed by cholinergic neurons in controlling striatal activity and behaviour in mice.

17:35-18:55	**Symposium 6: Cognitive, Socio-Emotional, and Motivational Factors in Learning: Developmental and Intervention Studies** – *Organizers: Paavo Leppänen & Aino Sorsa*
17:35-17:55	*Kaisa Lohvansuu:* Newborn magnitude processing is associated with their parents' mathematical skills
17:55-18:15	*Aino Sorsa & Ariane Tretow:* Development of speech perception and reading from childhood to adulthood: brain and behavioral studies
18:15-18:35	*Akie Yada:* Learning-related emotions and beliefs in the very early stages of schooling and their associations with academic skills
18:35-18:55	*Pilvi Peura:* Which factors contribute to responsiveness to reading intervention?
19:15-	**Get-together dinner (self-funded) at Äkäshotelli Restaurant**

Wednesday, April 1

8:30-9:30	**Poster session 3** (Äkäskabinetti)

Beatrice Aquilino, Teija Kujala, Paula Virtala: Neural speech encoding and language abilities in 8–12-month-old infants at risk for dyslexia: first results from the BusyBaby trial.

Maike Hille, Elisabeth Wenger, Eleftheria Papadaki, & Yana Fandakova: Motor sequence learning in children and adults: age differences in the time course of brain activation and representational stability.

Meyyappan, Amutha: Music-based embodied engagement: a systematic review of neural, motivational and learning plasticity mechanisms in adults.

Aylin Rosberg, Jetro J. Tuulari et al.: Baby brain gradients revealed by functional connectome harmonics.

Aaron Barron, Elmo Pulli, Ekaterina Saukko, Minna Lukkarinen, Alex Dickens, Tuulia Hyötylainen, Matej Orešič, Linnea Karlsson, Hasse Karlsson, Jetro Tuulari: Peripheral immune proteins predict reduced cortical thickness and anxiety in 5-year-old children.

Raymond Bertram: Measuring components of reading development during elementary and lower secondary school years in Finland: evidence from the MUREA project.

Erik Seesjärvi, Eeva T. Aronen, Minna Mannerkoski, Hanna Huhdanpää, Matti Laine, Sampsa Knuutila, Sami Leppämäki, Lauri Nummenmaa, & Juha Salmi: Goal-directed behavior in adhd during a video game simulating everyday situations: virtual reality vs. Computer version.

| 9:30-10:30 | **Symposium 7: Exploring the Impact of Music Activities on Learning, Well-being, and Rehabilitation** – *Organizer: Mari Tervaniemi* |

9:30-9:50	*Assal Habibi:* The Brain's Crescendo: How Music Engagement Enriches Neurocognitive Development Across the Lifespan
9:50-10:10	*Frank Russo:* Voices in Community: How Group Singing Supports Communication, Well-Being, and Brain Health
10:10-10:30	*Mari Tervaniemi:* Music Enriched Development – Neuroscientific Evidence and Future Perspectives

| 10:30-10:40 | **Short break 10 min** |

| 10:40-11:40 | **Symposium 8: Neurocognitive Changes in the Aging Brain** – *Organizer: Yi-Fang Hsu* |

10:40-11:00	*Heidi Pesonen:* First look at parents' data in the Jyväskylä Longitudinal Study of Dyslexia: longitudinal changes in cognitive functions in late adulthood
11:00-11:20	*Yi-Fang Hsu:* Neural responses to prediction errors show linear age-related decline but differential associations with working memory
11:20-11:40	*Jan Kujala:* Changes in beta-band oscillations following physical and cognitive training in older adults

11:40-11:50   **Closing the meeting**