

Qualifications

Doctoral degree, Humanities, University of Helsinki
Award Date: 15 Oct 1985

Licentiate degree, Natural Sciences, University of Helsinki
Award Date: 28 May 1985

Master's degree, Humanities, University of Helsinki
Award Date: 25 Sep 1979

Bachelor's degree, Social Sciences, University of Helsinki
Award Date: 29 May 1979

Employment

Senior Advisor

Senior Advisor
Department of Neuroscience and Biomedical Engineering
Aalto University
1 Jun 2021 → present

Professor

Department of Computer Science
Aalto University
Finland
1 Jan 2016 → present

Adjunct professor

University of Helsinki
Helsinki, Finland
1 Jan 1987 → present

Research output

ACT OF FICTION : Simultaneously experienced multiple perspectives of (un)reality when engaging with narrative-based art

Amir, E., Sofaer, J. & Sams, M., 17 Jan 2023, In: Leonardo Journal. 14 p.

Lipreading a naturalistic narrative in a female population: Neural characteristics shared with listening and reading

Saalasti, S., Alho, J., Lahnakoski, J. M., Bacha-Trams, M., Glerean, E., Jääskeläinen, I. P., Hasson, U. & Sams, M., 29 Dec 2022, (E-pub ahead of print) In: Brain and Behavior.

Under the umbrella : components of empathy in psychology and design

Chang-Arana, A. M., Surma-aho, A., Holtta-Otto, K. & Sams, M., 1 Aug 2022, In: Design Science. 8, 29 p., 20.

Exploring the Interpersonal Level of Music Performance Anxiety: Online Listener's Accuracy in Detecting Performer Anxiety

Chang-Arana, Á. M., Mavrolampados, A., Thompson, M. R., Pokki, N. & Sams, M., 10 May 2022, In: Frontiers in Psychology. 13, 838041.

Processing of an Audiobook in the Human Brain Is Shaped by Cultural Family Background

Hakonen, M., Ikäheimonen, A., Hultèn, A., Kauttonen, J., Koskinen, M., Lin, F. H., Lowe, A., Sams, M. & Jääskeläinen, I. P., May 2022, In: BRAIN SCIENCES. 12, 5, p. 1-19 19 p., 649.

Body Maps of Loves

Rinne, P., Tavast, M., Glerean, E. & Sams, M., 1 Apr 2022.

Classification of emotion categories based on functional connectivity patterns of the human brain

Saarimäki, H., Glerean, E., Smirnov, D., Mynttinen, H., Jääskeläinen, I. P., Sams, M. & Nummenmaa, L., 15 Feb 2022, In: *NeuroImage*. 247, p. 1-10 10 p., 118800.

Emotion, psychophysiology, and intersubjectivity

Peräkylä, A., Voutilainen, L., Stevanovic, M., Henttonen, P., Kahri, M., Kivioja, M., Koskinen, E., Sams, M. & Ravaja, N., Nov 2021, *Intersubjectivity in Action. Studies in language and social interaction*. Lindström, J., Laury, R., Peräkylä, A. & Sorjonen, M-L. (eds.). John Benjamins Publishing Company, p. 303-327 25 p. (Pragmatics and Beyond New Series; vol. 3265).

Rhythmic Neural Patterns During Empathy to Vicarious Pain: Beyond the Affective-Cognitive Empathy Dichotomy

Zebarjadi, N., Adler, E., Kluge, A., Jääskeläinen, I. P., Sams, M. & Levy, J., 7 Jul 2021, In: *FRONTIERS IN HUMAN NEUROSCIENCE*. 15, 9 p., 708107.

Social pleasures of music

Nummenmaa, L., Putkinen, V. & Sams, M., Jun 2021, In: *Current Opinion in Behavioral Sciences*. 39, p. 196-202 7 p.

Movies and narratives as naturalistic stimuli in neuroimaging

Jääskeläinen, I. P., Sams, M., Glerean, E. & Ahveninen, J., 1 Jan 2021, In: *NeuroImage*. 224, 14 p., 117445.

A novel ultrasonic haptic device induces touch sensations with potential applications in neuroscience research

Hayward, N., Lewis, E., Perra, E., Jousmaki, V., Saarinen, V. M., McGlone, F., Sams, M. & Nieminen, H., 7 Sep 2020, *IUS 2020 - International Ultrasonics Symposium, Proceedings*. IEEE Computer Society, 4 p. 9251554. (IEEE International Ultrasonics Symposium).

Inter-subject Similarity of Brain Activity in Expert Musicians After Multimodal Learning: A Behavioral and Neuroimaging Study on Learning to Play a Piano Sonata

Fasano, M. C., Glerean, E., Gold, B. P., Sheng, D., Sams, M., Vuust, P., Rauschecker, J. P. & Brattico, E., 10 Aug 2020, In: *Neuroscience*. 441, p. 102-116 15 p.

Auditory representation of learned sound sequences in motor regions of the macaque brain

Archakov, D., DeWitt, I., Kuśmierk, P., Ortiz-Rios, M., Cameron, D., Cui, D., Morin, E. L., VanMeter, J. W., Sams, M., Jääskeläinen, I. P. & Rauschecker, J. P., 30 Jun 2020, In: *Proceedings of the National Academy of Sciences of the United States of America*. 117, 26, p. 15242-15252 11 p.

Social perspective-taking shapes brain hemodynamic activity and eye movements during movie viewing

Bacha-Trams, M., Ryyppö, E., Glerean, E., Sams, M. & Jääskeläinen, I. P., 11 May 2020, In: *Social Cognitive and Affective Neuroscience*. 15, 2, p. 175-191 17 p.

Empathic accuracy in design: Exploring design outcomes through empathic performance and physiology

Chang-Arana, A. M., Piispanen, M., Himberg, T., Surma-aho, A., Alho, J., Sams, M. & Holtta-Otto, K., 2020, In: *Design Science*. 6, 34 p., 16.

Emotions amplify speaker-listener neural alignment

Smirnov, D., Saarimäki, H., Glerean, E., Hari, R., Sams, M. & Nummenmaa, L., 1 Nov 2019, In: *Human Brain Mapping*. 40, 16, p. 4777-4788 12 p.

Opioidergic regulation of emotional arousal: A combined PET-fMRI study

Karjalainen, T., Seppälä, K., Glerean, E., Karlsson, H. K., Lahnakoski, J., Nuutila, P., Jääskeläinen, I., Hari, R., Sams, M. & Nummenmaa, L., Sep 2019, In: *Cerebral Cortex*. 29, 9, p. 4006-4016 11 p.

Contextual knowledge provided by a movie biases implicit perception of the protagonist

Afdile, M., Jääskeläinen, I. P., Glerean, E., Smirnov, D., Alho, J., Aïmälä, A. & Sams, M., 1 May 2019, In: *Social Cognitive and Affective Neuroscience*. 14, 5, p. 519-527 9 p.

Inferior parietal lobule and early visual areas support elicitation of individualized meanings during narrative listening
Saalasti, S., Alho, J., Bar, M., Glerean, E., Honkela, T., Kauppila, M., Sams, M. & Jääskeläinen, I. P., 1 May 2019, In: Brain and Behavior. 9, 5, p. 1-9 9 p., e01288.

Physiological responses to affiliation during conversation: Comparing neurotypical males and males with Asperger syndrome
Stevanovic, M., Henttonen, P., Koskinen, E., Peräkylä, A., von-Wendt, T. N., Sihvola, E., Tani, P., Ravaja, N. & Sams, M., 1 Jan 2019, In: PloS one. 14, 9, p. 1-19 e0222084.

A drama movie activates brains of holistic and analytical thinkers differentially
Bacha-Trams, M., Alexandrov, Y. I., Broman, E., Glerean, E., Kauppila, M., Kauttonen, J., Ryyppö, E., Sams, M. & Jääskeläinen, I. P., 9 Nov 2018, In: Social Cognitive and Affective Neuroscience. 13, 12, p. 1293-1304 12 p.

Reproducibility of importance extraction methods in neural network based fMRI classification
Gotsopoulos, A., Saarimäki, H., Glerean, E., Jääskeläinen, I. P., Sams, M., Nummenmaa, L. & Lampinen, J., 1 Nov 2018, In: NeuroImage. 181, p. 44-54 11 p.

Distributed affective space represents multiple emotion categories across the human brain
Saarimäki, H., Ejtehadian, L. F., Glerean, E., Jääskeläinen, I. P., Vuilleumier, P., Sams, M. & Nummenmaa, L., 1 May 2018, In: Social Cognitive and Affective Neuroscience. 13, 5, p. 471-482 12 p.

Empathy, challenge, and psychophysiological activation in therapist-client interaction
Voutilainen, L., Henttonen, P., Kahri, M., Ravaja, N., Sams, M. & Peräkylä, A., 11 Apr 2018, In: Frontiers in Psychology. 9, APR, 530.

Neuroanatomical substrate of noise sensitivity
Kliuchko, M., Puoliväli, T., Heinonen-Guzejev, M., Tervaniemi, M., Toiviainen, P., Sams, M. & Brattico, E., 15 Feb 2018, In: NeuroImage. 167, p. 309-315 7 p.

Distinct brain areas process novel and repeating tone sequences
Green, B., Jääskeläinen, I. P., Sams, M. & Rauschecker, J. P., Feb 2018, In: Brain and Language. 187, p. 104-114 11 p.

Event-related potentials during individual, cooperative, and competitive task performance differ in subjects with analytic vs. holistic thinking
Apanovich, V. V., Bezdenezhnykh, B. N., Sams, M., Jääskeläinen, I. P. & Alexandrov, Y. I., 1 Jan 2018, In: International Journal of Psychophysiology. 123, p. 136-142 7 p.

Brain-to-brain hyperclassification reveals action-specific motor mapping of observed actions in humans
Smirnov, D., Lachat, F., Peltola, T., Lahnakoski, J., Koistinen, O-P., Glerean, E., Vehtari, A., Hari, R., Sams, M. & Nummenmaa, L., 11 Dec 2017, In: PloS one. 12, 12, e0189508.

Differential inter-subject correlation of brain activity when kinship is a variable in moral dilemma
Bacha-Trams, M., Glerean, E., Dunbar, R., Lahnakoski, J. M., Ryyppö, E., Sams, M. & Jääskeläinen, I. P., 1 Dec 2017, In: Scientific Reports. 7, 1, p. 1-16 14244.

Predictive processing increases intelligibility of acoustically distorted speech: Behavioral and neural correlates
Hakonen, M., May, P. J. C., Jääskeläinen, I., Jokinen, E., Sams, M. & Tiitinen, H., Sep 2017, In: Brain and Behavior. 7, 9, 15 p., e00789.

Distributed neural signatures of natural audiovisual speech and music in the human auditory cortex
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Dissociable roles of cerebral μ -opioid and type 2 dopamine receptors in vicarious pain: A combined PET-fMRI study
Karjalainen, T., Karlsson, H. K., Lahnakoski, J. M., Glerean, E., Nuutila, P., Jääskeläinen, I. P., Hari, R., Sams, M. & Nummenmaa, L., 1 Aug 2017, In: *Cerebral Cortex*. 27, 8, p. 4257-4266 10 p.

Neural mechanisms for integrating consecutive and interleaved natural events
Lahnakoski, J., Jääskeläinen, I., Sams, M. & Nummenmaa, L., Jul 2017, In: *Human Brain Mapping*. 38, 7, p. 3360–3376

Social laughter triggers endogenous opioid release in humans
Manninen, S., Tuominen, L., Dunbar, R. I., Karjalainen, T., Hirvonen, J., Arponen, E., Hari, R., Jääskeläinen, I. P., Sams, M. & Nummenmaa, L., 21 Jun 2017, In: *JOURNAL OF NEUROSCIENCE*. 37, 25, p. 6125-6131 7 p.

Sequentiality, mutual visibility, and behavioral matching: Body sway and pitch register during joint decision making
Stevanovic, M., Himberg, T., Niinisalo, M., Kahri, M., Peräsalo, A., Sams, M. & Hari, R., Mar 2017, In: *RESEARCH ON LANGUAGE AND SOCIAL INTERACTION*. 50, 1, p. 33–53 21 p.

Consistency of Regions of Interest as nodes of fMRI functional brain networks
Korhonen, O., Saarimäki, H., Glerean, E., Sams, M. & Saramäki, J., 2017, In: *Network Neuroscience*. 1, 3, p. 254-274

Graph coarse-graining reveals differences in the module-level structure of functional brain networks
Kujala, R., Glerean, E., Pan, R. K., Jääskeläinen, I. P., Sams, M. & Saramäki, J., 1 Nov 2016, In: *European Journal of Neuroscience*. 44, 9, p. 2673-2684 12 p.

Social touch modulates endogenous μ -opioid system activity in humans
Nummenmaa, L., Tuominen, L., Dunbar, R., Hirvonen, J., Manninen, S., Arponen, E., Machin, A., Hari, R., Jääskeläinen, I. P. & Sams, M., 1 Sep 2016, In: *NeuroImage*. 138, p. 242-247 6 p.

Hidden sources of joy, fear, and sadness: Explicit versus implicit neural processing of musical emotions
Bogert, B., Numminen-Kontti, T., Gold, B., Sams, M., Numminen, J., Burunat, I., Lampinen, J. & Brattico, E., 1 Aug 2016, In: *Neuropsychologia*. 89, p. 393-402 10 p.

Attending to and neglecting people: Bridging neuroscience, psychology and sociology
Hari, R., Sams, M. & Nummenmaa, L., 5 May 2016, In: *PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B: BIOLOGICAL SCIENCES*. 371, 1693, p. 1-9 20150365.

Theme issue 'Attending to and neglecting people' compiled and edited by Riitta Hari, Lauri Nummenmaa and Mikko Sams
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Behavioural activation system sensitivity is associated with cerebral μ -opioid receptor availability
Karjalainen, T., Tuominen, L., Manninen, S., Kalliokoski, K. K., Nuutila, P., Jääskeläinen, I., Hari, R., Sams, M. & Nummenmaa, L., 6 Apr 2016, In: *Social Cognitive and Affective Neuroscience*. 11, 8, p. 1310–1316 7 p.

Early-latency categorical speech sound representations in the left inferior frontal gyrus
Alho, J., Green, B. M., May, P. J. C., Sams, M., Tiitinen, H., Rauschecker, J. P. & Jääskeläinen, I. P., 1 Apr 2016, In: *NeuroImage*. 129, p. 214-223 10 p.

Reorganization of functionally connected brain subnetworks in high-functioning autism
Glerean, E., Pan, R. K., Salmi, J., Kujala, R., Lahnakoski, J. M., Roine, U., Nummenmaa, L., Leppämäki, S., Nieminen-von Wendt, T., Tani, P., Saramäki, J., Sams, M. & Jääskeläinen, I. P., 1 Mar 2016, In: *Human Brain Mapping*. 37, 3, p. 1066-1079 14 p.

Neural mechanisms supporting evaluation of others' errors in real-life like conditions
Jääskeläinen, I. P., Halme, H-L., Agam, Y., Glerean, E., Lahnakoski, J. M., Sams, M., Tapani, K., Ahveninen, J. & Manoach, D. S., 5 Jan 2016, In: *Scientific Reports*. 6, 10 p., 18714.

Interacting parallel pathways associate sounds with visual identity in auditory cortices

Ahveninen, J., Huang, S., Ahlfors, S. P., Hämäläinen, M., Rossi, S., Sams, M. & Jääskeläinen, I., 1 Jan 2016, In: NeuroImage. 124, p. 858-868 11 p.

The reliability of continuous brain responses during naturalistic listening to music

Burunat, I., Toiviainen, P., Alluri, V., Bogert, B., Ristaniemi, T., Sams, M. & Brattico, E., 1 Jan 2016, In: NeuroImage. 124, p. 224-231 8 p.

Discrete neural signatures of basic emotions

Saarimäki, H., Gotsopoulos, A., Jääskeläinen, I. P., Lampinen, J., Vuilleumier, P., Hari, R., Sams, M. & Nummenmaa, L., 2016, In: Cerebral Cortex. 26, 6, p. 2563-2573 11 p.

Tarinankerronnan psykofysiologiaa

Peräkylä, A., Voutilainen, L., Henttonen, P., Kahri, M., Stevanovic, T. M., Sams, M. & Ravaja, N., 2016, In: SOSIOLOGIA. 53, 3, p. 258-274

РАЗЛИЧИЯ МОЗГОВОГО ОБЕСПЕЧЕНИЯ ИНДИВИДУАЛЬНОГО, КООПЕРАТИВНОГО И КОНКУРЕНТНОГО ПОВЕДЕНИЯ У СУБЪЕКТОВ С АНАЛИТИЧЕСКИМ И ХОЛИСТИЧЕСКИМ КОГНИТИВНЫМИ СТИЛЯМИ

Apanovich, V. V., Bezdenezhnykh, B. N., Znakov, V. V., Sams, M., Jääskeläinen, I. & Aleksandrov, Y. I., 2016, In: Eksperimental'naya Psikhologiya. 9, 2, p. 5-22 18 p.

Adult attachment style is associated with cerebral μ -opioid receptor availability in humans

Nummenmaa, L., Manninen, S., Tuominen, L., Hirvonen, J., Kallioikoski, K. K., Nuutila, P., Jääskeläinen, I. P., Hari, R., Dunbar, R. I. M. & Sams, M., Sep 2015, In: Human Brain Mapping. 36, 9, p. 3621-3628 8 p.

Facilitated early cortical processing of nude human bodies

Alho, J., Salminen, N., Sams, M., Hietanen, J. K. & Nummenmaa, L., Jul 2015, In: Biological Psychology. 109, p. 103-110 8 p.

Functional MRI of the vocalization-processing network in the macaque brain

Ortiz-Rios, M., Kusmierek, W., DeWitt, I., Archakov, D., Azevedo, F. A. C., Sams, M., Jaaskelainen, I. P., Keliris, G. A. & Rauschecker, J. P., 1 Apr 2015, In: Frontiers in Neuroscience. 9, p. 1-10 10 p., 113.

Constrained spherical deconvolution-based tractography and tract-based spatial statistics show abnormal microstructural organization in Asperger syndrome

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Abnormal wiring of the connectome in adults with high-functioning autism spectrum disorder

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Action in Perception: Prominent Visuo-Motor Functional Symmetry in Musicians during Music Listening

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Ihmisen mieli

Hari, R., Järvinen, J., Lehtonen, J., Lonka, K., Peräkylä, A., Pyysiäinen, I., Salenius, S., Sams, M. & Ylikoski, P., 2015, Helsinki: GAUDEAMUS. 205 p.

Sharing the emotional load : Recipient affiliation calms down the storyteller

Perakyla, A., Henttonen, P., Voutilainen, L., Kahri, M., Stevanovic, M., Sams, M. & Ravaja, N., 2015, In: SOCIAL PSYCHOLOGY QUARTERLY. 78, 4, p. 301-323 23 p.

Emotional speech synchronizes brains across listeners and engages large-scale dynamic brain networks

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Synchronous brain activity across individuals underlies shared psychological perspectives

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Fronto-parietal network supports context-dependent speech comprehension

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Posterior parietal cortex activity reflects the significance of others' actions during natural viewing

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Effect of attentional load on audiovisual speech perception: Evidence from ERPs

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Affective stance, ambivalence, and psychophysiological responses during conversational storytelling

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Enhanced neural synchrony between left auditory and premotor cortex is associated with successful phonetic categorization

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Mental Action Simulation Synchronizes Action-Observation Circuits across Individuals

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Increased coherence of white matter fiber tract organization in adults with Asperger syndrome: a diffusion tensor imaging study

Roine, U., Roine, T., Salmi, J., Nieminen-Von Wendt, T., Leppämäki, S., Rintahaka, P., Tani, P., Leemans, A., Sams, M. & Roine, T., Dec 2013, In: *AUTISM RESEARCH*. 6, 6, p. 642-650 9 p.

DID YOU HEAR THAT TOO? EMOTIONS MAKE BRAINS TICK TOGETHER DURING SPOKEN DISCOURSE PROCESSING

Nummenmaa, L., Heikkilä, H., Gotsopoulos, A., Glerean, E., Jääskeläinen, I., Hari, R. & Sams, M., 2013, In: *Journal of Cognitive Neuroscience*. p. 183-183 1 p.

DID YOU HEAR THAT TOO? EMOTIONS MAKE BRAINS TICK TOGETHER DURING SPOKEN DISCOURSE PROCESSING

Nummenmaa, L., Heikkilä, H., Gotsopoulos, A., Glerean, E., Jaaskelainen, I. P., Hari, R. & Sams, M., 2013, *Conference: 20th Annual Meeting of the Cognitive-Neuroscience-Society Location: San Francisco, CA Date: APR 13-16, 2013*. p. 183-183

DYNAMIC LARGE-SCALE BRAIN NETWORKS FOR EMOTIONAL PROCESSING

Glerean, E., Pan, R. K., Sams, M. & Nummenmaa, L., 2013, In: *Journal of Cognitive Neuroscience*. p. 97-97 1 p.

Silent lipreading and covert speech production suppress processing of non-linguistic sounds in auditory cortex

Balk, M.H., Kari, H., Kauramäki, J., Ahveninen, J., Sams, M., Autti, T. & Jaaskelainen, I. P., 2013, In: *OPEN JOURNAL OF NEUROSCIENCE*. 3, 3

The brains of high functioning autistic individuals do not synchronize with those of others

Salmi, J., Roine, U., Glerean, E., Lahnakoski, J., Nieminen-von Wendt, T., Tani, P., Leppämäki, S., Nummenmaa, L., Jääskeläinen, I. P., Carlson, S., Rintahaka, P. & Sams, M., 2013, In: NEUROIMAGE. CLINICAL. 3, p. 489-497 9 p.

Visual task enhances spatial selectivity in the human auditory cortex

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Representation of perceived sound valence in the human brain

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Naturalistic fMRI mapping reveals superior temporal sulcus as the hub for the distributed brain network for social perception

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Valence Scaling of Dynamic Facial Expressions is Altered in High-Functioning Subjects with Autism Spectrum Disorders: an fMRI Study

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Enhanced early-latency electromagnetic activity in the left premotor cortex is associated with successful phonetic categorization

Alho, J., Sato, M., Sams, M., Schwartz, J.-L., Tiitinen, H. & Jääskeläinen, I. P., 1 May 2012, In: NeuroImage. 60, 4, p. 1937-1946 10 p.

Large-scale brain networks emerge from dynamic processing of musical timbre, key and rhythm

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Brain state-triggered stimulus delivery: an efficient tool for probing ongoing brain activity

Andermann, M. L., Kauramäki, J., Palomäki, T., Moore, C. I., Hari, R., Jääskeläinen, I. P. & Sams, M., 2012, In: OPEN JOURNAL OF NEUROSCIENCE. 2, 5, p. 1-18

Emotions promote social interaction by synchronizing brain activity across individuals

Nummenmaa, L., Glerean, E., Viinikainen, M., Jääskeläinen, I., Hari, R. & Sams, M., 2012, In: Proceedings of the National Academy of Sciences of the United States of America. 109, 24, p. 9599-9604 6 p.

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Networks of Emotion Concepts

Toivonen, R., Kivela, M., Saramaki, J., Viinikainen, M., Vanhatalo, M. & Sams, M., 2012, In: PloS one. 7, 1, p. 1-14 14 p., e28883.

Neural processing of emotional valence of facial expressions

Viinikainen, M., Jääskeläinen, I. P., Balk, M.H., Autti, T. & Sams, M., 2012, In: OPEN JOURNAL OF NEUROSCIENCE. 2, 3, p. 1-20

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Imada, T., Hari, R., Loveless, N., McEvoy, L. & Sams, M., Sep 1993, In: Electroencephalography and clinical Neurophysiology. 87, 3, p. 144-153 10 p.

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Human auditory cortical mechanisms of sound lateralization: II. Interaural time differences at sound onset

McEvoy, L., Hari, R., Imada, T. & Sams, M., May 1993, In: Hearing Research. 67, 1-2, p. 98-109 12 p.

Human auditory cortical mechanisms of sound lateralization: I. Interaural time differences within sound

Sams, M., Hämäläinen, M., Hari, R. & McEvoy, L., May 1993, In: Hearing Research. 67, 1-2, p. 89-97 9 p.

ABSOLUTE PITCH AND EVENT-RELATED BRAIN POTENTIALS

TERVANIEMI, M., ALHO, K., PAAVILAINEN, P., SAMS, M. & NAATANEN, R., 1993, In: Music Perception. 10, 3, p. 305-316 12 p.

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Levänen, S., Ahonen, A., Hämäläinen, M., Hari, R., Lounasmaa, O. V., Mäkelä, J. P., McEvoy, L., Pardo, P. J. & Sams, M., 1993, Vienna, p. 134-135, (9th International Conference on Biomagnetism, Vienna, Itävalta, 14.-20.8.1993).

Event-related potentials to repetition and change of auditory stimuli

Ritter, W., Paavilainen, P., Lavikainen, J., Reinikainen, K., Alho, K., Sams, M. & Näätänen, R., Nov 1992, In: *Electroencephalography and clinical Neurophysiology*. 83, 5, p. 306-321 16 p.

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Hari, R., Rif, J., Tiihonen, J. & Sams, M., Feb 1992, In: *Electroencephalography and clinical Neurophysiology*. 82, 2, p. 152-154 3 p.

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Mismatch responses to changes in single auditory stimulus features are additive

Levänen, S., Hari, R., McEvoy, L. & Sams, M., 1992, Helsinki, (Third Nordic Meeting in Psychophysiology, m/s Cinderella, Tukholma-Helsinki-Tukholma, 15.-17.9.1992).

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Sams, M., 1992, In: *BIOMEDICAL RESEARCH-TOKYO*. 13, p. 57-60 4 p.

NEUROMAGNETIC CORRELATES OF AUDIOVISUAL SPEECH-PERCEPTION

AULANKO, R. & SAMS, M., 1992, In: *INTERNATIONAL JOURNAL OF PSYCHOLOGY*. 27, 3-4, p. 88-88 1 p.

Auditory attention affects two different areas in the human supratemporal cortex

Rif, J., Hari, R., Hämäläinen, M. S. & Sams, M., Dec 1991, In: *Electroencephalography and clinical Neurophysiology*. 79, 6, p. 464-472 9 p.

Seeing speech: visual information from lip movements modifies activity in the human auditory cortex

Sams, M., Aulanko, R., Hämäläinen, M., Hari, R., Lounasmaa, O. V., Lu, S. T. & Simola, J., 10 Jun 1991, In: *Neuroscience Letters*. 127, 1, p. 141-145 5 p.

Right hemisphere dominance of different mismatch negativities

Paavilainen, P., Alho, K., Reinikainen, K., Sams, M. & Näätänen, R., Jun 1991, In: *Electroencephalography and clinical Neurophysiology*. 78, 6, p. 466-479 14 p.

Neuromagnetic responses of the human auditory cortex to short frequency glides

Sams, M. & Näätänen, R., 2 Jan 1991, In: *Neuroscience Letters*. 121, 1-2, p. 43-46 4 p.

Cortical activity elicited by changes in auditory stimuli: Different sources for the magnetic N100m and mismatch responses
Sams, M., Kaukoranta, E., Hämäläinen, M. & Naatanen, R., Jan 1991, In: *Psychophysiology*. 28, 1, p. 21-29 9 p.

Cortical responses to changes in auditory stimuli: Magnetoencephalographic studies
Sams, M., 1991, In: *ACTA OTO-LARYNGOLOGICA: SUPPLEMENT*. 111, 491, p. 124-131 8 p.

Seeing faces activates three separate areas outside the occipital visual cortex in man
Lu, S. T., Hämäläinen, M. S., Hari, R., Ilmoniemi, R. J., Lounasmaa, O. V., Sams, M. & Vilkmann, V., 1991, In: *Neuroscience*. 43, 2-3, p. 287-290 4 p.

The effect of small variation of the frequent auditory stimulus on the event-related brain potential to the infrequent stimulus
Winkler, I., Paavilainen, P., Alho, K., Reinikainen, K., Sams, M. & Naatanen, R., Mar 1990, In: *Psychophysiology*. 27, 2, p. 228-235 8 p.

Human somatosensory evoked potentials to mechanical pulses and vibration: contributions of SI and SII somatosensory cortices to P50 and P100 components
Hämäläinen, H., Kekoni, J., Sams, M., Reinikainen, K. & Näätänen, R., Feb 1990, In: *Electroencephalography and clinical Neurophysiology*. 75, 2, p. 13-21 9 p.

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Mismatch negativity (MMN) for sequences of auditory and visual stimuli: evidence for a mechanism specific to the auditory modality
Nyman, G., Alho, K., Laurinen, P., Paavilainen, P., Radil, T., Reinikainen, K., Sams, M. & Näätänen, R., 1990, In: *Electroencephalography and Clinical Neurophysiology/ Evoked Potentials*. 77, 6, p. 436-444 9 p.

Separate finger representations at the human second somatosensory cortex
Hari, R., Hämäläinen, H., Hämäläinen, M., Kekoni, J., Sams, M. & Tiihonen, J., 1990, In: *Neuroscience*. 37, 1, p. 245-249 5 p.

Event-related brain potentials reflecting processing of relevant and irrelevant stimuli during selective listening
Alho, K., Sams, M., Paavilainen, P., Reinikainen, K. & Naatanen, R., Sep 1989, In: *Psychophysiology*. 26, 5, p. 514-528 15 p.

MISMATCH NEGATIVITY IN AUDITORY STIMULUS SERIES OF VARIED STANDARDS
Winkler, I., Paavilainen, P., Alho, K., Reinikainen, K., Sams, M. & Näätänen, R., Aug 1989, In: *International Journal of Psychophysiology*. 7, 2-4, p. 439-440 2 p.

Mismatch negativity of the event-related brain potential (ERP) - A review
Näätänen, R., Alho, K., Paavilainen, P., Reinikainen, K. & Sams, M., Aug 1989, In: *International Journal of Psychophysiology*. 7, 2-4, p. 326-327 2 p.

Reactions of human auditory cortex to a change in tone duration
Kaukoranta, E., Sams, M., Hari, R., Hämäläinen, M. & Näätänen, R., Aug 1989, In: *Hearing Research*. 41, 1, p. 15-21 7 p.

Scalp distribution of the mismatch negativity in the auditory event-related brain potential to an infrequent stimulus change
Alho, K., Paavilainen, P., Reinikainen, K., Sams, M. & Näätänen, R., Aug 1989, In: *International Journal of Psychophysiology*. 7, 2-4, p. 115-116 2 p.

Do event-related potentials reveal the mechanism of the auditory sensory memory in the human brain?
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Näätänen, R., Sams, M., Alho, K., Paavilainen, P., Reinikainen, K. & Sokolov, E. N., Jun 1988, In: *Electroencephalography and clinical Neurophysiology*. 69, 6, p. 523-531 9 p.

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RADIL, T., SAMS, M., PAAVILAINEN, P., REINIKAINEN, K., ALHO, K., NAATANEN, R., NYMAN, G. & LAURINEN, P., 1988, In: *ESTETIKA: THE CENTRAL EUROPEAN JOURNAL OF AESTHETICS*. 37, 4, p. 363-363 1 p.

NO VISUAL MISMATCH POTENTIAL FOUND

RADIL, T., NYMAN, G., LAURINEN, P., SAMS, M., PAAVILAINEN, P., REINIKAINEN, K., ALHO, K. & NAATANEN, R., 1988, In: *Activitas nervosa superior*. 30, 4, p. 282-283 2 p.

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Alho, K., Töttölä, K., Reinikainen, K., Sams, M. & Näätänen, R., Nov 1987, In: *Electroencephalography and Clinical Neurophysiology/ Evoked Potentials*. 68, 6, p. 458-470 13 p.

AUTONOMIC CONCOMITANTS OF EVENT-RELATED POTENTIALS IN THE AUDITORY ODDBALL PARADIGM

LYYTINEN, H., NAATANEN, R., ALHO, K., ANTERVO, A., BLOMBERG, AP., IKONEN, T., LEPPASAARI, T., PAAVILAINEN, P., REINIKAINEN, K. & SAMS, M., Sep 1987, In: *Psychophysiology*. 24, 5, p. 600-600 1 p.

Stimulus selection during auditory spatial attention as expressed by event-related potentials

Alho, K., Donauer, N., Paavilainen, P., Reinikainen, K., Sams, M. & Näätänen, R., Apr 1987, In: *Biological Psychology*. 24, 2, p. 153-162 10 p.

BRAIN RESPONSES TO INFREQUENT INTENSITY INCREASES AND DECREASES IN A SEQUENCE OF AUDITORY-STIMULI

NAATANEN, R., PAAVILAINEN, P., ALHO, K., REINIKAINEN, K. & SAMS, M., 1987, In: *International Journal of Neuroscience*. 34, 3-4, p. 222-222 1 p.

DISAPPEARANCE OF MISMATCH NEGATIVITY DURING SLEEP

CAMMANN, R., PAAVILAINEN, P., ALHO, K., NAATANEN, R., REINIKAINEN, K. & SAMS, M., 1987, In: *International Journal of Neuroscience*. 34, 3-4, p. 154-155 2 p.

Separability of different negative components of the event-related potential associated with auditory stimulus processing

Alho, K., Paavilainen, P., Reinikainen, K., Sams, M. & Näätänen, R., Nov 1986, In: *Psychophysiology*. 23, 6, p. 613-623 11 p.

Small pitch separation and the selective-attention effect on the ERP

Alho, K., Sams, M., Paavilainen, P. & Naatanen, R., Mar 1986, In: *Psychophysiology*. 23, 2, p. 189-197 9 p.

Auditory frequency discrimination and event-related potentials

Sams, M., Paavilainen, P., Alho, K. & Näätänen, R., Nov 1985, In: *Electroencephalography and Clinical Neurophysiology/ Evoked Potentials*. 62, 6, p. 437-448 12 p.

Cerebral neuromagnetic responses evoked by short auditory stimuli

Sams, M., Hämäläinen, M., Antervo, A., Kaukoranta, E., Reinikainen, K. & Hari, R., Oct 1985, In: *Electroencephalography and clinical Neurophysiology*. 61, 4, p. 254-266 13 p.

Responses of the primary auditory cortex to pitch changes in a sequence of tone pips: Neuromagnetic recordings in man

Hari, R., Hämäläinen, M., Ilmoniemi, R., Kaukoranta, E., Reinikainen, K., Alho, K., Näätänen, R., Sams, M. & Salminen, J., 7 Sep 1984, In: *Neuroscience Letters*. 50, 1-3, p. 127-132 6 p.

Short-term habituation and dishabituation of the mismatch negativity of the ERP

Sams, M., Alho, K. & Naatanen, R., Jul 1984, In: Psychophysiology. 21, 4, p. 434-441 8 p.

Sequential effects on the ERP in discriminating two stimuli

Sams, M., Alho, K. & Näätänen, R., Aug 1983, In: Biological Psychology. 17, 1, p. 41-58 18 p.

DETERMINATION OF THE ACTIVITY OF MOTOR CORTEX NEURONS IN BEHAVIOR

ALEXANDROV, YI., GRINCHENKO, YV., SHVYRKOV, VB., JÄRVILEHTO, T. & SAMS, M., 1983, In: PSIKHOLOGICHESKII ZHURNAL. 4, 2, p. 74-86 13 p.

Auditory evoked transient and sustained potentials in the human EEG: I. Effects of expectation of stimuli

Hari, R., Sams, M. & Järvilehto, T., Dec 1979, In: Psychiatry Research. 1, 3, p. 297-306 10 p.

Auditory evoked transient and sustained potentials in the human EEG: II. Effects of small doses of ethanol

Hari, R., Sams, M. & Järvilehto, T., Dec 1979, In: Psychiatry Research. 1, 3, p. 307-312 6 p.

Effect of stimulus repetition on negative sustained potentials elicited by auditory and visual stimuli in the human EEG

Järvilehto, T., Hari, R. & Sams, M., Sep 1978, In: Biological Psychology. 7, 1-2, p. 1-12 12 p.

Activities

NATURALISTIC EXPERIMENTAL APPROACHES TO MECHANISMS OF HUMAN BEHAVIOR: RELEVANT FOR STUDYING ABSTRACT CONCEPTS?

Mikko Sams (Invited speaker)

15 Mar 2021 → 17 Mar 2021

7 Experiences – Aalto Experience Summit to endorse Experience Research as a multidisciplinary research field

Mikko Sams (Chair)

1 Sep 2020 → 2 Sep 2020

Emotions: in evolution, in body, in brain

Mikko Sams (Speaker)

25 Feb 2019 → 26 Feb 2019

History of Emotions

Mikko Sams (Organiser)

7 Nov 2018 → 8 Nov 2018

Ihmisaivojen toiminnan mittaaminen taidekokemuksen kuluessa

Mikko Sams (Speaker)

6 Nov 2018

Your in-group influences how you see others

Mikko Sams (Speaker)

21 Oct 2018

International Conference on Cognitive Science

Mikko Sams (Chair)

18 Oct 2018 → 21 Oct 2018

Psychological Human Cognitive Neuroscience

Mikko Sams (Keynote speaker)

18 Oct 2018 → 21 Oct 2018

Decoding Emotions from Brain Activity

Mikko Sams (Speaker)

11 Oct 2018 → 12 Oct 2018

Examiner and opponent in Århus Universitet

Mikko Sams (Examiner)

28 Jun 2018

Expert evaluator of the planned programme "Biomedical and Health Engineering"

Mikko Sams (Reviewer)

10 Jun 2018

Hybrid Labs Symposium

Mikko Sams (Speaker)

31 May 2018

Making cognitive neuroscience more psychological.

Mikko Sams (Speaker)

1 Nov 2017

Making cognitive neuroscience more psychological.

Mikko Sams (Speaker)

29 Oct 2017

Experience Platform (Event)

Mikko Sams (Member)

1 Sep 2017 → ...

Kohti psykologista neurotiedettä.

Mikko Sams (Speaker)

28 Apr 2017

Evaluator for Assistant Professorship in University of Nottingham

Mikko Sams (Examiner)

2017

Early years of N100 and Mismatch Negativity Response in human auditory neuroscience.

Mikko Sams (Speaker)

7 Nov 2016

Neurocognition of shared reality.

Mikko Sams (Speaker)

31 Oct 2016

Aarhus University

Mikko Sams (Visiting researcher)

1 Sep 2016 → 30 Nov 2016

Homophilic Brains?

Mikko Sams (Speaker)

28 Apr 2016

Evaluator for promotion to Full Professorhip, Harvard Medical School

Mikko Sams (Reviewer)
2016

Attending and Neglecting People

Mikko Sams (Member)
16 May 2015 → 20 May 2015

Neural duets: Shared understanding between two brains that are watching movies.

Mikko Sams (Speaker)
29 Jan 2015

Evaluator for Associate Professorship in University of Oxford

Mikko Sams (Examiner)
2015

Neural duets: Shared understanding between two brains that are watching movies

Mikko Sams (Speaker)
14 Nov 2014 → 15 Nov 2014

Studying brain under naturalistic conditions

Mikko Sams (Speaker)
2 Jun 2014

Uri Hasson

Mikko Sams (Host)
1 Jan 2014

Aalto University (Organisational unit)

Mikko Sams (Chair)
2014 → 2017

Aalto University (Organisational unit)

Mikko Sams (Chair)
2014 → 2017

COGNITION AND EMOTION (Journal)

Mikko Sams (Editor)
2014 → 2017

Lyon Neuroscience Research Centre

Mikko Sams (Visiting researcher)
2014

Northwestern University

Mikko Sams (Visiting researcher)
2014

PloS one (Journal)

Mikko Sams (Editor)
2014 → 2017

The Neurosciences and Music V, Dijon, 29.5.-1.6.2014, France

Mikko Sams (Contributor)
2014

Processing of emotional valence in the brain.

Mikko Sams (Speaker)

11 Jun 2013 → 15 Jun 2013

Brain activity during listening to music and experiencing feelings: naturalistic approach.

Mikko Sams (Speaker)

29 Apr 2013

Real-world (almost) caused brain activity.

Mikko Sams (Speaker)

22 Apr 2013

Real-world (almost) caused brain activity.

Mikko Sams (Speaker)

18 Apr 2013

Studying social brains in real world.

Mikko Sams (Speaker)

12 Apr 2013

Intersubjectivity in cognitive neuroscience: Experimentalist's point of view.

Mikko Sams (Speaker)

5 Apr 2013

Studying Emotions and music in aivoAALTO project

Mikko Sams (Speaker)

8 Mar 2013

Alin Coman

Mikko Sams (Host)

1 Jan 2013

2013, San Francisco, USA; 13.-16.4.2013, United States

Mikko Sams (Contributor)

2013

Aalto University (Organisational unit)

Mikko Sams (Member)

2013 → 2017

Princeton University

Mikko Sams (Visiting researcher)

2013

Aalto University (Organisational unit)

Mikko Sams (Member)

2012 → 2017

Aalto University (Organisational unit)

Mikko Sams (Chair)

2012 → 2015

Doctoral thesis opponent at Aalto University

Mikko Sams (Opponent)
2012

University of Oxford

Mikko Sams (Visiting researcher)
2012

David McAlpine

Mikko Sams (Host)
1 Jan 2011

14th International Congress of ESCAP - European Society for Child and Adolescent Psychiatry, Finland

Mikko Sams (Contributor)
2011

34th ARO MidWinter Meeting, Baltimore, Maryland, USA, February 19-23, 2011, USA

Mikko Sams (Contributor)
2011

34th ARO MidWinter Meeting, Baltimore, Maryland, USA, February 19-23, 2011, USA

Mikko Sams (Contributor)
2011

Georgetown University

Mikko Sams (Visiting researcher)
2011

Invited talk in seminar of the Leibniz Institute for Neurobiology, Center for Learning and Memory Research, June 7, 2011, Germany

Mikko Sams (Contributor)
2011

Northwestern University

Mikko Sams (Visiting researcher)
2011

Seminar in University Medical Center (CMU), University of Geneva, Switzerland

Mikko Sams (Contributor)
2011

The Embodied Mind: Motion in Communication and Cognition Research, RWTH Aachen University, Germany, 8.-9.4.2011, Germany

Mikko Sams (Contributor)
2011

Yhteistyötapaaminen Emotions in science and art, Portugal

Mikko Sams (Contributor)
2010

2nd International Conference on Imaging in Neuroscience, Tromsø, 9.-13.9.2009, Norway

Mikko Sams (Speaker)
2009

Brain-Learning-Education Network (External organisation)

Mikko Sams (Chair)

2009 → 2010

Evaluator for promotion to Associate Adjunct Professor, UCSD, USA

Mikko Sams (Reviewer)

2009

FRONTIERS IN HUMAN NEUROSCIENCE (Journal)

Mikko Sams (Editor)

2009 → 2017

Harry Bronson

Mikko Sams (Host)

2009

Jean-Luc Schwartz

Mikko Sams (Host)

2009

Kelly Spencer

Mikko Sams (Host)

2009

Learning Mind and Brain, Moscow, 16.-20.11.2009, Russia

Mikko Sams (Contributor)

2009

Marc Sato

Mikko Sams (Host)

2009

Marshall Dawson

Mikko Sams (Host)

2009

Nina Kraus

Mikko Sams (Host)

2009

RIKEN BSI Joint Workshop on Cognitive and Social Brain, Tokyo, 25.-26.5.2009, Japan

Mikko Sams (Speaker)

2009

Acoustics

Mikko Sams (Chair)

2008

Acoustics'08 kokous, Pariisi, 27.6.-5.7. 2008, France

Mikko Sams (Contributor)

2008

Alfred Kordelin Foundation (External organisation)

Mikko Sams (Member)

2008 → 2014

Christian Benoit Muistosymposium, Grenoble, 27.-31.10.2008, France

Mikko Sams (Speaker)
2008

Evaluator for promotion to associate professor, Harvard University, USA

Mikko Sams (Reviewer)
2008

Foreign Organisation

Mikko Sams (Visiting researcher)
2008

International Organization of Psychology annual meeting, Pietari, 11.-13.9.2008., Russia

Mikko Sams (Speaker)
2008

Lyon Neuroscience Research Center

Mikko Sams (Visiting researcher)
2008

HCSNet SummerFest

Mikko Sams (Member)
2007

HCSNet SummerFest '07, University of New South Wales, Sydney, Desember 3-7, 2007, Australia

Mikko Sams (Contributor)
2007

Kylliäinen, Anneli (University of Tampere) Finland

Mikko Sams (Examiner)
2007

Kylliäinen, Anneli (University of Tampere) Finland

Mikko Sams (Opponent)
2007

Northwestern University, USA, October 15, 2007, USA

Mikko Sams (Contributor)
2007

Anu Kujala (Helsinki University, Department of Psychology) Finland

Mikko Sams (Opponent)
2006

Brain Awareness week, Helsinki Collegium for Advanced Studies, March 16th, Finland

Mikko Sams (Speaker)
2006

Chris Davis

Mikko Sams (Host)
2006

Cross-modal interaction in natural and artificial cognitive systems (CINACS), Hamburg, September 28, 2006, Germany
Mikko Sams (Speaker)
2006

International Cerebral Palsy Conference, Oulu, February 2-5, 2006, Finland
Mikko Sams (Speaker)
2006

Josef Raucher
Mikko Sams (Host)
2006

PENS/Hertie Winter School 2006. Brain Basis of Social Interaction: From Concepts to Imaging, Kitzbuhel, Austria, December 10-17, 2006, Austria
Mikko Sams (Speaker)
2006

R. Holland Cheng
Mikko Sams (Host)
2006

University of Helsinki (External organisation)
Mikko Sams (Chair)
2006 → 2017

Vesa Talvitie (Helsinki University, Department of Psychology) Finland
Mikko Sams (Examiner)
2006

Yurii Alaxandrov
Mikko Sams (Host)
2006

Doctoral thesis opponent at University of Oxford, UK
Mikko Sams (Opponent)
2005

Evaluator for promotion of associate professor to full professor, Tilburg University, The Netherlands
Mikko Sams (Reviewer)
2005

Määttä, Sara (Kuopion yliopisto)
Mikko Sams (Examiner)
2005

8th International Congress on Spoken Language Processing, Jeju, South-Korea, October 4-8, 2004, South-Korea
Mikko Sams (Contributor)
2004

Evaluator for promotion for a position of associate professor in radiology: Giorgio Bonmassar, Harvard Medical School
Mikko Sams (Reviewer)
2004

Brain Research (Journal)
Mikko Sams (Editorial board member)

2002

Human Brain Mapping (Journal)

Mikko Sams (Editorial board member)
2002

Journal of Cognitive Neuroscience (Journal)

Mikko Sams (Editorial board member)
2002

Psychophysiology (Journal)

Mikko Sams (Editorial board member)
2002

Aalto University (Organisational unit)

Mikko Sams (Member)
2001 → 2017

Yurii Alexandrov

Mikko Sams (Host)
2001

Doctoral thesis opponent at University of Helsinki

Mikko Sams (Opponent)
2000

Polysteekki (Journal)

Mikko Sams (Editorial board member)
2000 → 2008

Dominic Massaro

Mikko Sams (Host)
1998

Donald Schankweiler

Mikko Sams (Host)
1998

Yurii Alexandrov

Mikko Sams (Host)
1998

International Organization of Psychophysiology (External organisation)

Mikko Sams (Chair)
1997 → 2003

Doctoral thesis opponent at University of Bergen

Mikko Sams (Opponent)
1996

Tampere University (External organisation)

Mikko Sams (Member)
1996 → 1998

TIEDE (Journal)

Mikko Sams (Editorial board member)
1996 → 2006

Academy of Finland (External organisation)

Mikko Sams (Member)
1995 → 2002

Brain Research Society of Finland (External organisation)

Mikko Sams (Member)
1995 → 2002

Prizes

International Samuel Sutton prize of the Society for Psychophysiology for 'The best dissertation in psychophysiology in 1985–1986'.

Sams, Mikko (Recipient), 1987

Projects**Kasvokkain/Nummenmaa/TY**

Sams, M. & Volynets, S.
01/09/2016 → 31/12/2016

MAGICS: National Infrastructure for human virtualization and remote presence

Sams, M., Ruotoistenmäki, A. & Pohjalainen, P.
01/07/2020 → 30/11/2021

Neuroscience of intergroup processes

Sams, M., Chang Arana, A., Ertas Yorulmaz, S. G. & Himberg, T.
01/09/2017 → 31/12/2021