

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 Sept 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

Sisterhood predicts similar neural processing of a film

Bacha-Trams, M., Yorulmaz, G. E., Glerean, E., Ryyppö, E., Tapani, K., Virravirta, E., Saaristo, J., Jääskeläinen, I. P. & Sams, M., 15 Aug 2024, In: *NeuroImage*. 297, p. 1-14 14 p., 120712.

Asymmetry in political polarization at multiple levels of bias

Kluge, A., Adler, E., Nir, L., Halperin, E., Sams, M. & Levy, J., 8 Mar 2024, (E-pub ahead of print) In: *Political Psychology*.

Bodily maps of musical sensations across cultures

Putkinen, V., Zhou, X., Gan, X., Yang, L., Becker, B., Sams, M. & Nummenmaa, L., 25 Jan 2024, In: *Proceedings of the National Academy of Sciences of the United States of America*. 121, 5, p. 1-10 10 p., e2308859121.

Hippocampus-Centered Network Is Associated With Positive Symptom Alleviation in Patients With First-Episode Psychosis

Alho, J., Lahnakoski, J. M., Panula, J. M., Rikandi, E., Mäntylä, T., Lindgren, M., Kiesepää, T., Suvisaari, J., Sams, M. & Raji, T. T., Dec 2023, In: *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*. 8, 12, p. 1197-1206 10 p.

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

Amir, E., Sofaer, J. & Sams, M., 1 Aug 2023, In: *Leonardo Journal*. 56, 4, p. 374-378 5 p.

Decoding brain basis of laughter and crying in natural scenes

Nummenmaa, L., Malèn, T., Nazari-Farsani, S., Seppälä, K., Sun, L., Santavirta, S., Karlsson, H. K., Hudson, M., Hirvonen, J., Sams, M., Scott, S. & Putkinen, V., Jun 2023, In: *NeuroImage*. 273, p. 1-9 9 p., 120082.

Ideological values are parametrically associated with empathy neural response to vicarious suffering

Zebarjadi, N., Adler, E., Kluge, A., Sams, M. & Levy, J., 22 May 2023, In: *Social Cognitive and Affective Neuroscience*. 18, 1, p. 1-10 10 p., nsad029.

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., Feb 2023, In: *Brain and Behavior*. 13, 2, e2869.

Body maps of loves

Rinne, P., Tavast, M., Glerean, E. & Sams, M., 2023, (E-pub ahead of print) In: *PHILOSOPHICAL PSYCHOLOGY*.

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., Hultén, 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 Sept 2020, *IUS 2020 - International Ultrasonics Symposium, Proceedings*. IEEE, 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., Sept 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., Sept 2017, In: Brain and Behavior. 7, 9, 15 p., e00789.

Distributed neural signatures of natural audiovisual speech and music in the human auditory cortex

Salmi, J., Koistinen, O-P., Glerean, E., Jylänki, P., Vehtari, A., Jääskeläinen, I., Mäkelä, S., Nummenmaa, L., Nummi-Kuisma, K., Nummi, I. & Sams, M., 15 Aug 2017, In: NeuroImage. 157, p. 108-117 10 p.

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 Sept 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

Hari, R. (ed.), Sams, M. (ed.) & Nummenmaa, L. (ed.), May 2016, In: PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B: BIOLOGICAL SCIENCES. 371, 1693

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., Kalliokoski, K. K., Nuutila, P., Jääskeläinen, I. P., Hari, R., Dunbar, R. I. M. & Sams, M., Sept 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

Roine, U., Salmi, J., Roine, T., Nieminen-von Wendt, T., Leppamäki, S., Rintahaka, P., Tani, P., Leemans, A., Sams, M. & Roine, T., 16 Jan 2015, In: *Molecular Autism*. 6, p. 1-11 11 p.

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

Roine, U., Roine, T., Salmi, J., Nieminen-von Wendt, T., Tani, P., Leppämäki, S., Rintahaka, P., Caeyenberghs, K., Leemans, A. & Sams, M., 2015, In: *Molecular Autism*. 6, p. 1-11 11 p., 65.

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

Burunat, I., Brattico, E., Puolivali, T., Ristaniemi, T., Sams, M. & Toiviainen, P., 2015, In: *PloS one*. 10, 9, p. 1-18 18 p., e0138238.

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

Nummenmaa, L., Saarimäki, H., Glerean, E., Gotsopoulos, A., Hari, R. & Sams, M., 15 Nov 2014, In: *NeuroImage*. 102, p. 498-509 12 p.

Synchronous brain activity across individuals underlies shared psychological perspectives

Lahnakoski, J., Glerean, E. G., Jääskeläinen, I. P., Hyönä, J., Hari, R., Sams, M. & Nummenmaa, L., 15 Oct 2014, In: *NeuroImage*. 100, p. 316-324 9 p.

Fronto-parietal network supports context-dependent speech comprehension

Smirnov, D., Glerean, E., Lahnakoski, J. M., Salmi, J., Jääskeläinen, I. P., Sams, M. & Nummenmaa, L., Oct 2014, In: *Neuropsychologia*. 63, p. 293-303 11 p.

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

Salmi, J., Glerean, E., Jääskeläinen, I. P., Lahnakoski, J. M., Kettunen, J., Lampinen, J., Tikka, P. & Sams, M., Sept 2014, In: *Human Brain Mapping*. 35, 9, p. 4767-4776 10 p.

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

Alsius, A., Möttönen, R., Sams, M. E., Soto-Faraco, S. & Tiippana, K., 15 Jul 2014, In: *Frontiers in Psychology*. 5, p. 1-9 9 p., 727.

Affective stance, ambivalence, and psychophysiological responses during conversational storytelling

Voutilainen, L., Henttonen, P., Kahri, M., Kivioja, M., Ravaja, N., Sams, M. & Peräkylä, A., Jul 2014, In: *Journal of Pragmatics*. 68, p. 1-24 24 p.

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

Alho, J., Lin, F. H., Sato, M., Tiitinen, H., Sams, M. & Jääskeläinen, I. P., 6 May 2014, In: *Frontiers in Psychology*. 5, p. 1-10 10 p., 394.

Mental Action Simulation Synchronizes Action-Observation Circuits across Individuals

Nummenmaa, L., Smirnov, D., Lahnakoski, J. M., Glerean, E., Jaaskelainen, I. P., Sams, M. & Hari, R., 15 Jan 2014, In: JOURNAL OF NEUROSCIENCE. 34, 3, p. 748-757 10 p.

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

Salminen, N., Aho, J. & Sams, M., 2013, In: Frontiers in Neuroscience. 7, p. 1-6 44.

Representation of perceived sound valence in the human brain

Viinikainen, M., Kätsyri, J. & Sams, M., Oct 2012, In: Human Brain Mapping. 33, 10, p. 2295-2305 11 p.

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

Lahnakoski, J. M., Glerean, E., Salmi, J., Jääskeläinen, I., Sams, M., Hari, R. & Nummenmaa, L., 13 Aug 2012, In: Frontiers in Human Neuroscience. 6, p. 1-14 14 p., 233.

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

Rahko, J. S., Paakki, J.-J., Starck, T. H., Nikkinen, J., Pauls, D. L., Kätsyri, J., Jansson-Verkasalo, E. M., Carter, A. S., Hurtig, T. M., Mattila, M.-L., Jussila, K. K., Remes, J. J., Kuusikko-Gauffin, S. A., Sams, M. E., Bölte, S., Ebeling, H. E., Moilanen, I. K., Tervonen, O. & Kiviniemi, V., Jun 2012, In: JOURNAL OF AUTISM AND DEVELOPMENTAL DISORDERS. 42, 6, p. 1011-1024 14 p.

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

Alluria, V., Toiviainen, P., Jääskeläinen, I. P., Glerean, E., Sams, M. & Brattico, E., 15 Feb 2012, In: NeuroImage. 59, 4, p. 3677-3689 13 p.

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.

Functional magnetic resonance imaging phase synchronization as a measure of dynamic functional connectivity

Glerean, E., Salmi, J., Lahnakoski, J., Jääskeläinen, I. P. & Sams, M., 2012, In: Brain Connectivity. 2, 2, p. 91-101

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

Nonlinear neural representation of emotional feelings elicited by dynamic naturalistic stimulation

Viinikainen, M., Glerean, E., Jääskeläinen, I. P., Kettunen, J., Sams, M. & Nummenmaa, L., 2012, In: OPEN JOURNAL OF NEUROSCIENCE. 2, 4, p. 1-17

Stimulus-related independent component and voxel-wise analysis of human brain activity during free viewing of a feature film.

Lahnakoski, J. M., Salmi, J., Jääskeläinen, I. P., Lampinen, J., Glerean, E., Tikka, P. & Sams, M., 2012, In: PloS one. 7, 4, p. 1-14 e35215.

Two-Stage Processing of Sounds Explains Behavioral Performance Variations due to Changes in Stimulus Contrast and Selective Attention: An MEG Study

Kauramaki, J., Jaaskelainen, I. P., Hanninen, J. L., Auranen, T., Nummenmaa, A., Lampinen, J. & Sams, M., 2012, In: PloS one. 7, 10, p. 1-14 e46872.

Short-term plasticity as a neural mechanism supporting memory and attentional functions

Jääskeläinen, I. P., Ahveninen, J., Andermann, M. L., Belliveau, J. W., Raji, T. & Sams, M., 8 Nov 2011, In: Brain Research. 1422, p. 66-81 16 p.

The effect of visual spatial attention on audiovisual speech perception in adults with Asperger syndrome

Saalasti, S., Tiippana, K., Kätsyri, J. & Sams, M., Sept 2011, In: Experimental Brain Research. 213, 2, p. 283-290 8 p.

Audiovisual Speech Perception and Eye Gaze Behavior of Adults with Asperger Syndrome

Saalasti, S., Kätsyri, J., Tiippana, K., Laine-Hernandez, M., von Wendt, L. & Sams, M., Aug 2011, In: JOURNAL OF AUTISM AND DEVELOPMENTAL DISORDERS. 42, 8, p. 1-10 10 p.

Attention-driven auditory cortex short-term plasticity helps segregate relevant sounds from noise

Ahveninen, J., Hämäläinen, M., Jääskeläinen, I. P., Ahlfors, S. P., Huang, S., Lin, F.-H., Raji, T., Sams, M., Vasios, C. E. & Belliveau, J. W., 2011, In: Proceedings of the National Academy of Sciences of the United States of America. 108, 10, p. 4182-4187 6 p.

Face Prediction from fMRI Data during Movie Stimulus: Strategies for Feature Selection

Kauppi, J-P., Huttunen, H., Korkala, H., Jääskeläinen, I. P., Sams, M. & Tohka, J., 2011, *Artificial Neural Networks and Machine Learning – ICANN 2011: 21st International Conference on Artificial Neural Networks, Espoo, Finland, June 14-17, 2011, Proceedings, Part II*. Honkela, T., Duch, W., Girolami, M. & Kaski, S. (eds.). Springer, p. 189-196 8 p. (Lecture Notes in Computer Science ; vol. 6792).

Sound Location Can Influence Audiovisual Speech Perception When Spatial Attention Is Manipulated

Tiippa, K., Puharinen, H., Möttönen, R. & Sams, M., 2011, In: SEEING AND PERCEIVING. 24, 1, p. 67-90 24 p.

Clustering inter-subject correlation matrices in functional magnetic resonance imaging

Kauppi, J. P., Jääskeläinen, I. P., Sams, M. & Tohka, J., 1 Dec 2010, *ITAB 2010 - 10th International Conference on Information Technology and Applications in Biomedicine: Emerging Technologies for Patient Specific Healthcare*. 5687650

Synchrony of audio-visual speech stimuli modulates left superior temporal sulcus

Balk, M., Ojanen, V., Pekkola, J., Autti, T., Sams, M. & Jaaskelainen, I., 23 Aug 2010, In: *Neuroreport*. 21, 12, p. 822-826 5 p.

Nonlinear Relationship Between Emotional Valence and Brain Activity: Evidence of Separate Negative and Positive Valence Dimensions

Viinikainen, M., Jääskeläinen, I. R., Alexandrov, Y., Balk, M. H., Autti, T. & Sams, M., Jul 2010, In: *Human Brain Mapping*. 31, 7, p. 1030-1040 11 p.

Functional Mapping of Dynamic Happy and Fearful Facial Expression Processing in Adolescents

Rahko, J., Paakki, J-J., Starck, T., Nikkinen, J., Remes, J., Hurtig, T., Kuusikko-Gauffin, S., Mattila, M-L., Jussila, K., Jansson-Verkasalo, E., Kätsyri, J., Sams, M., Pauls, D., Ebeling, H., Moilanen, I., Tervonen, O. & Kiviniemi, V., Jun 2010, In: *Brain Imaging and Behavior*. 4, 2, p. 164-176 13 p.

Gaze-direction-based MEG averaging during audiovisual speech perception

Hirvenkari, L., Jousmäki, V., Lamminmäki, S., Saarinen, V-M., Sams, M. E. & Hari, R., 8 Mar 2010, In: *Frontiers in Human Neuroscience*. 4, p. 1-7 7 p., 17.

Emotion and the auditory brainstem response to speech

Wang, J., Nicol, T., Skoe, E., Sams, M. & Kraus, N., 29 Jan 2010, In: *Neuroscience Letters*. 469, 3, p. 319-323 5 p.

Inter-subject correlation of brain hemodynamic responses during watching a movie: localization in space and frequency

Kauppi, J-P., Jääskeläinen, I. P., Sams, M. & Tohka, J., 2010, In: *Frontiers in Neuroinformatics*. 4, p. 1-10 4.

Lipreading and Covert Speech Production Similarly Modulate Human Auditory-Cortex Responses to Pure Tones

Kauramäki, J., Jääskeläinen, I. P., Hari, R., Möttönen, R., Rauschecker, J. P. & Sams, M., 2010, In: *JOURNAL OF NEUROSCIENCE*. 30, 4, p. 1314-1321 8 p.

The role of visual spatial attention in audiovisual speech perception

Andersen, T. S., Tiippa, K., Laarni, J., Kojo, I. & Sams, M., Feb 2009, In: *Speech Communication*. 51, 2, p. 184-193 10 p.

Audiovisual speech perception and eye movements in the Asperger Syndrome

Saalasti, S., Kätsyri, J., Tiippa, K., Laine-Hernandez, M., von Wendt, L. & Sams, M., 2009, *Neurobiology of Language, Chicago, US, October 15-16, 2009*.

Auditory attention can decrease sharpness of population-level frequency tuning in the human auditory cortex

Kauramäki, J., Jääskeläinen, I. P., Hänninen, J. L., Auranen, T., Lampinen, J. & Sams, M., 2009, (Learning Mind and Brain conference, Helsinki, Dec 3-4, 2009).

Auditory attention decreases sharpness of frequency tuning in the human auditory cortex

Kauramäki, J., Jääskeläinen, I. P., Hänninen, J. L., Auranen, T., Lampinen, J. & Sams, M., 2009, p. 280, (Neuroscience 2009 - Society for Neuroscience Annual Meeting, Chicago, IL, USA, Oct 17-21, 2009).

Emotion Modulates Early Auditory Response to Speech

Wang, J., Nicol, T., Skoe, E., Sams, M. & Kraus, N., 2009, In: *Journal of Cognitive Neuroscience*. 21, 11, p. 2121-2128 8 p.

Low-Frequency Specific Inter-subject Hemodynamic Synchronization in Frontal Cortex During Natural Vision

Kauppi, J-P., Jääskeläinen, I., Sams, M. & Tohka, J., 2009, *Human Brain Mapping, San Francisco, 18.-23.6.2009*.

Neural processing of dynamic happy and fearful facial expressions in adolescents

Rahko, J., Paakki, J-J., Ebeling, H., Hurtig, T., Jansson-Verkasalo, E., Remes, J., Kätsyri, J., Kuusikko, S., Mattila, M-L., Moilanen, I., Nikkinen, J., Pauls, D., Sams, M., Starck, T., Tervonen, O. & Kiviniemi, V., 2009, *Human Brain Mapping, San Francisco, California, US, June 18-23, 2009*.

Nonlinear representation of valence in amygdala and auditory cortex during perception of emotional sounds

Viinikainen, M., Kätsyri, J. & Sams, M., 2009, *Human Brain Mapping, San Francisco, California, US, June 18-23, 2009*.

Perceived valence of sounds is represented non-linearly in the human amygdala and auditory cortex

Viinikainen, M., Kätsyri, J. & Sams, M., 2009, *Brain Tuning Workshop, Helsinki, Finland, February 5-6, 2009*.

Valence of auditory stimuli modifies activity in the amygdala, auditory and dorsomedial prefrontal cortex

Viinikainen, M., Kätsyri, J. & Sams, M., 2009, *Learning Mind and Brain, Helsinki, Finland, December 3-4, 2009*.

The effect of viewing speech on auditory speech processing is different in the left and right hemispheres

Davis, C., Kislyuk, D., Jesus, K. & Sams, M., 25 Nov 2008, In: *Brain Research*. 1242, p. 151-161 11 p.

Active auditory system

Sams, M. E., Sept 2008, In: *International Journal of Psychophysiology*. 69, 3, p. 199-199 1 p.

Impaired recognition of facial emotions from low-spatial frequencies in Asperger syndrome

Kätsyri, J., Saalasti, S., Tiippana, K., von Wendt, L. & Sams, M., Jun 2008, In: *Neuropsychologia*. 46, 7, p. 1888-1897 10 p.

The effect of dynamics on identifying basic emotions from synthetic and natural faces

Kätsyri, J. & Sams, M., Apr 2008, In: *International Journal of Human-Computer Studies*. 66, 4, p. 233-242 10 p.

Online classification of single EEG trials during finger movements

Lehtonen, J., Jylänki, P., Kauhanen, L. & Sams, M., Feb 2008, In: *IEEE Transactions on Biomedical Engineering*. 55, 2, p. 713-720 8 p.

Formant transition-specific adaptation by lipreading of left auditory cortex N1m

Jääskeläinen, I. P., Kauramäki, J., Tujunen, J. & Sams, M., 8 Jan 2008, In: *Neuroreport*. 19, 1, p. 93-97 5 p.

Audiovisual speech perception in Asperger syndrome

Saalasti, S., Tiippana, K., Laine-Hernandez, M., Kätsyri, J., von Wendt, L. & Sams, M., 2008, *IMRF'08, Hamburg, Germany, July 16-19, 2008*. p. .

Auditory selective attention modulates activation of human inferior colliculus

Rinne, T., Balk, M., Koistinen, S., Autti, T., Alho, K. & Sams, M., 2008, *ARO 31st MidWinter Meeting: February 16-21, 2008, Phoenix, Arizona, USA*. Peter A. Santi, P. (ed.). NJ, USA: Association for Research in Otolaryngology, p. 131

Auditory Selective Attention Modulates Activation of Human Inferior Colliculus

Rinne, T., Balk, M. H., Koistinen, S., Autti, T., Alho, K. & Sams, M., 2008, In: *Journal of Neurophysiology*. 100, 6, p. 3323-3327 5 p.

Human brain represents valence of another's facial expression

Viinikainen, M., Balk, M., Autti, T., Jääskeläinen, I. & Sams, M., 2008, (Annual Meeting of the Organization for Human Brain Mapping, June 15-19, 2008, Melbourne, Australia).

Inter-Subject Synchronization of Prefrontal Cortex Hemodynamic Activity During Natural Viewing

Jääskeläinen, I., Koskentalo, K., Autti, T., Balk, M., Kauramäki, J., Pomrén, C. & Sams, M., 2008, In: *THE OPEN NEUROIMAGING JOURNAL*. 2, p. 14-19

Lapsia ei saa unohtaa

Castrén, E., Hari, R., Järvinen, J., Lehtonen, J., Lonka, K., Niemivirta, M., Peräkylä, A., Pyysiäinen, I., Salenius, S., Sams, M. & Ylikoski, P., 2008, In: *Suomen Kuvalehti*. 3

Neurocognition of emotion and social perception

Kätsyri, J., Viinikainen, M. & Sams, M., 2008, *EHTI '08, Finnish symposium on the research of emotions in the context of human-technology interaction*. Vanhala, T. & Anttonen, J. (eds.). Tampere: SIGCHI Finland, p. 3-7

Visual Processing Affects the Neural Basis of Auditory Discrimination

Kislyuk, D., Möttönen, R. & Sams, M., 2008, In: *Journal of Cognitive Neuroscience*. 20, 12, p. 2175-2184 10 p.

Short-term plasticity in auditory cognition

Jääskeläinen, I. P., Ahveninen, J., Belliveau, J. W., Raij, T. & Sams, M., Dec 2007, In: *Trends in Neurosciences*. 30, 12, p. 653-661 9 p.

Effect of emotional context in auditory cortex processin

Alexandrov, Y., Klucharev, V. & Sams, M., Sept 2007, In: *International Journal of Psychophysiology*. 65, 3, p. 261-271 11 p.

Human brain activity associated with audiovisual perception and attention

Degerman, A., Rinne, T., Pekkola, J., Autti, T., Jääskeläinen, I., Sams, M. & Alho, K., 15 Feb 2007, In: *NeuroImage*. 34, 4, p. 1683-1691 9 p.

An MEG study of auditory-visual speech processing

Davis, C., Kislyuk, D., Sams, M. & Kim, J., 2007, (8th International Multisensory Research Forum, University of Sydney, Sydney, Australia, July 5-7, 2007).

Automatic relevance-determination based on hierarchical Bayesian MEG inversion in practice

Nummenmaa, A., Auranen, T., Hämäläinen, M. S., Jääskeläinen, I. P., Sams, M., Vehtari, A. & Lampinen, J., 2007, In: *NeuroImage*. 37, 3, p. 876-889 14 p.

Bayesian inverse analysis of neuromagnetic data using cortically constrained multiple dipoles

Auranen, T., Nummenmaa, A., Hämäläinen, M. S., Jääskeläinen, I. P., Lampinen, J., Vehtari, A. & Sams, M., 2007, In: *Human Brain Mapping*. 28, 10, p. 979-994 16 p.

EEG-based Brain-Computer interface for tetraplegics

Kauhanen, L. K., Jylänki, P., Lehtonen, J., Rantanen, P., Alaranta, H. & Sams, M., 2007, In: *Computational Intelligence and Neuroscience*.

Effects of Emotion on Neural Encoding of Sound in the Auditory Brainstem

Wang, J., Skoe, E., Nicol, T., Sams, M. & Kraus, N., 2007, (Human Brain Mapping Conference, Chicago, IL).

Hierarchical Bayesian estimates of distributed MEG sources: theoretical aspects and comparison of variational and MCMC methods

Nummenmaa, A., Auranen, T., Hämäläinen, M. S., Jääskeläinen, I. P., Lampinen, J., Sams, M. & Vehtari, A., 2007, In: *NeuroImage*. 35, 2, p. 669-685 17 p.

Multisensory interaction and plasticity in the human auditory brainstem

Musacchia, G., Sams, M. & Kraus, N., 2007, (8th International Multisensory Research Forum, University of Sydney, Sydney, Australia, July 5-7, 2007).

Musicians have enhanced auditory and audiovisual brainstem responses to speech and music

Musacchia, G., Sams, M., Skoe, E. & Kraus, N., 2007, (Music and Languages as Cognitive Systems, Cambridge, UK).

Musicians have enhanced subcortical auditory and audiovisual processing of speech and music

Musacchia, G., Sams, M., Skoe, E. & Kraus, N., 2007, In: *Proceedings of the National Academy of Sciences of the United States of America*. 104, 40, p. 15894-15898 5 p.

Selective Attention Increases Both Gain and Feature Selectivity of the Human Auditory Cortex

Kauramäki, J., Jääskeläinen, I. & Sams, M., 2007, In: *PloS one*. 2, 9, p. 1-10 10 p., e909.

Sparse MEG inverse solutions via hierarchical Bayesian modeling: Evaluation with a parallel fMRI study

Nummenmaa, A., Auranen, T., Vanni, S., Hämäläinen, M. S., Jääskeläinen, I. P., Lampinen, J., Vehtari, A. & Sams, M., 2007, Espoo, (Laskennallisen tekniikan laboratorion julkaisuja; no. B65).

Attention to visual speech gestures enhances activity in the left planum temporale

Pekkola, J., Ojanen, V., Autti, T., Jääskeläinen, I., Möttönen, R. & Sams, M., Jun 2006, In: *Human Brain Mapping*. 27, 6, p. 471-477 7 p.

EEG and MEG Brain-Computer Interface for Tetraplegic Patients

Kauhanen, L., Nykopp, T., Lehtonen, J., Jylänki, P., Heikkonen, J., Rantanen, P., Alaranta, H. & Sams, M., Jun 2006, In: *IEEE Transactions on Neural Systems and Rehabilitation Engineering*. 14, 2, p. 190-193 4 p.

Perceiving identical sounds as speech or non-speech modulates activity in the left posterior superior temporal sulcus

Möttönen, R., Calvert, G., Jääskeläinen, I. P., Matthews, P., Thesen, T., Tuomainen, J. & Sams, M., 1 Apr 2006, In: *NeuroImage*. 30, 2, p. 563-569 7 p.

Perception of matching and conflicting audiovisual speech in dyslexic and fluent readers: an fMRI study at 3 Tesla

Pekkola, J., Laasonen, M., Ojanen, V., Autti, T., Jääskeläinen, I. P., Kujala, T. & Sams, M., 1 Feb 2006, In: *NeuroImage*. 29, 3, p. 797-807 11 p.

Classification of single MEG trials related to left and right index finger movements

Kauhanen, L., Nykopp, T. & Sams, M., Feb 2006, In: *Clinical Neurophysiology*. 117, 2, p. 430-439 10 p.

Seeing speech affects acoustic information processing in the human brainstem

Musacchia, G., Sams, M., Nicol, T. & Kraus, N., Jan 2006, In: *Experimental Brain Research*. 168, 1, p. 1-10 10 p.

Audiovisual integration of speech and non-speech objects: an ERP study

Möttönen, R., Lindroos, V., Tiippana, K. & Sams, M., 2006, (International Multisensory Research Forum Annual Meeting; Dublin, Ireland, 18.-21.6.2006).

Controlled simulation of realistic MEG data

Viinikainen, M., Salmelin, R. & Sams, M., 2006, *12th Annual Meeting, Human Brain Mapping, June 11-15, 2006, Florence, Italy*.

Controlled simulation of realistic MEG data

Viinikainen, M., Sams, M. & Salmelin, R., 2006, p. 155, (Twelfth Annual Meeting of the Organization for Human Brain Mapping, HBM2006 Florence, Italy, June 11-15, 2006).

Cortically constrained neuromagnetic inverse analysis: structure of Bayesian multidipolar solutions and effects of MEG-MRI coregistration error

Auranen, T., Nummenmaa, A., Hämäläinen, M. S., Jääskeläinen, I. P., Lampinen, J., Vehtari, A. & Sams, M., 2006, p. 523, (12 th Annual Meeting of the Organization for Human Brain Mapping, MBM2006, Florence, Italy, June 11-15, 2006).

Dows sound location influence audiovisual speech perception?

Tiippana, K., Möttönen, R., Puharinen, H. & Sams, M., 2006, (International Multisensory Research Forum Annual Meeting; Dublin, Ireland, 18.-21.6.2006).

Human auditory Cortex is tuned to lip-reading

Sams, M., Jääskeläinen, I. P., Kauramäki, J., Hari, R., Rauschecker, J. P. & Möttönen, R., 2006, (Society for Neuroscience Annual Meeting, Atlanta 14.-18.10.2006).

Increased gain and sound frequency selectivity of auditory cortex neurons underlie human auditory selective attention

Kauramäki, J., Jääskeläinen, I. P. & Sams, M., 2006, p. 395, (Twelfth Annual Meeting of the Organization of Huma Mappind, HBM2006 Florence, Italy, June 11-15, 2006).

Inverse estimates of basic auditory and visual MEG responses by hierarchical Variational Bayesian approach

Nummenmaa, A., Auranen, T., Hämäläinen, M. S., Jääskeläinen, I. P., Lampinen, J., Sams, M. & Vehtari, A., 2006, p. 520, (Twelfth Annual Meeting of the Organization for Human Brain Mapping, HBM2006 Florence, Italy, June 11-15, 2006).

Kasvosokeuden yhteys perusemootioiden tunnistamiseen kasvoilta Aspergerin oireyhtymässä

Kätsyri, J., Saalasti, S., Tiippana, K., Frydrych, M., von Wendt, L. & Sams, M., 2006, (Psykologia 2006, Tampere, 23.-25.8.2006).

Reature-specific selective attention modulates the "what" and "where" pathways in human auditory cortex

Ahveninen, J., Jääskeläinen, I. P., Raij, T., Bonmassar, G., Devere, S., Hämäläinen, M., Levänen, S., Lin, F. H., Sams, M., Shinn-Cunningham, B., Witzel, T. & Belliveau, J. W., 2006, (Society for Neuroscience Annual Meeting, Atlanta, 14.-18.10.2006).

Statistical methods for MEG Based finger movement classification

Nykopp, T., Laitinen, L., Heikkonen, J. & Sams, M., 2006, In: IEEE Transactions on Neural Systems and Rehabilitation Engineering.

Task-modulated "what" and "where" pathways in human auditory cortex

Ahveninen, J., Jääskeläinen, I. P., Raij, T., Bonmassar, G., Sasha, D., Hämäläinen, M. S., Levänen, S., Lin, F., Sams, M., Shinn-Cunningham, B., Witzel, T. & Belliveau, J., 2006, In: Proceedings of the National Academy of Sciences of the United States of America. 103, 39, p. 14608-14613 6 p.

Tetraplegics control an EEG Brain-Computer Interface by attempting hand movements

Kauhanen, L., Jylänki, P., Lehtonen, J., RAntanen, P., Alaranta, H. & Sams, M., 2006, p. 18, (Twelfth Annual Meeting of the Organization for Human Brain Mapping, HBM2006 Florence, Italy, June 11-15, 2006).

The effect of visual speech on auditory cortical processing

Davis, C., Kislyuh, D., Sams, M. & Kim, J., 2006, In: Australian Journal of Psychology. 58, p. 71-71 1 p.

The role of attention in audiovisual speech perception: Evidence from ERPs

Alsius, A., Möttönen, R., Tiippana, K., Soto-Faraco, S. & Sams, M., 2006, (International Multisensory Research Forum Annual Meeting; Dublin, Ireland, 18.-21.6.2006).

Transient tuning of auditory Cortex by li-reading

Jääskeläinen, I. P., Kauramäki, J., Hari, R., Möttönen, R., Rauschecker, J. P. & Sams, M., 2006, *12th Annual Meeting, Human Brain Mapping, June 11-15, 2006, Florence, Italy.*

Use of feedback in classification of single-trial EEG during finger movements

Jylänki, P., Kauhanen, L., Lehtonen, J., Heikkonen, J. & Sams, M., 2006, (Twelfth Annual Meeting of the Organization for Human Brain Mapping, HBM2006 Florence, Italy, June 11-15, 2006).

Vaikuttaako äänen tulosuunta audiovisuaalisen puheen havaitsemiseen?

Tiippana, K., Möttönen, R., Puharinen, H. & Sams, M., 2006, (Psykologia 2006; Tampere, 23.-25.8.2006).

Emotion and Consciousness: ends of a continuum.(Theoretical review)

Alexandrov, Y. & Sams, M., Oct 2005, In: *Cognitive Brain Research.* 25, 2, p. 387-405 19 p.

Modulation of auditory cortex activation by sound presentation rate and attention

Rinne, T., Pekkola, J., Degerman, A., Autti, T., Jääskeläinen, I., Sams, M. & Alho, K., Oct 2005, In: *Human Brain Mapping.* 26, 2, p. 94-99 6 p.

Audio-visual speech perception is special

Tuomainen, J., Andersen, T. S., Tiippana, K. & Sams, M., May 2005, In: *Cognition.* 96, 1, p. B13-B22 10 p.

Maximum Likelihood Integration of rapid flashes and beeps

Andersen, T. S., Tiippana, K. & Sams, M., May 2005, In: *Neuroscience Letters.* 380, 1-2, p. 155-160 6 p.

Seeing and hearing others and oneself to talk

Sams, M., Möttönen, R. & Sihvonen, T., May 2005, In: *Cognitive Brain Research.* 23, 2-3, p. 429-435 7 p.

Processing of audiovisual speech in Broca's area

Ojanen, V., Möttönen, R., Pekkola, J., Jääskeläinen, I., Autti, T., Joensuu, R. & Sams, M., 1 Apr 2005, In: *NeuroImage.* 25, 2, p. 333-338 6 p.

Primary auditory cortex activation by visual speech: an fMRI study at 3 Tesla

Pekkola, J., Ojanen, V., Autti, T., Jääskeläinen, I., Möttönen, R., Tarkiainen, A. & Sams, M., 8 Feb 2005, In: *Neuroreport.* 16, 2, p. 125-128 4 p.

Viewing speech modulates activity in the left SI mouth cortex

Möttönen, R., Järveläinen, J., Sams, M. & Hari, R., 1 Feb 2005, In: *NeuroImage.* 24, 3, p. 731-737 7 p.

7-Tesla fMRI study on tonotopic organization of human auditory cortex

Ahveninen, J., Angelone, L., Purdon, P., Vasios, C., Jääskeläinen, I-P., Levänen, S., Raij, T., Sams, M., Wiggins, C., Belliveau, J. & Bonmassar, G., 2005, *11th Annual Meeting of the Organization for Human Brain Mapping, June 12-16, 2005, Toronto, Canada.* Canada

Audiovisual Interaction

Möttönen, R. & Sams, M., 2005, *Handbook of Signal Processing in Acoustics.* (Julkaisupaikka puuttuu)

Bayesian analysis of the neuromagnetic inverse problem with l^p -norm priors

Auranen, T., Nummenmaa, A., Hämäläinen, M. S., Jääskeläinen, I. P., Lampinen, J., Vehtari, A. & Sams, M., 2005, In: *NeuroImage.* 26, 3, p. 870-884 15 p.

BCI research in Finland

Kauhanen, L., Lehtonen, J., Nykopp, T., Jylänki, P., Heikkonen, J. & Sams, M., 2005, *Third International Brain-Computer Interface meeting, Albany, USA, 14-19 June, 2005.* Wadsworth Center, p. 61

BCI Research in Finland

Kauhanen, L., Lehtonen, J., Nykopp, T., Jylänki, P., Heikkonen, J. & Sams, M., 2005, (BCI2000 Workshop, Albany, USA, June 13-14, 2005).

Common brain areas activated by hearing and seeing speech

Ojanen, V., Pekkola, J., Jääskeläinen, I-P., Möttönen, R., Autti, T., Jousmäki, V. & Sams, M., 2005, Espoo, (Technical Report; no. B49).

Does stimulus location influence a visual illusion induced by sound?

Tiippa, K. & Sams, M., 2005, p. 50, (International Multisensory Research Forum Annual Meeting, 5-8.6.2005, Rovereto, Italy).

Movement-Related Potentials and Sensorimotor Cortical Rhythmic Activity of Tetraplegics

Kauhanen, L., Lehtonen, J., Rantanen, P., Tarnanen, I., Alaranta, H. & Sams, M., 2005, p. 102, (Third International Brain-Computer Interface meeting, Albany, USA, 14-19 June, 2005).

Neurocognitive research on the Laboratory of Computational Engineering: Complex neurocognitive systems

Sams, M., 2005, *Biology of Cognition, University of Helsinki, April 8-9, 2005.*

On-line classification of EEG activity during finger movements

Lehtonen, J., Kauhanen, L., Jylänki, P. & Sams, M., 2005, (BCI2000 Workshop, Albany, USA, June 13-14, 2005).

Online classification of finger movements

Lehtonen, J., Kauhanen, L., Jylänki, P. & Sams, M., 2005, p. 109, (Third International Brain-Computer Interface meeting, Albany, USA, 14-19 June, 2005).

Visual influences on auditory processing of speech

Sams, M., 2005, *6th Multisensory Research Forum, June 5.-8.2005, Trento, Italy.*

Visual spatial attention in audiovisual speech perception

Andersen, T. S., Tiippa, K., Laarni, J., Kojo, I. & Sams, M., 2005, Espoo, (Technical Report; no. B48).

Factors influencing audiovisual fission and fusion illusions

Andersen, T. S., Tiippa, K. & Sams, M., Nov 2004, In: *Cognitive Brain Research*. 21, 3, p. 301-308 8 p.

Time course of multisensory interactions during audiovisual speech perception in humans: A magnetoencephalographic study

Möttönen, R., Schürmann, M. & Sams, M., 10 Jun 2004, In: *Neuroscience Letters*. 363, 2, p. 112-115 4 p.

Interaction of gaze direction and facial expressions processing: ERP study

Klucharev, V. & Sams, M., 22 Mar 2004, In: *Neuroreport*. 15, 4, p. 621-625 5 p.

Adaptation of auditory N1m responses to phonetic stimuli by visual speech

Jääskeläinen, I. P., Ojanen, V., Ahveninen, J., Auranen, T., Levänen, S., Möttönen, R., Tarnanen, I. & Sams, M., 2004, p. MO 30, (Proceedings of the 10th Annual Meeting of the Organization for Human Brain Mapping, June 13-17, 2004, Budapest, Hungary).

Adaptation of neuromagnetic NI responses to phonetic stimuli by visual speech in humans

Jääskeläinen, I., Ojanen, V., Ahveninen, J., Levänen, S., Möttönen, R., Tarnanen, I. & Sams, M., 2004, In: *Neuroreport*. 15, 18, p. 2741-2744 4 p.

A Hierarchical Bayesian Approach in distributed MEG source Modelling

Nummenmaa, A., Auranen, T., Hämäläinen, M. S., Jääskeläinen, I. P., Lampinen, J., Sams, M. & Vehtari, A., 2004, (10th Annual Meeting of the Organization for Human Brain Mapping, Budapest, Unkari 13-17.6.2004).

Are posterior auditory-cortex neurons tuned to sound location in humans?

Jääskeläinen, I. P., Ahveninen, J., Raij, T., Bonmassar, G., Devore, S., Hämäläinen, M., Levänen, S., Lin, F.H., Sams, M., Shinn-Cunningham, B. & Belliveau, J.W., 2004, p. TU 190, (Proceedings of the 10th Annual Meeting of the Organization for Human Brain Mapping, June 13-17, 2004, Budapest, Hungary).

Brain Computer Interface Platform

Lehtonen, J., Nykopp, T., Heikkonen, J. & Sams, M., 2004, p. 65-66, (2nd International Brain-Computer Interface Workshop and Training Course 2004).

Detection of Finger Movements from Magnetoencephalography Recordings Using Particle Filters

Nykopp, T. & Sams, M., 2004, (10th Annual Meeting of the Organization for Human Brain Mapping, Budapest, Unkari, 13.-17.6.2004).

Full Bayesian Analysis of the MEG Inverse Problem with 1 p-norm Priors

Auranen, T., Nummenmaa, A., Hämäläinen, M. S., Jääskeläinen, I. P., Lampinen, J., Vehtari, A. & Sams, M., 2004, p. WE 128, (10th Annual Meeting of the Organization for Human Brain Mapping, June 13-17, 2004, Budapest, Hungary).

Identification of Computer Animated Emotional Facial Expressions

Frydrych, M., Dobsik, M., Kätsyri, J., Egges, A., Sams, M. & Magnenat-Thalmann, N., 2004, (Technical report, MUHCI 2005).

Magnetoencephalographic signals in Brain-Computer Interfaces

Kauhanen, L., Nykopp, T., Sams, M. & Hari, R., 2004, p. WE 219, (10th Annual Meeting of the Organisation for Human Brain Mapping, June 13-17, 2004, Budapest, Hungary).

Maximum likelihood integration of rapid flashes and beeps

Andersen, T., Bolder, B., Würtz, R., Tiippana, K. & Sams, M., 2004, Espoo, (Published as technical report; no. B39).

Neurocognition of speech-specific audiovisual perception

Sams, M., Ojanen, V., Tuomainen, J. & Klucharev, V., 2004, *Proceedings of the 8th International Congress on Spoken Language Processing, Jeju, South-Korea, October 4-8, 2004*. South-Korea

Perception of acoustically identical sounds as speech or non-speech modifies activity in left posterior superior temporal sulcus

Möttönen, R., Calvert, G., Jääskeläinen, I. P., Matthews, P. M., Thesen, T., Tuomainen, J. & Sams, M., 2004, Espoo, (Published as technical report; no. B42).

Primary auditory cortex activation by visual speech

Pekkola, J., Ojanen, V., Autti, T., Jääskeläinen, I. P., Möttönen, R., Tarkiainen, A. & Sams, M., 2004, (Organization for Human Brain Mapping 10th annual meeting in Budapest, Hungary, June 13-17, 2004).

Primary Auditory Cortex Activation by Lip-reading: an fMRI Study at 3 Tesla

Pekkola, J., Ojanen, V., Autti, T., Möttönen, R., Tarkiainen, A., Jääskeläinen, I. P. & Sams, M., 2004, *European Society of Head and Neck radiology 17th Annual Meeting, Parisi 6.-10.10.2004*.

Processing of audiovisual speech in Broca's area

Ojanen, V., Möttönen, R., Pekkola, J., Jääskeläinen, I. P. & Sams, M., 2004, (Proceedings of the 10th Annual Meeting of the Organization for Human Brain Mapping, June 13-17, 2004, Budapest, Hungary).

Sensorimotor cortical activity of tetraplegics during attempted finger movements

Kauhanen, L., Rantanen, P., Lehtonen, J., Tarnanen, I., Alaranta, H. & Sams, M., 2004, p. 59-60, (2nd International Brain-Computer Interface Workshop and Training Course 2004, September 17-18, 2004, Graz Switzerland).

Sequential Classification of Finger Movements from MEG Recordings

Nykopp, T., Heikkonen, J. & Sams, M., 2004, p. 77-79, (2nd International Brain-Computer Interface Workshop and Training Course 2004).

Visual attention modulates audiovisual speech perception

Tiippana, K., Andersen, T. S. & Sams, M., 2004, In: *European Journal of Cognitive Psychology*. 16, 3, p. 457-472 16 p.

Electrophysiological indicators of phonetic and non-phonetic multisensory interactions during audiovisual speech perception

Klucharev, V., Möttönen, R. & Sams, M., Dec 2003, In: *Cognitive Brain Research*. 18, 1, p. 65-75 11 p.

Integration of heard and seen speech: a factor in learning disabilities in children

Hayes, E., Tiippana, K., Nicol, T., Sams, M. & Kraus, N., 6 Nov 2003, In: *Neuroscience Letters*. 351, 1, p. 46-50 5 p.

Structural (operational) synchrony of EEG alpha activity during an auditory memory task

Fingelkurts, A., Fingelkurts, A., Krause, C., Kaplan, A., Borisov, S., Möttönen, R. & Sams, M., Sept 2003, In: *NeuroImage*. 20, 1, p. 529-542 14 p.

Cortical operational synchrony during audio-visual speech integration

Fingelkurts, A. A., Krause, C. M., Möttönen, R. & Sams, M., May 2003, In: *Brain and Language*. 85, 2, p. 297-312 16 p.

Visual awareness of low-contrast stimuli is reflected in event-related brain potentials

Ojanen, V., Revonsuo, A. & Sams, M., Mar 2003, In: *Psychophysiology*. 40, 2, p. 192-197 6 p.

Ajatus ohjaa tietokonetta

Lehtonen, J. & Sams, M., 2003, In: *TIEDE*. 2, p. 46-47

Audio-visual speech processing and attention

Sams, M., 2003, In: *Psychophysiology*. 40, p. S5-S6 2 p.

Effect of audiovisual primes on identification of auditory target syllables

Ojanen, V., Tuomainen, J. & Sams, M., 2003, *AVSP 2003, St. Jorioz, France, September 4.-7.2003*. International Speech Communication Association (ISCA), p. 71-75

Electrophysiological indicators of phonetic and non-phonetic audiovisual interactions

Klucharev, V., Möttönen, R., Krause, C. & Sams, M., 2003, (Ninth Annual Meeting of the Organization of Human Brain Mapping, June 18-22, 2003, New York City, USA).

Electrophysiological indicators of phonetic and non-phonetic multisensory interactions during audiovisual speech perception.

Klucharev, V., Möttönen, R. & Sams, M., 2003, In: *Cognitive Brain Research*. 18, p. 65-75

Identification of synthetic and natural emotional facial expressions.

Kätsyri, J., Klucharev, V., Frydrych, M. & Sams, M., 2003, *Proceedings of the workshop on Auditory-visual speech processing (AVSP2003)*. St. Jorioz, France

Modeling audiovisual integration of rapid flashes and beeps

Andersen, T. S., Tiippana, K. & Sams, M., 2003, (Society for Neuroscience Annual Meeting, 7.-12.11.2003, New Orleans).

Operational synchrony during Audio-Visual Speech Integration.

Fingelkurts, A., Krause, C., Möttönen, R. & Sams, M., 2003, In: *Brain and Language*. 85, p. 297-312

Speech processing, attention, and brain activity

Alho, K., Sams, M., Pulvermuller, F. & Connolly, JF., 2003, In: *Psychophysiology*. 40, p. S5-S5 1 p.

The Effect of Auditory and Visual Speech Observation on Activation of the Mouth and Hand Representation Areas of the Human SI Cortex

Möttönen, R., Järveläinen, J., Sams, M. & Hari, R., 2003, (Ninth Annual Meeting of the Organization for Human Brain Mapping, June 18-22, 2003, New York City, USA).

The effect of auditory and visual speech observation on activation of the mouth and hand representation areas of the human SI cortex

Möttönen, R., Järveläinen, J., Sams, M. & Hari, R., 2003, *Ninth Annual Meeting of the Organization of Human Brain Mapping, New York City, June 18-22, 2003*.

Toolkit of animation of Finnish talking head.

Frydrych, M., Kätsyri, J., Dobsik, M. & Sams, M., 2003, *Proceedings of the workshop on Auditory-visual speech processing (AVSP2003)*. St. Jorioz, France

Abstract phoneme representations in the left temporal cortex: Magnetic mismatch negativity study

Shestakova, A., Brattico, E., Huotilainen, M., Galunov, V., Soloviev, A., Sams, M., Ilmoniemi, R. J. & Näätänen, R., 7 Oct 2002, In: *Neuroreport*. 13, 14, p. 1813-1816 4 p.

Natural language representations in the brain: An MEG study

Shestakova, A., Brattico, E., Huotilainen, M., Galunov, V., Soloviev, A. & Sams, M., Jul 2002, In: *International Journal of Psychophysiology*. 45, 1-2, p. 96-96 1 p.

Oscillatory brain dynamics in audio-visual speech integration

Fingelkurts, AA., Krause, CM. & Sams, M., Jul 2002, In: *International Journal of Psychophysiology*. 45, 1-2, p. 97-97 1 p.

The duration of cortical operations during audio-visual speech integration

Fingelkurts, AA., Krause, CM. & Sams, M., Jul 2002, In: *International Journal of Psychophysiology*. 45, 1-2, p. 97-97 1 p.

Probability interrelations between pre/post-stimulus intervals and ERD/ERS during a memory task

Fingelkurts, A. A., Krause, C. & Sams, M., Jun 2002, In: *Clinical Neurophysiology*. 113, 6, p. 826-843

Processing of changes in visual speech in the human auditory cortex

Möttönen, R., Krause, C. & Sams, M., May 2002, In: *Cognitive Brain Research*. 13, 3, p. 417-425 9 p.

Maturation of audiovisual speech perception

Tiippana, K., Hayes, E., Kraus, N. & Sams, M., Apr 2002, In: *Journal of Cognitive Neuroscience*. p. 42-43 2 p., A117.

Abstract phoneme representations in the left temporal cortex: MEG study

Sams, M., Shestakova, A., Brattico, E., Huotilainen, M., Galunov, V., Soloviev, A., Ilmoniemi, R. & Näätänen, R., 2002, In: *Neuroreport*. 13, p. 1813-1816

Audio-visual integration of speech with time-varying sine wave speech replicas

Tuomainen, J., Andersen, T., Tiippana, K. & Sams, M., 2002, (*Journal of the Acoustical society of America*).

Audiovisual speech perception

Sams, M., 2002, In *"Speech in Context, Houston, Texas, USA, March 13-16, 2002*.

Audiovisual speech perception

Sams, M., 2002, *Seminar in Northwestern University, Department of Communication Sciences Neurobiology and Physiology, Otolaryngology, Evanston, USA, April 18, 2002*.

Audiovisual speech perception

Sams, M., 2002, *Seminar in the Department of Neurobiology and Anatomy, Wake Forest University School of Medicine, Winston-Salem, USA, March 19, 2002.*

Brain Oscillatory responses During an Audiovisual Memory Task - a MEG study

Krause, C., Möttönen, R., Auranen, T., Tiippana, K., Lampinen, J. & Sams, M., 2002, (International Multisensory Research Forum, 3rd Annual Meeting, Geneva, Switzerland 24ht - 26th May, 2002).

Cortical processing of audiovisual speech

Möttönen, R. & Sams, M., 2002, (Human Brain Mapping 2002, Sendai, Japan, 2.6. - 6.6.2002).

Endogenous visual spatial attention affects audiovisual speech perception

Andersen, T., Tiippana, K. & Sams, M., 2002, (International Multisensory Research Forum, 3rd Annual Meeting, Geneva, Switzerland, 24th - 26th May, 2002).

Ihmisen audiovisuaalinen havaitseminen

Sams, M., 2002, *Aivojen kuvantamis- ja mittausmenetelmät kognitiivisessa neurotieteessä, Oulu, 17.5.2002.*

Illusory flashes are induced by beeps, but are illusory beeps induced by flashes?

Tiippana, K., Andersen, T. & Sams, M., 2002, (International Multisensory Research Forum Annual Meeting, Geneva, Switzerland, 24.-26.5.2002).

Maturation of audiovisual speech perception

Tiippana, K., Hayes, E., Kraus, N. & Sams, M., 2002, (Cognitive Neuroscience Society Annual Meeting, San Francisco, USA).

Motor cortex involvement during verbal versus non-verbal lip and tongue movements

Salmelin, R. & Sams, M., 2002, In: *Human Brain Mapping*. 16, 2, p. 81-91 11 p.

Neurocognitive mechanisms of audiovisual speech

Sams, M., 2002, *6th Finnish-Russian Winter School, January 5.-11., 2002, Tvärminne, Finland.*

Using the Fuzzy Logical Model of Perception in measuring integration of audiovisual speech in humans

Andersen, T., Tiippana, K. & Sams, M., 2002, *The 1st International NAISO Congress on Neuro Fuzzy Technologies, Havana, Cuba, 16-19 January, 2002.*

Brain oscillations during audiovisual speech perception - a MEG study

Krause, C.M., Möttönen, R., Sams, M. & Jensen, O., Jun 2001, In: *NeuroImage*. 13, 6, p. S326-S326 1 p.

Brain oscillations during audiovisual speech perception a MEG study

Krause, C. M., Möttönen, R., Jensen, O. & Sams, M., 2001, (Human Brain Mapping Conference, Brighton, England, June 10-14, 2001).

Brain oscillations in the 20 Hz band are modulated by audiovisual speech perception - a MEG study

Krause, C. M., Möttönen, R., Jensen, O. & Sams, M., 2001, (Arctic Symposium on mechanisms of memory and memory disorders, Saariselkä, Finland, March 17-18, 2001).

Deviation in visual speech is detected in the auditory cortices

Möttönen, R., Krause, C. M. & Sams, M., 2001, (Arctic Symposium on mechanisms of memory and memory disorders, Saariselkä, Finland, March 17-18, 2001).

Does audiovisual speech perception use information about facial configuration?

Hietanen, J. K., Manninen, P., Sams, M. & Surakka, V., 2001, In: *European Journal of Cognitive Psychology*. 13, 3, p. 395-407 13 p.

Modeling of audiovisual speech perception in noise.

Andersen, T., Tiippana, K., Lampinen, J. & Sams, M., 2001, *Auditory-Visual Speech Processing Conference, Aalborg, Denmark, 7-9 September, 2001*. p. 172-176

Neuromagnetic Mismatch fields elicited by congruent and incongruent audiovisual utterances

Möttönen, R., Krause, C. M., Tiippana, K. & Sams, M., 2001, (Cognitive Neuroscience Society Annual Meeting, New York Marriott World Trade Center Hotel, New York, USA, March 25-27, 2001).

Visual attention influences audiovisual speech perception.

Tiippana, K., Andersen, T. & Sams, M., 2001, *Auditory-Visual Speech Processing Conference, Aalborg, Denmark, 7-9 September, 2001*. p. 167-171

Neuronal subserving of behavior before and after chronic ethanol treatment

Alexandrov, Y. I., Grinchenko, Y. V., Bodunov, M. V., Matz, V. N., Korpusova, A. V., Laukka, S. & Sams, M., Oct 2000, In: *Alcohol*. 22, 2, p. 97-106 10 p.

Distraction of visual attention reduces integration of audiovisual speech

Tiippana, K. & Sams, M., 2000, In: *Perception*. 29, p. 22-22 1 p.

Neurocognitive mechanisms of alcohol abuse

Alexandrov, Y. I., Grinchenko, Y. I., Bodunov, M. V., Matz, V. N., Sams, M., Korpusova, A. & Laukka, S., 2000, In: *Alcohol*. 22, p. 97-106

Parameterized Visual Speech Synthesis and its Evaluation.

Möttönen, R., Olivés, J-L., Kulju, J. & Sams, M., 2000, *X European Signal Processing Conference (EUSIPCO-2000), Tampere, Finland, September 2000..*

Physically based facial model

Jussila, V., Sams, M., Kaski, K. & Salonen, O., 2000, *X European Signal Processing Conference (EUSIPCO-2000), Tampere, Finland, September, 2000..*

Speech production modifies speech perception

Sams, M. & Mottonen, R., 2000, In: *Journal of Cognitive Neuroscience*. p. 128-129 2 p., 117E.

Towards a high-quality and well-controlled Finnish audio-visual speech synthesizer.

Sams, M., Kulju, J., Möttönen, R., Jussila, V., Olivés, J-L., Zhang, Y., Kaski, K., Majaranta, P. & Räihä, K-J., 2000, *4th World Multiconference on Systemics, Cybernetics and Informatics (SCI'2000), Orlando, Florida, USA, July 2000..*

Hemispheric differences in processing tone frequency and amplitude modulations

Pardo, P., Mäkelä, J. & Sams, M., 29 Sept 1999, In: *Neuroreport*. 10, 14, p. 3081-3086 6 p.

Modulation of neutral face evaluation by laterally presented emotional expressions.

Surakka, V., Sams, M. & Hietanen, J. K., Apr 1999, In: *Perception and Motor Skills*. 88, 2, p. 595-606 12 p.

Audio-visual speech synthesis for Finnish

Olivés, J-L., Möttönen, R., Kulju, J. & Sams, M., 1999, *Audio-visual Speech Processing, Santa Cruz, USA, 1999..* Massaro, D. (ed.). p. 157-162

Ihmisen ja tietokoneen välisen vuorovaikutuksen kehittäminen

Sams, M. & Räihä, K-J., 1999, *Tiedosta ja tiedon tutkimuksesta. Suomen Akatemian tiedon tutkimusohjelman raportteja, 2*. Panzar, E. (ed.). Tampere: Tampereen yliopisto, p. 113-129

Towards A High Quality Finnish Talking Head

Olivés, J.-L., Sams, M., Kulju, J., Seppälä, O., Karjalainen, M., Altosaar, T., Lemmetty, S., Töyrä, K. & Vainio, M., 1999, *The 1999 IEEE International Workshop on Multimedia Signal Processing, Denmark, 1999*. p. 433-437

McGurk effect in Finnish syllables, isolated words, and words in sentences: Effects of word meaning and sentence context
Sams, M., Manninen, P., Surakka, V., Helin, P. & Kättö, R., Oct 1998, In: *Speech Communication*. 26, 1-2, p. 75-87 13 p.

Modulation of human auditory information processing by emotional visual stimuli

Surakka, V., Tenhunen-Eskelinen, M., Hietanen, J. K. & Sams, M., Oct 1998, In: *Cognitive Brain Research*. 7, 2, p. 159-163 5 p.

Neurocognitive mechanisms of audiovisual integration

Sams, M., Hietanen, J. & Surakka, V., 15 Sept 1998, In: *International Journal of Psychophysiology*. 30, 1-2, p. 85-86 2 p.

Face-selective processing in human extrastriate cortex around 120 ms after stimulus onset revealed by magneto- and electroencephalography

Linkenkaer-Hansen, K., Palva, J. M., Sams, M., Hietanen, J. K., Aronen, H. J. & Ilmoniemi, R. J., 3 Sept 1998, In: *Neuroscience Letters*. 253, 3, p. 147-150 4 p.

Differential effects of alcohol on the cortical processing of foreign and native language

Alexandrov, Y., Sams, M., Lavikainen, J., Näätänen, R. & Reinikainen, K., 1 Jan 1998, In: *International Journal of Psychophysiology*. 28, 1, p. 1-10 10 p.

A Finnish-talking head

Kulju, J., Sams, M. & Kaski, K., 1998, *Linguistica Uralica*. Klaus, V. (ed.). Tallin: Estonian Academy of Sciences, p. 329-333

A neuromagnetic study of the integration of audiovisual in the brain

Sams, M. & Levänen, S., 1998, *Brain Topography Today*. Koga, Y., Nagata, K. & Hirata, K. (eds.). Amsterdam: Elsevier, p. 47-53

Auditory MMN during concurrent visual emotional information

Tenhunen-Eskelinen, M., Surakka, V. & Sams, M., 1998, p. 20-22, (Nordiskt Möte i Klinisk Neurofysiologi och den tionde finska KNF-dagarna, Åbo, Finland, 14.-16.5.1998).

Effects of word meaning and sentence context on the integration of audiovisual speech

Sams, M., Manninen, P., Surakka, V., Helin, P. & Kättö, R., 1998, In: *Speech Communication*. 26, p. 75-87

Integration of dichotically and visually presented speech stimuli

Sams, M. & Rusanen, S., 1998, *Auditory-Visual Speech Processing, 1998, Terrigal, New South Wales, Australia, December 4-6, 1998*.

Intermodal interaction

Sams, M., 1998, *Temporal aspects of human cortical information processing, Helsinki University of Technology, Finland, June 14-17, 1998*.

Magnetoencephalography

Sams, M., 1998, *New Investigative Techniques in Neuropsychiatry, Meeting of the Section of Psychiatry of the Royal Society of Medicine, London, 12 May, 1998*.

Modulation of Early auditory Information Processing by Visual Emotional Simulation

Surakka, V., Tenhunen-Eskelinen, M., Hietanen, J. K. & Sams, M., 1998, p. 30-35, (XX Nordic Congress of Psychology, Helsinki, 26-28 August, 1998).

Modulation of Early auditory Information Processing by Visual Emotional Stimulation

Surakka, V., Tenhunen-Eskelinen, M., Hietanen, J. K. & Sams, M., 1998, p. 35-40, (First International Workshop on Mismatch Negativity and its Clinical Applications, Helsinki, October 16-18, 1998).

Modulation of human auditory information processing by emotional visual stimuli

Surakka, V., Tenhunen-Eskelinen, M., Hietanen, J. & Sams, M., 1998, In: Cognitive Brain Research. 7, 2, p. 159-163

Processing of Facial Features and Configuration in Children's Face Recognition. A poster presentation in XX Nordic Congress of Psychology, Helsinki, 26-29 August, 1998

Hietanen, J. K., Keskinen, A., Surakka, V. & Sams, M., 1998, p. 56-58, (XX Nordic Congress of Psychology, Helsinki, 26-29 August, 1998).

The Effects of Facial Configuration Manipulation on the McGurk illusion

Hietanen, J. K., Nölvi, T., Oksanen, T., Manninen, P., Surakka, V. & Sams, M., 1998, p. 45-48, (XX Nordic Congress of Psychology, Helsinki, 26-29 August, 1998).

Frequency and periodicity are represented in orthogonal maps in the human auditory cortex: evidence from magnetoencephalography

Langner, G., Sams, M., Heil, P. & Schulze, H., Dec 1997, In: JOURNAL OF COMPARATIVE PHYSIOLOGY A: NEUROETHOLOGY SENSORY NEURAL AND BEHAVIORAL PHYSIOLOGY. 181, 6, p. 665-676 12 p.

Differential activation to faces, degraded faces, and their inverted counterparts

Linkenkaer-Hansen, K., Sams, M., Hietanen, J. K. & Ilmoniemi, R. J., Aug 1997, In: Perception. 26, p. 137-137 1 p.

Face-Specific responses from the human inferior occipito-temporal cortex

Sams, M., Hietanen, J. K., Hari, R., Ilmoniemi, R. & Lounasmaa, O., 1 Jun 1997, In: Neuroscience. 77, 1, p. 49-55 7 p.

Disrupting human auditory change detection: Chopin is superior to white noise

Levänen, S. & Sams, M., May 1997, In: Psychophysiology. 34, 3, p. 258-265 8 p.

Characteristics of auditory sensory memory: Neuromagnetic evidence

Loveless, N. E., Levänen, S., McEvoy, L. K., Jousmäki, V., Sams, M. & Hari, R., Jan 1997, In: International Journal of Psychophysiology. 25, 1, p. 19-19 1 p.

Where and when is audiovisual speech integrated: MEG studies

Sams, M. & Levanen, S., Jan 1997, In: International Journal of Psychophysiology. 25, 1, p. 82-82 1 p.

A neuromagnetic study of the integration of audiovisual speech in the brain

Sams, M. & Levanen, S., 1997, *BRAIN TOPOGRAPHY TODAY*. Koga, Y., Nagata, K. & Hirata, K. (eds.). Elsevier Science B.V., p. 47-53 7 p. (INTERNATIONAL CONGRESS SERIES; vol. 1147).

Audiovisual speech perception

Sams, M., 1997, In: Perception. 26, p. 78-78 1 p.

Differential activation to faces, degraded faces, and their inverted counterparts

Linkenkaer-Hansen, K., Sams, M., Hietanen, J. & Ilmoniemi, R., 1997, p. s. xx, (The 20th European Conference on Visual Perception, Helsinki-Espoo, August 24-29, 1997).

"Neuromagnetic Window" to human brain (in Russian)

Salmelin, R., Hari, R. & Sams, M., 1997, In: Priroda. 997, 3, p. 90-93

Temporal integration in auditory sensory memory: neuromagnetic evidence

Levänen, S., Loveless, N., Jousmäki, V., Sams, M. & Hari, R., May 1996, In: *Electroencephalography and Clinical Neurophysiology. Evoked Potentials*. 100, 3, p. 220-228 9 p.

Characteristics of auditory sensory memory: Neuromagnetic evidence

Loveless, N. E., Levänen, S., McEvoy, L. K., Jousmäki, V., Sams, M. & Hari, R., 1996, Tampere, p. 73, (8th World Congress of Psychophysiology, Tampere, Finland, June 25-30, 1996).

Deviant auditory stimuli activate human left and right auditory cortex differently

Levänen, S., Ahonen, A., Hari, R., McEvoy, L. & Sams, M., 1996, In: *Cerebral Cortex*. 6, 2, p. 288-296 9 p.

Where and when is audiovisual speech integrated: MEG studies

Sams, M. & Levänen, S., 1996, p. 203.

Auditory evoked magnetic fields to tones and pseudowords in healthy children and adults

Paetau, R., Ahonen, A., Salonen, O. & Sams, M., Mar 1995, In: *Journal of Clinical Neurophysiology*. 12, 2, p. 177-185 9 p.

Exploration of human auditory cortical functions: Neuromagnetic approach

Hari, R., Levänen, S., Mäkelä, J., Sams, M. & Vasama, J., 1995, *Active Hearing*. Å.Flock, O. & Ulfendahl, M. (eds.). Pergamon: Pergamon Press, p. 1-12

Hemispheric differences in the cortical processing of auditory frequency and amplitude modulations

Pardo, P., Mäkelä, J., Sams, M. & Hari, R., 1995, *First International Conference on Functional Mapping of the Human Brain, Paris, France, 27.-30.6.1995*. Mazoyer, B., Roland, P. & Seitz, R. (eds.). John Wiley & Sons, p. 160

Right-hemisphere predominance in memory-based processing of simple tones

Levänen, S., Hari, R., McEvoy, L. & Sams, M., 1995, p. 171, (First International Conference on Functional Mapping of the Human Brain, Paris, France, 27.-30.6.1995).

Cortical sensory evoked potentials and communicative forebrain functions

Leinonen, L., Sams, M., Heiskala, H., Klippi, A., Korhonen, A-M. & Hakapää, M., Jan 1994, In: *Brain and Development*. 16, 1, p. 32-39 8 p.

Auditory evoked magnetic fields to tones and pseudowords in healthy children and adults

Paetau, R., Ahonen, A., Salonen, O. & Sams, M., 1994, Otaniemi, p. 18, (Helsinki University of Technology, Low Temperature Laboratory; no. TKK-F-A722).

Dynamics of brain activation during picture naming

Salmelin, R., Hari, R., Lounasmaa, O. V. & Sams, M., 1994, In: *Nature*. 368, p. 463-465 3 p.

Evidence of sharp frequency tuning in the human auditory cortex

Sams, M. & Salmelin, R., 1994, In: *Hearing Research*. 75, 1-2, p. 67-74 8 p.

Neuromagnetic correlates of memory disturbance caused by infarction in anterior thalamus

Pardo, P., Mäkelä, J., Sams, M. & Hari, R., 1994, Washington, D.C., p. 810, (Society for Neuroscience, 24th Annual Meeting, Miami Beach, Florida, 13.-18.11.1994).

Neuromagnetic measurements of hemispheric differences in auditory processing of frequency and amplitude modulations

Pardo, P., Mäkelä, J., Sams, M. & Hari, R., 1994, Washington, D.C., p. 325, (Society for Neuroscience, 24th Annual Meeting, Miami Beach, Florida, 13.-18.11.1994).

Responses of the human auditory cortex to changes in one versus two stimulus features

Levänen, S., Hari, R., McEvoy, L. & Sams, M., Dec 1993, In: *Experimental Brain Research*. 97, 1, p. 177-183 7 p.

Phonetic invariance in the human auditory cortex

Hari, R., Aulanko, R., Lounasmaa, O., Näätänen, R. & Sams, M., 30 Sept 1993, In: *Neuroreport*. 4, 12, p. 1356-1358 3 p.

Human auditory cortex responses to rising versus falling glides

Pardo, P. & Sams, M., 3 Sept 1993, In: *Neuroscience Letters*. 159, 1-2, p. 43-45 3 p.

Determinants of the auditory mismatch response

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

Functional organization of the human first and second somatosensory cortices: a neuromagnetic study

Hari, R., Karhu, J., Hämäläinen, M., Knuutila, J., Salonen, O., Sams, M. & Vilkmann, V., Jun 1993, In: *European Journal of Neuroscience*. 5, 6, p. 724-734 11 p.

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.

Brain research with a whole-head 122-channel neuromagnetometer

Lounasmaa, O., Sams, M., Mäkelä, J. & Hari, R., 1993, In: *IBRO News*. 21, 2, p. 6-7

Higher brain functions reflected in MEG

Sams, M., 1993, *The Second Ragnar Granit Symposium, Tampere, 22.-23.11.1993*. Tampere: Tampere University of Technology, p. 9

The human auditory sensory memory trace persists about 10 sec: neuromagnetic evidence

Sams, M., Hari, R., Rif, J. & Knuutila, J., 1993, In: *Journal of Cognitive Neuroscience*. 5, 3, p. 363-370 8 p.

Whole-head neuromagnetic recordings of responses to deviant auditory stimuli

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.

Neuromagnetic mismatch fields to single and paired tones

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

Cognitive processes: current status of neuromagnetic research

Sams, M., 1992, *Biomagnetism: Clinical Aspects*. Hoke, M., Erne, SN., Okada, YC. & Romani, GL. (eds.). Elsevier, p. 111-119 9 p. (INTERNATIONAL CONGRESS SERIES; vol. 988).

Frequency tuning of the human auditory cortex

Sams, M. & Salmelin, R., 1992, *22nd Annual meeting of the Society for Neuroscience, Anaheim, California, 25.-30.10.1992*. Washington: Society for Neuroscience

MAGNETIC RESPONSES REVEAL SOMATOTOPIC ORGANIZATION OF THE 2ND SOMATOSENSORY CORTEX
HARI, R., KARHU, J., SAMS, M., HAMALAINEN, M. & KNUUTILA, J., 1992, *BIOMAGNETISM : CLINICAL ASPECTS*. Hoke, M., Erne, SN., Okada, YC. & Romani, GL. (eds.). Elsevier, p. 229-232 4 p. (INTERNATIONAL CONGRESS SERIES; vol. 988).

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).

Multichannel MEG studies of human cognitive functions

Sams, M., 1992, In: *Biomedical Research* . 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.

Event-related brain potentials in selective listening to frequent and rare stimuli

Alho, K., Lavikainen, J., Reinikainen, K., Sams, M. & Naatanen, R., Jan 1990, In: *Psychophysiology*. 27, 1, p. 73-86 14 p.

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., Sept 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?

Näätänen, R., Paavilainen, P., Alho, K., Reinikainen, K. & Sams, M., 27 Mar 1989, In: *Neuroscience Letters.* 98, 2, p. 217-221 5 p.

FREQUENCY AND LOCATION SPECIFICITY OF THE HUMAN VERTEX N1-WAVE

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.

ACOUSTIC AND VISUAL EEG EVOKED MISMATCH POTENTIAL

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.

Brain mechanism of selective listening reflected by event-related potentials

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., Sept 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 Sept 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., JARVILEHTO, 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., Sept 1978, In: Biological Psychology. 7, 1-2, p. 1-12 12 p.

Activities

Creative Technologies

Laura Beloff (Speaker) & Mikko Sams (Contributor)
30 Mar 2023

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 Sept 2020 → 2 Sept 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 Sept 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 Sept 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 Center

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

TheExbodied 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, Tromso, 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

Yuri I. 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

Yuri I. 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

XTREME: Mixed Reality Environment for Immersive Experience of Art and Culture

Sams, M.

01/01/2024 → 31/12/2026

MAGICS: National Infrastructure for human virtualization and remote presence

Sams, M. & Ruotoistenmäki, A.

01/07/2020 → 30/11/2021

Neuroscience of intergroup processes

Sams, M., Chang Arana, A., Himberg, T. & Ertas Yorulmaz, S. G.

01/09/2017 → 31/12/2021

-: XTREME WP 1 NBE

Sams, M.

01/01/2024 → 31/12/2026

-: XTREME WP 2 NBE

Sams, M.

01/01/2024 → 26/12/2031

-: XTREME WP 3 NBE

Sams, M.

01/01/2024 → 31/12/2026

-: XTREME WP 4 NBE

Sams, M.

01/01/2024 → 31/05/2026

-: XTREME WP 5 NBE

Sams, M. & Kloft, A.

01/01/2024 → 31/12/2026

-: XTREME WP 6 NBE

Sams, M.

01/01/2024 → 31/05/2026