

1. Curriculum Vitae for Viljami Salmela

2. Contact

Contact: Institute of Behavioural Sciences, University of Helsinki
 P.O. Box 9 (Siltavuorenpenger 1 A)
 00014 University of Helsinki, Finland

Office +358 (0) 2 941 29 468

Email: viljami.salmela@helsinki.fi

Web: <http://www.helsinki.fi/~vsalmela/>

TUHAT: <https://tuhat.halvi.helsinki.fi/portal/en/person/vsalmela>

3. Education and degrees awarded

Degrees

Title of Docent (Adjunct professor), Cognitive Neuroscience, 30.5.2014 University of Helsinki
 Ph.D., Title: 'Perception of Surface Brightness' (grade: laudatur), 9.6.2009 University of Helsinki
 M.A., Major: Psychology, Minor: Cognitive Science, Theoretical Philosophy, 4.6.2002 University of Helsinki

Education

Psychology, University of Helsinki, 1999-2002
 Cognitive Science, University of Helsinki, 1998-2002
 Mathematics, University of Turku, 1996-1997

4. Other education and training, qualifications and skills

Special courses & seminars:

Diffusion Tensor Imaging, National Doctoral Programme of Psychology, University of Helsinki, 2013
 fMRI school, Low Temperature Laboratory, Helsinki University of Technology, 2009
 Cognitive Brain Research Methods, Department of Psychology, University of Helsinki, 2002
 Digital signal processing, Prof. Olli Simula, University of Helsinki, 2002

Software skills

Fluent programming in Matlab, Presentation, Psychtoolbox, SPM, EEGLab, Freesurfer, SPSS, Linux

5. Linguistic skills

Finnish Native tongue
 English Fluent written and verbal
 Swedish Good written and verbal

6. Current position

Post-Doctoral Researcher (Tutkijatohtori), 'Overloaded Brain' Research Project of the Academy of Finland, Institute of Behavioural Sciences, University of Helsinki (1.1.2013-31.8.2016)

7. Previous work experience

Visiting Post-Doctoral Researcher (Vieraileva tutkijatohtori), Advanced Magnetic Imaging Centre, Aalto Neuroimaging, Aalto University; Brain Research Unit, O.V. Lounasmaa Laboratory, Aalto University (16.5.2011-31.12.2013)
 University Lecturer (Yliopistonlehtori), Institute of Behavioural Sciences, University of Helsinki (1.8.2012-31.12.2012)
 University Instructor (Yliopisto-opettaja), Institute of Behavioural Sciences, University of Helsinki (16.8.2010-31.7.2012)

Post-Doctoral Researcher (Tutkijatohtori), Research Project of the Academy of Finland (1.8.2009-31.12.2009), University of Helsinki
 Doctoral Student (Tutkijakoulutettava), Research Project of the Academy of Finland (1.1.2008-31.7.2009), Graduate school of Psychology (1.10.2003-31.10.2007), University of Helsinki
 Junior Lecturer (Assistentti), Department of Psychology (1.9.2002-31.7.2003), University of Helsinki
 Assistant Research Scientist (Tutkimusavustaja; 1.6.-30.8.2002), Part-time consultant (Osa-aikainen konsultti; 1.11.2002 -31.5.2003), Visual ergonomics laboratory, Nokia Research Center / Visual Communications, Helsinki, Finland.
 Part-time Teaching Assistant (Apuopettaja), Department of Psychology (1.3.-31.5.2000 & 1.9.2000-31.5.2002), University of Helsinki
 Researcher (Tutkija), Information Ergonomics Research Group (1.5.-31.10.2000), Helsinki University of Technology

8. Research funding as well as leadership and supervision

Research grants

Three-year research grant for studying face memory, 150 000 e, University of Helsinki, 2014
 Three-year personal grant for post-doctoral research, Finnish Cultural Foundation, 2010.

Research supervision

Doctoral Thesis, Kaisu Ölander (1st supervisor, work in progress, 1.9.2015-), Title: "Memory precision and neural representations of facial identity and expression".
 Doctoral Thesis, Mona Moisala (2nd supervisor, work in progress, 1.1.2013-), Title: "The effect of attentional load and extensive ICT exposure on brain networks of working memory and attention".
 Member of thesis committee/follow-up group, PhD student Teemu Mäntylä, Doctoral Program Brain & Mind, University of Helsinki.

Research leadership

Principal investigator and leader of research team, Face Memory –project (1.6.2015-).

9. Merits in teaching and pedagogical competence

50 study credits of University Pedagogy (2007-2016), Helsinki University Centre for Research and Development of Higher Education.

Lecturer/responsible teacher in total of 25 courses on experimental and brain imaging methods, perception, and neuropsychology during the years 2003-2016 in Institute of Behavioural Sciences and in Department of Psychology, University of Helsinki, as well as in Open University of Helsinki. Supervision of 3 Masters Theses (2005-2016) and 5 Bachelors Theses (2012-2016).

10. Awards, prizes and honours

Faculty PhD thesis award, Faculty of the Behavioural Sciences, University of Helsinki, 2010
 Teacher of the year, students of psychology, 3.5.2007

11. Other academic merits

Referee for scientific journals: Journal of Vision, Vision Research, PLoSOne, Attention, Perception & Psychophysics, Scandinavian Journal of Psychology, 2009-2016

12. Scientific and societal impact of research

- 13 Peer-reviewed scientific articles (A1)
- 1 Doctoral dissertation (G5)
- 1 Textbook chapter (D5)
- 5 Papers in conference proceedings (A4)
- 17 Abstracts in Conference proceedings (A4)

- 18 Presentations in the international conferences, 2000-2016, Annual Meeting of the Society of Neuroscience, European Conference on Visual Perception, Annual Meeting of Vision Sciences Society, Annual Meeting of the Organization of Human Brain Mapping, Visionarium.

13. Publications

A1 Peer-reviewed scientific articles:

- 13. Moisala, M., Salmela, V., Hietajärvi, L., Salo, E., Carlson, S., Salonen, O., Lonka, K., Hakkarainen, K., Salmela-Aro, K. & Alho, K. (2016). Media multitasking is associated with distractibility and increased prefrontal activity in adolescents and young adults. *NeuroImage*, 134, 113–121. 9 p.
- 12. Salmela, V.R., Henriksson, L., & Vanni, S. (2016). Radial frequency analysis of contour shapes in visual cortex. *Plos Computational Biology*, 12, 2. 18 p.
- 11. Moisala, M., Salmela, V., Salo, E, Carlson, S., Vuontela, V., Salonen, O. & Alho, K. (2015). Brain activity during divided and selective attention to auditory and visual sentence comprehension tasks. *Frontiers in Human Neuroscience*, 9, 86. 15 p.
- 10. Salmela, V.R., Moisala, M., & Alho, K. (2014). Working memory resources are shared across modalities. *Attention, Perception & Psychophysics*, 76, 1962-1974. 13 p.
- 9. Salmela, V.R. & Vanni, S. (2013). Brightness and transparency in the early visual cortex. *Journal of Vision*, 13, 7. 14 p.
- 8. Hausen, M., Torppa, R., Salmela, V.R., Vainio, M. & Särkämö, T. (2013). Music and speech prosody: A common rhythm. *Frontiers in Psychology*, 4:566. 16 p.
- 7. Salmela, V.R., & Saarinen, J. (2013). Detection of small orientation changes and the precision of visual working memory. *Vision Research*, 76, 17–24. 8 p.
- 6. Salmela, V.R., Lähde, M., & Saarinen, J. (2012). Visual working memory for amplitude-modulated shapes. *Journal of Vision*, 12(6):2. 9 p.
- 5. Salmela, V.R., Mäkelä, T. & Saarinen, J. (2010). Human working memory for shapes of radial frequency patterns. *Vision research*, 50, 623-629. 7 p.
- 4. Salmela, V.R. & Laurinen, P.I. (2009). Low-level features determine brightness in White's and Benary's illusions. *Vision Research*, 49, 682-690. 9 p.
- 3. Salmela V.R. & Laurinen P.I. (2007). Brightness processing in the visual cortex. *Neuroscience Letters*, 420, 160-162. 3 p.
- 2. Salmela, V.R. & Laurinen, P.I. (2007). Spatial frequency difference between textures interferes with brightness perception. *Vision Research*, 47, 452-459. 8 p.
- 1. Salmela, V.R. & Laurinen, P.I. (2005). Spatial frequency tuning of brightness polarity identification. *Journal of the Optical Society of America A*, 22, 2239-2245. 7 p.

G5 Theses, Doctoral dissertation:

- 1. Salmela, V.R. (2009). *Perception of surface brightness*. University of Helsinki, Department of Psychology, Studies 57.

D5 Publications intended for professional communities, textbook chapter:

- 1. Salmela, V., Kurki, I. & Laurinen, P. (2006). Psykofysiikka ('Psychophysics'). In Hämäläinen, H., Laine, M., Aaltonen, O. & Revonsuo, A. (ed.). *Mieli ja Aivot: Kognitiivisen neurotieteen oppikirja ('Mind and Brain: Textbook of Cognitive Neuroscience')*. Centre for Cognitive Neuroscience, University of Turku.

A4 Conference proceedings, abstracts:

17. Salmi, J., Salmela, V., Salo, E., Mikkola, K., Leppämäki, S., Tani, P., Hokkanen, L., Laasonen, M., Numminen, J., & Alho, K. (2016). Modulations of activity in the brain attention networks by focused, divided and stimulus-driven attention in ADHD. *The 34th European Workshop on Cognitive Neuropsychology*.
16. Salmela, V., Salo, E., Salmi, J., & Alho, K. (2015). Dissimilar spatiotemporal activation patterns for multiple attention tasks revealed by representational similarity analysis of EEG and fMRI data. *The 45th Annual Meeting of Society for Neuroscience*.
15. Moisala, M., Salmela, V., Hietajärvi, L., Salo, E., Carlson, S., Salonen, O., Lonka, K., Hakkarainen, K., Salmela-Aro, K. & Alho, K. (2015). The effects of information and communication technology use in adolescence on attention-related brain activity. *The 45th Annual Meeting of Society for Neuroscience*.
14. Moisala, M., Salmela, V., Hietajärvi, L., Salo, E., Carlson, S., Salonen, O., Lonka, K., Hakkarainen, K., Salmela-Aro, K. & Alho, K. (2015). Differences in brain activations during divided and selective attention related to ICT user profiles. *The Nordic Neuroscience Meeting*.
13. Salmela, V., Henriksson, L., & Vanni, S. (2015). Representational similarity analysis of contour shape processing in the visual cortex. *Perception (supplement)*.
12. Salmela, V., Salo, E., Salonen, O. & Alho, K. (2014). fMRI pattern analysis of working memory representations in auditory and visual cortex. *The 20th Annual Meeting of the Organization for Human Brain Mapping*.
11. Moisala, M., Salmela, V., Salo, E., Carlson, S., Vuontela, V., Salonen, O. & Alho, K. (2014). Brain activity elicited by the performance of two simultaneous sentence comprehension tasks. *The 20th Annual Meeting of the Organization for Human Brain Mapping*.
10. Salmela, V., & Leppänen, M. (2012). Classification images for detection and discrimination of contours and shapes. *Perception (supplement)*.
9. Salmela, V., Lähde, M. Saarinen, J (2011). The tradeoff between memory capacity and precision is weaker in recall than in discrimination. *Journal of Vision, 11(11)*, 1244.
8. Salmela V., Mäkelä T. & Saarinen J. (2009). Visual working memory for abstract shapes. *Abstract. Perception, 38 (supplement)*, 177.
7. Salmela, V. & Laurinen, P. (2007). Orientation and spatial frequency tuning of brightness perception. *Abstract. Perception, 36 (supplement)*, 61.
6. Salmela, V. & Laurinen, P. (2005). Polarity specific reduction of the brightness of Gaussian blobs in the presence of flankers. *Abstract. Perception, 34 (supplement)*, 215.
5. Salmela, V. & Laurinen, P. (2004). Spatial frequency difference between textures interferes with brightness spreading. *Abstract. Perception, 33 (supplement)*, 174.
4. Salmela, V., Peromaa, T. & Laurinen, P. (2003). Interaction of luminance and texture borders in brightness perception. *Abstract. Perception, 32 (supplement)*, 152.
3. Peromaa, T., Salmela, V. & Laurinen, P. (2003). Lightness-specific processing occurs at low spatial frequencies. *Abstract. Perception, 32 (supplement)*, 40.
2. Salmela, V., Typpi, M., Peromaa, T. & Laurinen, P. (2002). Accurate lightness perception without edges. *Abstract. Perception, 31 (supplement)*, 184
1. Typpi, M., Salmela, V., Peromaa, T. & Laurinen, P. (2002). Spatiotemporal interactions in lightness and shape perception. *Abstract. Perception, 31 (supplement)*, 184.