

# Erik Marsja

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## Current research

I am examining how sudden and unexpected changes in our environment captures our attention and, thus, causes distraction from what we currently are engaged in. Specifically, my Ph.D. work is examining how sudden and unexpected changes in auditory, tactile, and the combination of both auditory and tactile (multisensory) stimulation affects performance in speeded and short-term memory tasks.

## Research ambition

My goal is to create my academic career in cognitive psychology. Mainly doing ground research but also more applied (e.g., multisensory alarms). Specifically, in the areas of attention and cognitive control. I aspire to eventually be able to work as an established researcher in these, and related, areas (i.e., cognitive neuroscience).

## Education and Degrees

- 2012-Present Ph.D. Student in Psychology
- 2011-2012 M.Sc. in Cognitive Science (*Thesis*: Attention Capture: The Impact of Change in Spatial Sound Source on Behavior- Department of Psychology, Umeå University.
- 2008-2011 B.Sc. in Cognitive Science (*Thesis*: Attention Capture: Studying the Distracting Effect of One's Own Name. Department of Psychology, Umeå University. Available from DiVA Database (<http://urn.kb.se/resolve?urn=urn:nbn:se:umu:diva-46607>).

## Publications

### International peer-reviewed journals

Ljungberg, K. J., Parmentier, F. B. R., Jones, D. M., **Marsja**, E., & Neely, G. (2014). "What's in a name?" "No more than when it's mine own". Evidence from auditory oddball distraction. *Acta Psychologica*, 150C, 161–166. doi:10.1016/j.actpsy.2014.05.009.

### Publications In Preperation/Submitted/Under Revision

Rosa, E., **Marsja**, E., Ljungberg K.J. (In Preparation). Vibrotactile On-thigh Alarm Detection as a Function of Flight Task Mental Workload.

**Marsja**, E., Neely, G., Ljungberg K.J. (In Preparation). Investigating deviance distraction and the impact of modality.

Marsh, J.E., Sörqvist, P., **Marsja**, E., Röer J.P., & Ljungberg, K.J. (Submitted). Irrelevant vibro-tactile stimuli produce a changing-state effect: Implications for theories of interference in short-term memory.

**Marsja**, E., Neely, Ljungberg, K.J (Under revision). Deviance distraction in the auditory and tactile modalities after repeated exposure: differential aspects of tactile and auditory deviants.

## Current research collaborations

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- Associate Professor Jessica K. Ljungberg, Department of Psychology, Umeå University, Umeå, Sweden
- Associate Professor Gregory Neely, Department of Psychology, Umeå University, Umeå, Sweden
- Dr. Patrik Hansson, Department of Psychology, Umeå University, Umeå, Sweden
- Dr. John E. Marsh, School of Psychology, University of Central Lancashire, UK
- Professor Patrik Sörqvist, Faculty of Engineering and Sustainable Development, Högskolan i Gävle, Gävle

## Conference Presentations

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**Marsja**, E., Marsh, J.E., Neely G., Hansson P., Ljungberg K.J., (2016, September). Do Spatial Changes in Sounds and Vibrations Affect Visuo-spatial and Verbal Short-Term Memory? Attention and Control: Insights from Distraction, Workshop, University of Central Lancashire, Preston, UK. **Invited Talk**.

**Marsja**, E., Marsh, J.E., Neely G., Hansson P., Ljungberg K.J., (2016, June). Spatial Change in Multisensory Distractors Impact on Verbal and Spatial Short Term Memory. International Multisensory Research Forum 17<sup>th</sup> annual meeting, Suzhou, CHN. **Oral presentation**.

**Marsja**, E., Neely G., Ma, L., Ljungberg K.J., (2015, August). Cross-modality matches of intensity and attention capture dimensions of auditory and vibrotactile stimuli. Fechner Day 2015. The 31<sup>st</sup> Annual Meeting of the International Society for Psychophysics, Québec, CA. **Poster**.

**Marsja**, E., Neely, G., Parmentier, F.B.R., Ljungberg, K.J., (2014, October) Deviance Distraction Is Contingent on Stimuli Being Presented within the Same Modality. Psychonomic Society's 55<sup>th</sup> Annual Meeting. Long Beach, CA, USA. **Poster**.

Ljungberg, K.J., Parmentier, F.B.R., **Marsja**, E., Neely, G., Jones, D., (2014, January). Any Tom, Dick, or Harry will do: Hearing one's own name distracts no more than any other in a cross-modal oddball task. Experimental Psychology Society Meeting. London, UK. **Poster**.

**Marsja**, E., Neely, G., Parmentier, F.B.R., Ljungberg, K.J., (2013, October). Maintenance of the distractive effect of deviating vibrotactile stimuli in a cross-modal oddball paradigm. the 29<sup>th</sup> Annual meeting of the International Society of Psychophysics, Freiburg, DE. **Poster**.

## Funding and Grants

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**16000 SEK** from Lars Hiertas Minnesfond for the project *Är korttidsminnet domän-generellt eller domän-specifikt? (Is short-term memory domain-general or domain specific?)*, 2016.

**8000 SEK** from the Department of Psychology for participating the conference 17<sup>th</sup> International Multisensory Research Forum 15-18 June, Suzhou, China, 2016.

**10 000 SEK** from JC Kempes minnesfond for the project *Is everyday distractibility related to attention capture by vibrating deviants?*, 2014.

**9 000 SEK** from Knut och Alice Wallenbergs Stiftelse for participating in the conferences Psychonomic Society's 55<sup>th</sup> Annual Meeting, 20-23 November, and APCAM, 20 November, Long Beach, USA, 2014.

**6000 SEK** from the Department of Psychology for participating the conference Fechner Day 2013 (the 29<sup>th</sup> Annual Meeting of the International Society for Psychophysics) 21-25 October, Freiburg i.Br., Germany, 2013.

## Teaching responsibilities

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### Past & current areas at undergraduate level

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Primarily in:

- Attention
- Perception
- Applied Cognitive Psychology
- Cognitive Psychology
- Research Methods
- Project work

Lectures, seminars, lab demonstrations, supervision of group project (both involving empirical and applied projects) and supervision of thesis' have been given at the Department of Psychology Umeå University, Sweden. I have so far taught 695 clock hours. See Table for an overview of teaching topics.

Teaching responsibilities - an overview of type of teaching, hours, etc.

Period	Subject	Type	Clock Hours	Course/Program	Level	Language
VT 2014	Cognitive Psychology Research Methods	Supervision of projects Lectures	20 60	Introduction to Psychology Developmental Psychology and Personality Theory , Psychology Program	UG UG	Swe Swe
HT 2014	Cognitive Psychology Psychology	Supervision of projects Supervision	20 20	Introduction to Psychology Master Thesis 30 ECTS, Psychology Program	UG G	Swe Swe
	Cognitive Science	Supervision of projects	40	Project in Cognitive Science, Bachelor's Program in Cognitive Science	UG	Swe
VT 2015	Cognitive Psychology Cognitive Psychology, Attention, Perception, Memory Cognitive Psychology, Psychophysics, Attention Cognitive Science	Supervising projects Lectures, seminars, supervision of projects, Supervision	24 20 15	Introduction to Psychology Basic psychology and sport psychology Master Thesis 15 ECTS, Master's Program in Cognitive Science	UG UG G	Swe Swe Eng
		Supervision of projects	110	Project in Cognitive Science, Bachelor's Program in Cognitive Science	UG	Swe
HT 2015	Cognitive Psychology	Supervising projects	24	Cognitive Psychology, Psychology Program	UG	Swe
	Research Methods	Seminars in Qualitative research methods	20	Psychology of Organizations, Environment and Work, Psychology Program	UG	Swe
VT 2016	Cognitive Psychology Applied Cognitive Psychology, Auditory Cognition, Attention Research Methods	Lab demonstrations Lectures, seminars, supervision of projects, examination	30 60	2:1 Cognition, Psychology Program Applied Cognitive Psychology, Bachelor's Program in Cognitive Science	UG UG	Eng Swe
		SPSS laboratory, seminars, examination	30	Psychology of Organizations, Environment and Work, Psychology Program	UG	Swe
	Cognitive Science	Supervision of projects	110	Project in Cognitive Science, Bachelor's Program in Cognitive Science	UG	Swe
HT 2016	Cognitive Psychology Research Methods	Lab demonstrations Seminars in Qualitative research methods	30 30	2:1 Cognition, Psychology Program Psychology of Organizations, Environment and Work, Psychology Program	UG UG	Eng Swe
	Perception, Attention, Consciousness, Psychology	Lectures	24	Perception, Bachelor's Program in Cognitive Science	UG	Swe
		Examining defense and opposition of Thesis'	8	Master Thesis 30 ECTS, Psychology Program	G	Swe

Total of clock hours: 695 UG = Undergraduate, G = Graduate

## Supervision of master students

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Ma, L. (2015). Department of Psychology, Umeå University. “Cross-Modal Matching of Distractibility in Auditory and Tactile Stimuli”. Master Thesis in Cognitive Science (15 ECTS).

Blide, M. (2014). Department of Psychology, Umeå University. “Att orka lämna ett misshandelsförhållande: Anknytningens betydelse (To cope leaving abusive relationships: The importance of attachment). Master Thesis in Clinical Psychology (30 ECTS).

## Additional skills

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- Good skills in Microsoft Word and Excel
  - Good skills in statistical software such as SPSS and R
  - Good programming skills in Python (v2.7.x) and R
  - Basic skills in Markdown (i.e., RMarkdown) and L<sup>A</sup>T<sub>E</sub>X
  - Basic programming skills in Visual Basic, E-basic (E-prime), and MATLAB
  - Programming and performing experiments using both E-prime, MATLAB, and Python (i.e., PsychoPy & Experiment)
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