

# 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

- Ph.D. in Psychology, 2017, Department of Psychology, Umeå University.  
*Thesis title:* Attention capture by sudden and unexpected changes: a multisensory perspective. Available from the DiVA Databse: <http://umu.diva-portal.org/smash/record.jsf?pid=diva2%3A1156775>
- M.Sc. in Cognitive Science, 2012, Department of Psychology, Umeå University.  
*Thesis title:* Attention Capture: The Impact of Change in Spatial Sound Source on Behavior.
- B.Sc. in Cognitive Science, 2011, Department of Psychology, Umeå University.  
*Thesis title:* Attention Capture: Studying the Distracting Effect of One's Own Name. Available from DiVA Database: <http://urn.kb.se/resolve?urn=urn:nbn:se:umu:diva-46607>.

## Publications

### International peer-reviewed journals

Marsja, E., Neely, G., Ljungberg K.J. (In Press). Investigating deviance distraction and the impact of the modality of the to-be-ignored stimuli. *Experimental Psychology*.

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 Preparation/Submitted/Under Revision

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Rosa, E., **Marsja**, E., Ljungberg K.J. (Manuscript in Preparation). Tactile warnings constitute an efficient alarm during high mental workload in simulated flight tasks

Marsh, J.E., Sörqvist, P., **Marsja**, E., Röer J.P., & Ljungberg, K.J. (Under revision). 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
- 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., (2017, April). Domain-general or domain-specificity of the short-term memory: insights from a multisensory distraction paradigm. Re-thinking the Senses Spring School, Dubrovnik, Croatia. **Poster**.

**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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**6000 SEK** from the Department of Psychology for participating in the spring course Re-thinking the Senses Spring School, Dubrovnik, Croatia, 2017.

**15000 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.

**12 000 SEK** from the Faculty of Social sciences, Umeå University for participating in the workshop Attention and Control: Insights from Distraction and visiting a researcher at the University of Central Lancashire, Preston, UK, 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.

Language	Type	Semester	Year	row.names	Subject
	Cognitive Psychology	Supervision of projects	20	Introduction to Psychology	UG
Swe	Lectures	VT	2014	Developmental Psychology and Personality Theory	Research Methods
Swe	Cognitive Psychology	Supervision of projects	20	Introduction to Psychology	UG
Swe	Supervision of projects	HT	2014	Master Thesis 30 ECTS	Psychology
Swe	Cognitive Psychology	HT	2014	Project in Cognitive Science	Cognitive Science
		Supervising projects	24	Introduction to Psychology	UG
Attention	seminars	Lectures	20	Basic psychology and sport psychology	supervision of projects
Attention	Supervision	VT	UG	Perception	Cognitive Psychology
Swe	Supervision of projects	VT	2015	Master Thesis 15 ECTS	Cognitive Psychology
Swe	Supervision of projects	HT	2015	Project in Cognitive Science	Cognitive Science
UG	HT	20	2015	Cognitive Psychology	Cognitive Psychology
			Psychology Program	Psychology of Organizations	Seminars in Qualitative research methods
			Swe		
Eng	Lab demonstrations	VT	2016	2:1 Cognition	Cognitive Psychology
examination	Lectures	VT	2016	Applied Cognitive Psychology	seminars
		Swe	Attention	Applied Cognitive Psychology	
Research Methods	VT	30	Psychology Program	Psychology of Organizations	Seminars in Qualitative research methods
Swe	Supervision of projects	VT	2016	UG	Cognitive Science
Eng	Lab demonstrations	HT	2016	Project in Cognitive Science	Cognitive Psychology
Research Methods	HT	30	Psychology Program	2:1 Cognition	Seminars in Qualitative research methods
Attention	Lectures	HT	2016	Psychology of Organizations	Seminars in Qualitative research methods
Swe	Examining defense and opposition of Thesis	HT	2016	UG	Lab demonstrations
Eng	Lab demonstrations	VT	2016	Perception	Psychology
			UG	Consciousness	
Applied Cognitive Psychology	Lectures	VT	2017	Master Thesis 30 ECTS	Cognitive Psychology
Swe	Supervision of projects	VT	2017	2:1 Cognition	seminars
Research Methods	VT	30	Psychology Program	Applied Cognitive Psychology	Cognitive Science
Eng	Lab demonstrations	HT	2017	Perception	Seminars in Qualitative research methods
UG	Lectures	HT	2017	Applied Cognitive Psychology	Cognitive Psychology
			2017	UG	Attention and Consciousness
and Working Memory	Seminars	HT	2017	2:1 Cognition	Self-concept
				Perception	
				Swe	
				Learning and teaching	
				UG	

Total of clock hours: 0 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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