

# Erik Marsja, PhD | Disability Researcher

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## Experience

2019 - 2022    Postdoctoral Researcher, Dept. of Behavioral Sciences and Learning, Linköpings University

2018 - 2018    Postdoctoral Research Assistant, Dept. of Psychology, Umeå University

2012 - 2018    PhD Student and Teaching Assistant, Dept. of Psychology, Umeå University

June 2011    Undergrad. Research Assistant, Dept. of Psychology, Umeå University

## Education

2017    Ph.D. in Psychology, Dept. of Psychology, Umeå University

2012    M.Sc. in Cognitive Science, Dept. of Psychology, Umeå University

2011    B.Sc. in Cognitive Science, , Dept. of Psychology, Umeå University

## Selected Publications

### International peer-reviewed journals

Marsja, E., Stenbäck, V., Moradi, S., Danielsson, H., & Rönnerberg, J. (2022). Is Having Hearing Loss Fundamentally different? Multi-group structural equation modeling of the effect of cognitive functioning on speech identification. *Ear & Hearing*. <https://doi.org/10.1097/AUD.0000000000001196> (PDF)

Stenbäck, V., Marsja, E., Hällgren, M., Lyxell, B., & Larsby, B. (2021). The Contribution of Age, Working Memory Capacity, and Inhibitory Control on Speech Recognition in Noise in Young and Older Adult Listeners. *Journal of Speech, Language, and Hearing Research*, 64(11), 4513–4523. [https://doi.org/10.1044/2021\\_JSLHR-20-00251](https://doi.org/10.1044/2021_JSLHR-20-00251)

Rosa, E., Marsja, E., & Ljungberg, J. K. (2020). Exploring Residual Capacity: The Effectiveness of a Vibrotactile Warning During Increasing Levels of Mental Workload in Simulated Flight Tasks. *Aviation Psychology and Applied Human Factors*, 10(1), 13–23. <https://doi.org/10.1027/2192-0923/a000180>

Marsja, E., Marsh, J.E., Hansson, P., & Neely, G. (2019). Examining the Role of Spatial Changes in Bimodal and Uni-Modal To-Be-Ignored Stimuli and How They Affect Short-Term Memory Processes. *Frontiers In Psychology*. <https://doi.org/10.3389/fpsyg.2019.00299> (PDF)

Marsja, E., Neely, G., & Ljungberg, K.J. (2018). Investigating Deviance Distraction and the Impact of the Modality of the To-Be-Ignored Stimuli. *Experimental Psychology*, 65(2), 61–70. <http://doi.org/10.1027/1618-3169/a000390>

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. <http://dx.doi.org/10.1016/j.actpsy.2014.05.009>

## Conference Presentations

**Marsja**, E., Danielsson, H., Stenbäck, V., Moradi, S., Rönnberg, J. (2019, November). Examining how Cognitive Functioning, Aging, and Hearing Loss, Affect Speech-in-Noise Performance. Aging and Speech Communication conference, Tampa, Florida, USA. **Poster**.

Stenbäck, V., **Marsja**, E., Danielsson, H., Rönnberg, J. (2019, November). Logical and Auditory Inference Making: Performance in the HINT in normally-hearing and hearing-impaired listeners. Aging and Speech Communication conference, Tampa, Florida, USA. **Poster**.

Bampouni, E., **Marsja**, E., Sörman, D.E., & Ljungberg, K.J (2019, November). Do Action Gamers Have Enhanced Visual Search Skills? a Realistic Task Approach. The 15th SweCog conference of the Swedish Cognitive Science Society, Umeå, Sweden. **Poster**.

**Marsja**, E., Danielsson, H., Stenbäck, V., Moradi, S., & Rönnberg, J. (2019, June). Examining Relationship Amongst Cognition, Hearing Loss, Age, & Speech in Noise. Cognitive Hearing Science for Communication, Linköping, Sweden. **Poster**.

Stenbäck, V., Moradi, S., **Marsja**, E., Danielsson, H., & Rönnberg, J. (2019, June). Logical and auditory inference-making in normally-hearing and hearing-impaired listeners. Cognitive Hearing Science for Communication, Linköping, Sweden. **Poster**.

**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 presentation**.

**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**.

## Popular Science and Education-Related Articles

Marsja, E. (2016, July). Python Programming in Psychology – From Data Collection to Analysis. *JEPS Bulletin - The Official Blog of the Journal of European Psychology Students*. **Invited Blog Post**. Retrieved from <http://blog.efpsa.org/2016/07/12/python-programming-in-psychology-from-data-collection-to-analysis/>

## Selected Funding and Grants

**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.

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

## Peer-reviewed for Journals:

- Behavior Research Methods
- Frontiers in Psychology
- Journal of Cognitive Psychology

Information about my responsibilities as a peer-reviewer can be found in my Publons profile.

## Skills & Training

### Training

2017 Spring School *Re-Thinking the Senses*, Inter-University Centre, Dubrovnik, Croatia

### Teaching

The majority of lectures, seminars, lab demonstrations, supervision of group projects (both involving empirical and applied projects) and supervision of thesis' have been given at the Department of Psychology, Umeå University, Sweden (2014 - 2017). I have also held workshops, and supervised projects at the Department of Behavioral Science and Learning, Linköping University (2019 - ). At Umeå University and Linköping University, I have so far taught 950 and 550 clock hours, respectively. At Linköping University I have supervised thesis' projects at both undergraduate and graduate level covering areas such as disability research, cognitive science (incl. e.g. artificial intelligence, psychology, human-computer interaction) and pedagogy. I have primarily taught in:

- Research Methods & Basic Statistics
- Cognitive Psychology (attention, perception, & working memory)
- Applied Cognitive Psychology (attention and perception)

## Supervision of Bachelor Students (Undergraduate Level)

Rombo, A. (2020). Department of Computer and Information Science, Linköping University. "Self-determination perceived by users in support services pursuant to LSS - An analysis on a municipal level. Bachelor's Thesis in Cognitive Science (18 EcTS). *Main supervisor*

Lindberg, F. (2020). Department of Computer and Information Science, Linköping University. "Hur ungas attityder kring hörselnedsättningar orsakade av fritidsbuller påverkas av deras koppling till sitt

framtida jag.” (How young people’s attitudes to hearing impairments caused by leisure noise are affected by their connection to their future selves.) Bachelor’s Thesis in Cognitive Science (18 ECTS). *Main supervisor*

Dahlgren, S. Department of Computer and Information Science, Linköping University. “The association between cognition and speech-in-noise perception - Investigating the link between speech-in-noise perception and fluid intelligence in people with and without hearing loss.” Bachelor’s Thesis in Cognitive Science (18 ECTS). *Main supervisor*

### **Supervision of Master Students (Graduate Level)**

Carlbring, J. (2020) Department of Computer and Information Science, Linköping University. “Inclusive Design for Mobile Devices with WCAG and Attentional Resources in Mind.” Master’s Thesis in Cognitive Science (30 ECTS). *Main supervisor*

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

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

### **Teaching Workshops**

Oct 2018      **R Workshop "Step-by-Step"**

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Department of Psychology, Umeå University.

An introduction to R statistical programming language - presented to senior researchers with a focus on basic programming and the R environment.

### **Additional skills**

- Extensive knowledge in statistical software such as SPSS, JASP, and R statistical programming environment
- Strong scripting skills in Python (v2.7.x & v3.x.x) and R
- Substantial skills in programming and performing experiments using both E-prime and Python (i.e., PsychoPy, OpenSesame, & Expyriment)
- Good skills in Microsoft Word and Excel
- Basic programming skills in Visual Basic, E-basic (E-prime), MATLAB, Bash, JavaScript, and PHP
- Basic skills in Markdown (e.g., RMarkdown) and L<sup>A</sup>T<sub>E</sub>X

### **Responsibilities**

- Elected chairperson of the Ph.D. students Council of the Department of Psychology, Umeå University.

Table 1: Teaching responsibilities - an overview of type of teaching, hours, etc.

Period	Subject	Type	Clock Hours	Course/Program	Level	Language
Umeå University	Scientific communication, research methods, research ethics	Lectures, seminars, supervision	60	Psychological test and research methods/Statistical and Empirical Methods, the Clinical Psychologist program/the Bachelor's Program in Cognitive Science	UG	Swe
Umeå University	Cognitive Psychology	Supervision of projects	20	Introduction to Psychology, the Clinical Psychologist Program	UG	Swe
Umeå University	Clinical Psychology	Co-supervision of thesis project	20	Master Thesis in Psychology, 30 ECTS, the Clinical Psychologist Program	G	Eng
Umeå University	Applied Cognitive Science	Supervision of projects	40	Project in Cognitive Science, the Bachelor's Program in Cognitive Science	UG	Swe
Umeå University	Cognitive Psychology	Supervision of projects	20	Introduction to Psychology, the Clinical Psychologist Program	UG	Swe
Umeå University	Cognitive Psychology	Supervision of projects	24	Introduction to Psychology, the Clinical Psychologist Program	UG	Swe
Umeå University	Cognitive Psychology	Lectures, seminars, supervision of projects	20	Basic psychology and sport psychology, the Coaching Program	UG	Swe
Umeå University	Cognitive Psychology	Supervision of thesis project	15	Master Thesis in Cognitive Science, 15 ECTS, the Master's Program in Cognitive Science	G	Eng
Umeå University	Applied Cognitive Science	Supervision of projects	110	Project in Cognitive Science, the Bachelor's Program in Cognitive Science	UG	Swe
Umeå University	Cognitive Psychology	Supervision of projects	24	Cognitive Psychology, the Clinical Psychologist Program	UG	Swe

Table 1: Teaching responsibilities - an overview of type of teaching, hours, etc. (*continued*)

Period	Subject	Type	Clock Hours	Course/Program	Level	Language
Umeå University	Qualitative methods	Seminars	20	the Psychology of Organizations, Environment and Work, the Clinical Psychologist Program	UG	Swe
Umeå University	Cognitive Psychology	Lab demonstrations	30	2:1 Cognition, the Clinical Psychologist Program	UG	Eng
Umeå University	Cognitive Psychology: Attention	Lectures, seminars, supervision of projects	60	Applied Cognitive Psychology, the Bachelor's Program in Cognitive Science	UG	Swe
Umeå University	Applied Cognitive Science	Supervision of projects	110	Project in Cognitive Science, the Bachelor's Program in Cognitive Science	UG	Swe
Umeå University	Qualitative and Quantitative methods	Seminars, computer labs	30	the Psychology of Organizations, Environment and Work, the Clinical Psychologist Program	UG	Swe
Umeå University	Cognitive Psychology	Lab demonstrations	30	2:1 Cognition, the Clinical Psychologist Program	UG	Eng
Umeå University	Qualitative and Quantitative methods	Seminars, computer labs	30	the Psychology of Organizations, Environment and Work, the Clinical Psychologist Program	UG	Swe
Umeå University	Cognitive Psychology: Perception, Attention, and Consciousness	Lectures	24	Perception, the Bachelor's Program in Cognitive Science	UG	Swe
Umeå University	Clinical Psychology	Seminars	9	Master Thesis in Psychology, 30 ECTS, the Clinical Psychologist Program	G	Swe
Umeå University	Cognitive Psychology	Lab demonstrations	30	2:1 Cognition, the Clinical Psychologist Program	UG	Eng

Table 1: Teaching responsibilities - an overview of type of teaching, hours, etc. (*continued*)

Period	Subject	Type	Clock Hours	Course/Program	Level	Language
Umeå University	Cognitive Psychology, Applied: Attention	Lectures, seminar	20	Applied Cognitive Psychology, the Bachelor's Program in Cognitive Science	UG	Swe
Umeå University	Applied Cognitive Science	Supervision of projects	40	Project in Cognitive Science, the Bachelor's Program in Cognitive Science	UG	Swe
Umeå University	Qualitative and Quantitative research methods	Seminars, computer labs	30	the Psychology of Organizations, Environment and Work, the Clinical Psychologist Program	UG	Swe
Umeå University	Clinical Psychology	Seminars	30	Master Thesis in Psychology, 30 ECTS, the Clinical Psychologist Program	G	Swe
Umeå University	Cognitive Psychology	Lab demonstrations	30	2:1 Cognition, the Clinical Psychologist Program	UG	Eng
Umeå University	Cognitive Psychology: Attention and Consciousness	Lectures, seminars	24	Perception, the Bachelor's Program in Cognitive Science	UG	Swe
Umeå University	Developmental Psychology	Seminar leader	50	Learning and teaching, pedagogy	UG	Swe
Linköping University	Research Methods	Workshops in SPSS	18	Human Resources, Special Pedagogists	G	Swe
Linköping University	Applied Cognitive Science	Supervision of Projects	24	Applied Cognitive Science, the Bachelor's Program in Cognitive Science	UG	Eng
Linköping University	Pedagogy	Examination of Thesis	6	Master Thesis in Special Pedagogy, 30 ECTS, the Specialist Pedagogy Program	G	Swe
Linköping University	Quantitative methods, theory of science	Seminar leader, grading exams	62	Theory of Science and Research Methods, Pedagogy	UG	Swe

Table 1: Teaching responsibilities - an overview of type of teaching, hours, etc. (*continued*)

Period	Subject	Type	Clock Hours	Course/Program	Level	Language
Linköping University	Cognitive Science	Seminar leader, grading exams	20	Cognitive Science - Methods, the Master's Program in Cognitive Science	G	Swe
Linköping University	Disability Research	Lectures, workshops, examining	40	Theory of Science and Research Methods, Disability Research II and III	UG	Swe
Linköping University	Perception	Lectures	12	Neuropsychology and Neuroscience, the Clinical Psychologist Program	G	Swe
Linköping University	Applied Learning Disabilities	Supervision of groups (Problem-based learning)	16	Cognitive Psychology, the Clinical Psychologists Program	UG	Swe
Linköping University	Adult life and Aging	Supervision of groups (Problem-based learning)	20	Developmental Psychology, the Clinical Psychologists Program	UG	Swe
Linköping University	Quantative methods	Lectures	92	Methods for Research and Development in Educational Institutions, Pedagogy	G	Swe
Linköping University	Applied Cognitive Science	Supervision	24	Applied Cognitive Science, the Bachelor's Program in Cognitive Science	UG	Eng
Linköping University	Cognitive Science	Supervision, Examining	45	Bachelor's Thesis in Cognitive Science, the Bachelor's Program in Cognitive Science	UG	Swe
Linköping University	Cognitive Science	Supervision	20	Master's Thesis in Cognitive Science, the Master's Program in Cognitive Science	G	Swe
Linköping University	Disability Research	Lectures, workshops, examining	80	Theory of Science and Research Methods, Disability Research II and III	UG	Swe
Linköping University	Quantative methods, theory of science	Seminar leader, grading exams	50	Theory of Science and Research Methods, Pedagogy	UG	Swe



Table 1: Teaching responsibilities - an overview of type of teaching, hours, etc. (*continued*)

Period	Subject	Type	Clock Hours	Course/Program	Level	Language
Linköping University	Applied Cognitive Science	Supervision	20	Applied Cognitive Science, the Bachelor's Program in Cognitive Science	UG	Eng
Linköping University		Supervision of research project	8	Research Project, the Master's Programme in Cognitive Science	G	Swe
Linköping University	Cognitive Science	Supervision, Examining	45	Bachelor's Thesis in Cognitive Science, the Bachelor's Program in Cognitive Science	UG	Swe
Linköping University	Disability Research	Supervision of theses	30	University Diploma Thesis, Disability Research II	UG	Swe
Linköping University	Disability Research	Lectures, workshops, examining	80	Theory of Science and Research Methods, Disability Research II and III	UG	Swe
Linköping University	Disability Research	Lectures, examination	40	Introduction to Research methods and Ethics	UG	Swe
Linköping University	Research Methods	Supervision of groups (Problem-based learning)	36	Research Methods, the Clinical Psychologists Program	UG	Swe
Linköping University	Applied Learning Disabilities	Supervision of groups (Problem-based learning)	16	Cognitive Psychology, the Clinical Psychologists Program	UG	Swe
Linköping University	Adult life and Aging	Supervision of groups (Problem-based learning)	20	Developmental Psychology, the Clinical Psychologists Program	UG	Swe

*Note:*

Total of clock hours: 1774 , UG = Undergraduate, G = Graduate, VT = Spring term, HT = autumn term, \* = two courses.