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# CURRICULUM VITAE DORA MATZKE

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## PERSONAL

Date of birth 1 September 1982  
Place of birth Budapest, Hungary  
Nationality Hungarian  
Website <http://dora.erbe-matzke.com>

## EMPLOYMENT

2013- Assistant Professor, Department of Psychological Methods at the University of Amsterdam

## EDUCATION

2009-2013 PhD student with Eric-Jan Wagenmakers and Conor Dolan, Department of Psychological Methods at University of Amsterdam. Topic: Bayesian Explorations in Mathematical Psychology (Cum Laude)  
2007-2009 Research Master's Psychology, Specialization in Psychological Methods, University of Amsterdam (Cum Laude)  
2004-2007 Bachelor Psychology, Specialization in Psychological Methods, University of Amsterdam (Cum Laude)

## HONORS AND AWARDS

2015 Personal Veni grant awarded by the Netherlands Organization of Scientific Research (NOW; €250.000)  
2012, 2013 Student Travel Award, Society for Mathematical Psychology  
2009 Unilever Research prize  
2008 Best Master's Thesis 2008, Department of Psychology, University of Amsterdam

## PROFESSIONAL EXPERIENCE

## TEACHING

2015	Lecturer "Methoden van Onderzoek en Statistiek 2" (Research Methods and Statistics 2; Second-year psychobiology)
2015	Lecturer "Meta-analysis" (Psychology research master's)
2015	Developer and lecturer "Bayesian Analysis" (Psychological methods master's)
2014	Lecturer "Bayesian Statistics using JAGS" (Psychological methods master's)
2014	Lecturer "Methoden van Onderzoek en Statistiek" (Research Methods and Statistics; First-year psychobiology)
2014	Lecturer and developer "Statistiek in R" (Statistics using R; First-year psychobiology)
2014	Lecturer "Onderzoeksmethoden en Statistiek" (Research Methods and Statistics; First-year beta-gamma)
2014	Supervisor "Miniscriptie Engels" (English Scientific Writing; Undergraduate psychobiology)
2013	Lecturer "Cognitive Models for Cognitive Neuroscience: Bayesian Hierarchical Modeling" (Psychology research master's)
2012-	Thesis and internship supervisor (Psychology research master's)
2010-2013	Supervisor Onderzoekspracticum (Research seminar; Undergraduate psychology)
2011-2012	Teaching assistant "Bayesian Graphical Modeling" (Psychology research master's)
2010-2012	Teaching assistant "Programming in R" (Psychology research master's)
2008	Teaching assistant "Scientific Writing and Presenting" (Psychology research master's)
2008	Tutor "Methoden van Onderzoek 2A" (Research Methods and Statistics; Undergraduate psychology course)

## RESEARCH

Nov 2014	Visiting researcher at the Department of Mathematics and Statistics, Fylde College Lancaster University, Lancaster, United Kingdom, with David Leslie. Topic: The application of reversible jump Markov chain Monte Carlo sampling to model selection for Bayesian hierarchical models.
Feb-Mar 2014	Visiting researcher at the Cognition Lab, University of Newcastle, Australia, with Andrew Heathcote and Scott Brown. Topic: <i>Bayesian estimation of trigger failures in the stop-signal paradigm, Bayesian implementation of process models of response inhibition.</i>

## SOFTWARE

- BEESTS-WTF Bayesian Ex-Gaussian estimation of stop-signal RT distributions with trigger failures; open source, cross-platform Python and R-based application with easy-to-use GUI. Available at: <http://dora.erbe-matzke.com/software.html>
- BEESTS Bayesian Ex-Gaussian estimation of stop-signal RT distributions; open source, cross-platform Python and R-based application with easy-to-use GUI. Available at: <http://dora.erbe-matzke.com/software.html>

## ORGANIZATIONAL ACTIVITIES

- 2015-2016 Together with Kai Jonas, organizing the two-day workshop "Pre-Registration as a Research and Publication Method" for the Kurt Lewin Institute. The workshop is scheduled to take place in the spring of 2016.
- 2014-2015 Together with Eric-Jan Wagenmakers, Helen Steingroever, Alexander Ly, and Michael Lee, part of the organizing committee for the one-week "Annual JAGS and WinBUGS Workshop: Bayesian Modeling for Cognitive Science". The workshop took place August 10–14, 2015, in Amsterdam, the Netherlands.
- 2014-2015 Together with Eric-Jan Wagenmakers, Alexander Ly, Jonathon Love, and Ravi Selker, part of the organizing committee for the two-day "August JASP Workshop". The workshop took place August 6–7, 2015, in Amsterdam, the Netherlands.
- 2014-2015 Together with Francis Tuerlinckx and Eric-Jan Wagenmakers, part of the organizing committee for the Erasmus Seminar on Mathematical Psychology: "Formal Models and Quantitative Methods for Psychology", a European-wide initiative to promote mathematical modeling in psychology. Participating institutions: University of Amsterdam, International University Bremen, University of Debrecen, University of Glasgow, University of Graz, University of Leuven, University of Lisbon, University Complutense of Madrid, University of Oldenburg, University of Padova, University of Tartu, and University of Tübingen. The workshop took place March 22–28, 2015, in Hungary
- 2013-2014 Together with Eric-Jan Wagenmakers, Helen Steingroever, Alexander Ly, Josine Verhagen, and Michael Lee, part of the organizing committee for the one-week workshop "Fourth Annual WinBUGS Workshop: Bayesian Modeling for Cognitive Science". The workshop took place August 11–15, 2014, in Amsterdam, the Netherlands, and attracted 56 participants.
- 2012-2013 Together with Eric-Jan Wagenmakers, Helen Steingroever, Alexander Ly, and Michael Lee, part of the organizing committee for the one-week workshop "Bayesian Modeling for Cognitive Science". The workshop took place August 12–16, 2013, in Amsterdam, the Netherlands, and attracted 48 participants.
- 2011-2012 Together with Eric-Jan Wagenmakers, Helen Steingroever, and Michael Lee, part of the organizing committee for the one-week workshop

"Bayesian Modeling for Cognitive Science". The workshop took place July 2–6, 2012, in Amsterdam, the Netherlands, and attracted 37 participants.

2010-2011 Together with Eric-Jan Wagenmakers, Ruud Wetzels, and Michael Lee, part of the organizing committee for the one-week workshop "Bayesian Modeling for Cognitive Science". The workshop took place August 22–26, 2011, in Amsterdam, the Netherlands, and attracted 48 participants.

## AD HOC REVIEWING

American Journal of Psychology  
Experimental Psychology  
Frontiers in Neuroinformatics  
Journal of Abnormal Child Psychology  
Journal of the American Statistical Association  
Journal of Cognitive Neuroscience  
Journal of Experimental Psychology: Human Perception and Performance  
Journal of Experimental Psychology: Learning, Memory & Cognition  
Journal of Mathematical Psychology  
Psychonomic Bulletin & Review  
PLOS ONE  
Psychologica Belgica

## MEMBERSHIP

European Society of Cognitive Psychology  
Psychonomic Society  
Society for Mathematical Psychology

## OTHER

2015- Methodology and statistics consultant for researchers at the Department of Psychology, University of Amsterdam (Stats Store; <http://www.statsstore.socsci.uva.nl/>)

2014- Part of the JASP Development Team (JASP: A Fresh Way to Do Statistics; <https://jasp-stats.org/>)

## PUBLICATIONS

### UNDER REVISION OR SUBMITTED

**Matzke, D.**, Love, J., & Heathcote A. (2015). A Bayesian approach for estimating the probability of trigger failures in the stop-signal paradigm. *Manuscript in submitted for publication.*

### IN PRESS

van Elk, M., **Matzke, D.**, & Wagenmakers, E.-J. (in press). Meta-analyses are no substitute for registered replications: A skeptical perspective on religious priming. *Frontiers in Psychology: Personality and Social Psychology*.

Cramer, A.O.J., van Ravenzwaaij, D., **Matzke, D.**, Steingroever, H., Wetzels, R., Grasman, R.P.P.P., Waldorp, L., & Wagenmakers, E.-J. (in press). Correction for multiple comparisons in the multiway ANOVA: Theoretical solution and practical consequences. *Psychonomic Bulletin & Review*.

Wagenmakers, E.-J., Verhagen, A. J., Ly, A., **Matzke, D.**, Steingroever, H., Rouder, J.N., & Morey, R.D. (in press). The need for Bayesian hypothesis testing in psychological science. In Lilienfeld, S.O., & Waldman, I. (Eds.), *Psychological science under scrutiny: Recent challenges and proposed solutions*. John Wiley and Sons.

Wagenmakers, E.-J., Verhagen, A. J., Ly, A., Bakker, M., Lee, M.D., **Matzke, D.**, Rouder, J.N., & Morey, R.D. (in press). A power fallacy. *Behavior Research Methods*.

## 2015

Wagenmakers, E.-J., Beek, T., Rotteveel, M., Gierholz, A., **Matzke, D.**, Steingroever, H., ..., Pinto, Y. (2015). Turning the hands of time again: A purely confirmatory replication study and a Bayesian analysis. *Frontiers in Psychology: Cognition*, 6:494.

**Matzke, D.**, Dolan, C.V, Batchelder, W.H., & Wagenmakers, E.-J. (2015). Bayesian estimation of multinomial processing tree models with heterogeneity in participants and items. *Psychometrika*, 80, 205-235.

Rotteveel, M., Gierholz, A., Koch, G., van Aalst, C., Pinto, Y., **Matzke, D.**, ... & Wagenmakers, E.-J. (2015). On the automatic link between affect and tendencies to approach and avoid: Chen and Bargh (1999) revisited. *Frontiers in Psychology: Cognition*, 6:335.

**Matzke, D.**, Nieuwenhuis, S., van Rijn, H., Slagter, H. A, van der Molen, M. W, & Wagenmakers, E.-J. (2015). The effect of horizontal eye movements on free recall: A preregistered adversarial collaboration. *Journal of Experimental Psychology: General*, 144, e1-e15.

Vandekerckhove, J., Matzke, D., & Wagenmakers, E.-J. (2015). Model comparison and the principle of parsimony. In J. Busemeyer, J. Townsend, Z. J. Wang, & A. Eidels (Eds.), *Oxford Handbook of Computational and Mathematical Psychology*, pp. 300-319. Oxford: Oxford University Press.

Nuijten, M. B., Wetzels, R., **Matzke, D.**, Dolan, C. V., & Wagenmakers, E.-J. (2015). A default Bayesian hypothesis test for mediation. *Behavior Research Methods*, 47, 85-97.

Love, J., Selker, R., Verhagen, J., Marsman, M., Gronau, Q.F., Jamil, T., ..., **Matzke, D.**, ..., Rouder, J.N. (2015). Software to sharpen your stats. *APS Observer*, 28.

## 2014

de Groot, A. D. (1956/2014). The meaning of "significance" for different types of research. Translated and annotated by Eric-Jan Wagenmakers, Denny Borsboom, Josine Verhagen, Rogier Kievit, Marjan Bakker, Angelique Cramer, **Dora Matzke**, Don Mellenbergh, and Han L.J. van der Maas. *Acta Psychologica*, 148, 188-194.

## 2013

**Matzke, D.** (2013). Bayesian explorations in mathematical psychology. *Doctoral dissertation*.

**Matzke, D.**, Lee, M.D., & Wagenmakers, E.-J. (2013). Getting started with WinBUGS. In M.D. Lee, & E.-J. Wagenmakers (Eds.), *Bayesian cognitive modeling: A practical course* (pp. 16-34). Cambridge University Press.

**Matzke, D.**, Lee, M.D., & Wagenmakers, E.-J. (2013). Signal detection theory: Parameter expansion. In M.D. Lee, & E.-J. Wagenmakers (Eds.), *Bayesian cognitive modeling: A practical course* (pp. 164-167). Cambridge University Press.

**Matzke, D.**, Lee, M.D., & Wagenmakers, E.-J. (2013). Multinomial processing trees. In M.D. Lee, & E.-J. Wagenmakers (Eds.), *Bayesian cognitive modeling: A practical course* (pp. 187-195). Cambridge University Press.

Bakker, M., Cramer, A.O.J., **Matzke, D.**, Kievit, R.A., van der Maas, H.L.J., Wagenmakers, E.-J., & Borsboom, D. (2013). Dwelling on the past. *European Journal of Personality*, 27, 120-144. Open peer commentary on Asendorp et al., "Recommendations for increasing replicability in psychology".

**Matzke, D.**, Love, J., Wiecki, T., Brown, S.D., Logan, G.D., & Wagenmakers, E.-J. (2013). Release the BEESTS: Bayesian ex-Gaussian estimation of stop-signal reaction time distributions. *Frontiers in Quantitative Psychology and Measurement*, 4:918, doi: 10.3389/fpsyg.2013.00918.

**Matzke, D.**, Dolan, C.V., Logan, G.D., Brown, S.D., & Wagenmakers, E.-J. (2013). Bayesian parametric estimation of stop-signal reaction time distributions. *Journal of Experimental Psychology: General*, 142, 1047-1073.

## 2011

Wetzels, R., **Matzke, D.**, Lee, M.D., Rouder, J.N., Iverson, G.J., & Wagenmakers, E.-J. (2011). Statistical evidence in experimental psychology: An empirical comparison using 855 *t* tests. *Perspectives on Psychological Science*, 6, 291-298.

## 2010

**Matzke, D.**, Dolan, C.V., & Molenaar, D. (2010). The issue of power in the identification of "g" with lower-order factors. *Intelligence*, 38, 336-344.

## 2009

**Matzke, D.**, & Wagenmakers, E.-J. (2009). Psychological interpretation of the ex-Gaussian and shifted Wald parameters: A diffusion model analysis. *Psychonomic Bulletin & Review*, 16, 798-817.

## PRESENTATIONS

**Matzke, D.**, Love, J., & Heathcote, A. (2015). A Bayesian approach for estimating the probability of trigger failures in the stop-signal paradigm. Talk at 14<sup>th</sup> Annual Summer Interdisciplinary Conference (ASIC 2015), Mammoth Lakes, Canada, USA.

**Matzke, D.**, Brown, S.D., Michie, P., & Heathcote, A. (2014). A Bayesian approach for estimating the probability of trigger failures in the stop-signal paradigm. Talk at 47<sup>th</sup> annual meeting of the Society for Mathematical Psychology, Quebec City, Canada.

**Matzke, D.**, Love, J., Wiecki, T., Brown, S.D., Logan, G.D., & Wagenmakers, E.-J. (2013). BEESTS: Bayesian estimation of stop-signal reaction time distributions. Talk at ESCOP 2013, Budapest, Hungary.

**Matzke, D.**, Love, J., Wiecki, T., Brown, S.D., Logan, G.D., & Wagenmakers, E.-J. (2013). BEESTS: Bayesian estimation of stop-signal reaction time distributions. Talk at the 46<sup>th</sup> annual meeting of the Society for Mathematical Psychology, University of Potsdam, Potsdam, Germany.

**Matzke, D.**, Dolan, C.V, Batchelder, W.H., & Wagenmakers, E.-J. (2012). Bayesian estimation of multinomial processing tree models with heterogeneity in participants and items. Talk at the 45<sup>th</sup> annual meeting of the Society for Mathematical Psychology, 2012, Columbus, Ohio, USA.

**Matzke, D.**, Dolan, C.V, Logan, G.D., Brown, S.D., & Wagenmakers, E.-J. (2011). A Bayesian parametric approach for estimating the distribution of stop-signal reaction times. Poster presentation at the 13<sup>th</sup> NVP conference, 2011, Egmond aan Zee, The Netherlands.

**Matzke, D.**, Dolan, C.V, Logan, G.D., Brown, S.D., & Wagenmakers, E.-J. (2011). A Bayesian parametric approach for estimating the distribution of stop-signal reaction times. Talk at the 44<sup>th</sup> annual meeting of the Society for Mathematical Psychology, 2011, Tufts University, Medford, Massachusetts, USA.

**Matzke, D.** & Wagenmakers, E.-J. (2009). Psychological interpretation of the ex-Gaussian and shifted Wald parameters: A diffusion model analysis. Poster presentation at the 42<sup>nd</sup> annual meeting of the Society for Mathematical Psychology, 2009, University of Amsterdam, Amsterdam, The Netherlands.

**Matzke, D.** & Wagenmakers, E.-J. (2009). Psychological interpretation of the ex-Gaussian and shifted Wald parameters: A diffusion model analysis. Talk at the Unilever Research Prize award ceremony.