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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, Dutch  
Website <http://www.ampl-psych.com/team/dora-matzke/>  
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## EMPLOYMENT

2020- Head of the Psychological Methods Unit, Department of Psychology, University of Amsterdam (UvA)  
2020- Associate Professor, Psychological Methods Unit, Department of Psychology, UvA  
2013-2019 Assistant Professor, Psychological Methods Unit, Department of Psychology, UvA

## EDUCATION

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

## HONORS AND AWARDS

2019 William K. Estes Early Career Award – Society for Mathematical Psychology (1,250 USD personal prize)  
2018 Elected fellow of the Young Academy (De Jonge Akademie) of the Royal Netherlands Academy of Arts and Sciences

2016	Early Career Award from the Society for Experimental Psychology and Cognitive Science – Division 3 of the American Psychological Association
2015	Leamer-Rosenthal Prize for Emerging Researchers from the Berkeley Initiative for Transparency in the Social Sciences (10,000 USD personal prize)
2015	Association for Psychological Science (APS) Rising Star
2012, 2013	Student Travel Award from the Society for Mathematical Psychology (400 USD personal prize)
2009	Unilever Research prize (€2,500 personal prize)
2008	Best Thesis Award, Department of Psychology, UvA (€250 personal prize)

## COMPETITIVE GRANTS AND FELLOWSHIPS

2021	Small-Scale Initiatives in Software Performance Optimization grant from the Netherlands eScience Center.
2020	Personal Innovational Research Incentives Scheme “Vidi” fellowship from the Netherlands Organization for Scientific Research (€800,000). Project title: Stopping in the real world: A cognitive-psychometric approach to the measurement of response inhibition.
2019	Discovery Project from the Australian Research Council (366,310 AUD; co-applicant). Project title: How do we cancel and modify movements?
2019	Discovery Early Career Award (DECRA) from the Australian Research Council (417,842 AUD; declined). Project title: Cognitive architectures for selective stopping.
2019	Aspasia budget (€10,000) from the University of Amsterdam.
2019	Young Academy Project Grant (“De Jonge Akademie Projectbeurs”; €10,000, co-applicant). Project title: In dialoog: Een “gesprek” tussen wetenschap en maatschappij.
2017	DFG Scientific Network on “Hierarchical MPT Modeling – Methodological Comparisons and Application Guidelines” from the DFG Deutsche Forschungsgemeinschaft (€62,950, network member).
2017	Competitive Evaluation Research Agreement grant from the Australian Defence Science and Technology Group (100,000 AUD, co-applicant). Project title: Providing automation with situational awareness of operator workload.
2017	Training in Mathematical and Computational Modeling for Psychological Science grant from the William K. and Katherine W. Estes Fund for the “Model-based Neuroscience Summer School” (15,000 USD, co-applicant).
2016	Training in Mathematical and Computational Modeling for Psychological Science grant from the William K. and Katherine W. Estes Fund for the

- “Bayesian Estimation of Evidence Accumulation Architectures in Neuroscience and Cognition” workshop (15,000 USD, co-applicant).
- 2015 Travel grant from the Visiting Fellowship and Visiting Scholarship Program of the University of Tasmania (7,000 AUD).
- 2015 Personal Innovational Research Incentives Scheme “Veni” fellowship from the Netherlands Organization for Scientific Research (€250,000). Project title: An integrated Bayesian framework for parameter estimation and hypothesis testing in process models of response inhibition.

## PROFESSIONAL EXPERIENCE

### LECTURING AND COURSE DEVELOPMENT

- 2017- “Bayesian Inference for Psychological Science” (UvA Research Master’s Psychology)
- 2016-2021 “Statistiek voor de Levenswetenschappen” (Statistics for the Life Sciences; UvA Institute of Interdisciplinary Studies - Natural and Social Sciences Bachelor)
- 2016- “Good Research Practices” (UvA Research Master’s Psychology)
- 2016, 2017 “Bayesian Graphical Modeling” (UvA Research Master’s Psychology)
- 2016 Basiskwalificatie Onderwijs Certificaat (Higher Education Teaching Certificate)
- 2015-2019 “Methoden van Onderzoek en Statistiek 2” (Research Methods and Statistics 2; UvA College of Life Sciences - Psychobiology Bachelor)
- 2015 “Good Science Bad Science” (UvA Research Master’s Psychology)
- 2015 “Meta-analysis” (UvA Research Master’s Psychology)
- 2015 “Bayesian Analysis” (UvA Psychological Methods Bachelor)
- 2014 “Bayesian Statistics using JAGS” (UvA Psychological Methods Bachelor)
- 2014 “Methoden van Onderzoek en Statistiek” (Research Methods and Statistics; UvA College of Life Sciences - Psychobiology Bachelor)
- 2014 “Statistiek in R” (Statistics using R; UvA College of Life Sciences - Psychobiology Bachelor)
- 2014 “Onderzoeksmethoden en Statistiek” (Research Methods and Statistics; UvA Institute of Interdisciplinary Studies - Natural and Social Sciences Bachelor)
- 2014 “Miniscriptie Engels” (English Scientific Writing; UvA College of Life Sciences - Psychobiology Bachelor)

2013	"Cognitive Models for Cognitive Neuroscience: Bayesian Hierarchical Modeling" (UvA Research Master's Psychology)
2012-	Thesis and internship (UvA Research Master's Psychology & Behavioral Data Science Master)
2010-2013	"Onderzoekspracticum" (Practical Research Training; UvA Psychology Bachelor)
2010	"VRT-2: Verwerking en Rapportage over Testksten" (Dutch Scientific Writing; UvA Psychology Bachelor)

## POST-DOC AND PHD-SUPERVISION

2021-	Frantisek Bartos (PhD-student; with E.-J. Wagenmakers)
2021-	Michelle Donzallaz (PhD-student)
2021-	Sarah Kemp (PhD-student; with Mark Hinder)
2020-	Quentin Gronau (Post-doc; with Mark Hinder)
2019-	Charlotte Tanis (PhD-student)
2017-2018	Udo Boehm (Post-doc; with Andrew Heathcote)
2016-2020	Quentin F. Gronau (PhD-student; with E.-J. Wagenmakers)
2015-2017	Udo Boehm (PhD-student; with E.-J. Wagenmakers; Cum Laude)

## UNIVERSITY ADMINISTRATION

2021 -	Member Equality, Diversity, and Inclusion Committee, UvA Department of Psychology
2018 - 2020	Member Psychobiology Education Committee, UvA College of Life Sciences – Psychobiology
2017-	Member Curriculum Committee of the Graduate School of Psychology, UvA Department of Psychology
2017-	Member Executive Board of the Psychological Methods Unit, UvA Department of Psychology
2015-2016	Member Statistics and Methods in the Bachelor Psychology Committee, UvA Department of Psychology

## SERVICE TO THE FIELD

2019-	Elected member of the Executive Board of the Society for Mathematical Psychology
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- 2019-2021      Reviewer panel member for the “Young Academy Project Grant” (De Jonge Akademie Projectbeurs) awarded by the Young Academy of the Royal Netherlands Academy of Arts and Sciences
- 2018            Reviewer panel member “KNAW Education Prize” (KNAW Onderwijsprijs) awarded by the Royal Netherlands Academy of Arts and Sciences
- 2018-           Member of the board of the Women of Mathematical Psychology of the Society for Mathematical Psychology

## ORGANIZATIONAL ACTIVITIES

- 2018-           Member organizing committee for the Women of Math Psych Professional Development Symposium at the Annual Meeting of the Society for Mathematical Psychology (21 July 2018, Maddison, USA; 19 July 2019, Montreal, Canada; 20 July 2020, virtual; 2, 6, and 8 July 2021, virtual)
- 2017-           Member organizing committee for the “Model-based Neuroscience Summer School” (31 July–4 August 2017; 30 July–3 August 2018; 5–14 August 2019, Amsterdam; <https://modelbasedneurosci.com/>). The 2017 summer school was supported by the William K. and Katherine W. Estes Fund and the Netherlands Institute for Neuroscience.
- 2016            Member organizing committee for the workshop “Bayesian Estimation of Evidence Accumulation Architectures in Neuroscience and Cognition” (7–11 November 2016, Boston, USA). The workshop was supported by the William K. and Katherine W. Estes Fund.
- 2016            Member organizing committee for the “Pre-Registration as a Research and Publication Method” workshop (12–13 May 2016, Amsterdam).
- 2015- 2019      Member organizing committee for the “Theory and Practice of Bayesian Hypothesis Testing: A JASP Workshop” (6–7 August 2015; 22–23 August 2016; 28–29 August 2017; 27–28 August 2018; 22–23 August 2019; Amsterdam; <https://jasp-stats.org/workshop/>).
- 2015, 2019      Member organizing committee for the Socrates–Erasmus Intensive Programme on Mathematical Psychology: “Formal Models and Quantitative Methods for Psychology” (22–28 March 2015; 25–29 March 2019, Balatonföldvár, Hungary).
- 2011-           Member organizing committee for the “Annual JAGS and WinBUGS Workshop: Bayesian Modeling for Cognitive Science” (22–26 August 2011; 2–6 July 2012; 12–16, August 2013; 11–15 August 2014; 10–14 August 2015; 15–19 August 2016; 21–25 August 2017; 20–24 August 2018; 26–30 August 2019, Amsterdam; <https://jasp-stats.org/jags-workshop/>).

## INTERNATIONAL RESEARCH VISITS

- Feb 2020        University of Tasmania, Australia. Topic: How do we cancel or modify movements – A model-based neuroscience approach.
- Dec 2019        Ghent University, Belgium. Topic: Trigger failures in the stop-signal paradigm.

Nov 2019	University of California Irvine, USA. Topic: Joint modeling in the stop-signal paradigm.
Feb-June 2019	University of Tasmania, Australia. Topic: Selective-stopping paradigms.
Nov 2018	University of Utah, USA. Topic: Modeling workload and attention failures with the Linear Ballistic Accumulator.
Feb 2018	University of Tasmania, Australia. Topic: Formal process models for the stop-signal paradigm.
April 2017	University of Utah, USA. Topic: Providing automation with situational awareness of operator workload.
Feb 2017	University of Newcastle, Australia. Topic: Bayes factors for evidence-accumulation models.
April 2016	University of Mannheim, Germany. Topic: Bayesian hierarchical multinomial processing trees.
Feb-Mar 2016	University of Tasmania, Australia. Topic: Dealing with messy stop-signal data.
Nov 2015	Vanderbilt University, USA. Topic: The stop-signal paradigm.
Nov 2014	Department of Mathematics and Statistics, Fylde College Lancaster University, UK. Topic: Reversible jump Markov chain Monte Carlo sampling for model selection in Bayesian hierarchical models.
Feb-Mar 2014	University of Newcastle, Australia. Topic: Bayesian estimation of trigger failures in the stop-signal paradigm.

## SOFTWARE DEVELOPMENT

M4MA	Co-developer Minds for Mobile Agents (M4MA): An R module for simulating the movement trajectories of groups of pedestrians in low to medium density settings performing complex tasks involving a series of spatially defined goals. Available at: <a href="https://github.com/CharlotteTanis/ppedped">https://github.com/CharlotteTanis/ppedped</a>
DMC	Co-developer Dynamic Models of Choice (DMC): A comprehensive set of R modules for the Bayesian hierarchical estimation of evidence-accumulation models, including models for the stop-signal paradigm. Available at: <a href="https://osf.io/5yeh4">osf.io/5yeh4</a>
BEESTS	Chief developer BEESTS: A stand-alone, GUI-based, open source, and cross platform package that enables the Bayesian hierarchical estimation of response time models for the stop-signal paradigm. Available at: <a href="https://osf.io/482fv">https://osf.io/482fv</a>
Bayesian MPTs	Chief developer Bayesian MPTs: R and WinBUGS code for the Bayesian estimation of multinomial processing tree models with heterogeneity in participants and items. Available at: <a href="https://osf.io/ebs6z/">https://osf.io/ebs6z/</a>
JASP	Member JASP Development Team. JASP is a stand-alone, GUI-based, open source, and cross platform package that provides classical and Bayesian equivalents of common statistical tests. Available at: <a href="https://jasp-stats.org/">https://jasp-stats.org/</a>

## REVIEWING

### JOURNALS

*American Journal of Psychology, Behavior Research Methods, Biostatistics & Epidemiology, Cognition and Emotion, Computational Brain & Behavior, Cortex, eLIFE, Experimental Brain Research, Experimental Psychology, Frontiers in Neuroinformatics, Journal of Abnormal Child Psychology, Journal of the American Statistical Association, Journal of Cognitive Neuroscience, Journal of Experimental Psychology: General, Journal of Experimental Psychology: Human Perception and Performance, Journal of Experimental Psychology: Learning, Memory & Cognition, Journal of Mathematical Psychology, Multivariate Behavioral Research, Nature Communications, Psychonomic Bulletin & Review, PLOS ONE, Psychologica Belgica, Scientific Reports - Nature*

### SCIENTIFIC ORGANIZATIONS AND FUNDING AGENCIES

*Berkeley Initiative for Transparency in the Social Sciences (BITSS), Deutsche Forschungsgemeinschaft (DFG), Netherlands Organization for Scientific Research (NWO), Royal Netherlands Academy of Arts and Sciences*

### FELLOWSHIPS/MEMBERSHIPS

Elected fellow of the Young Academy (De Jonge Akademie) of the Royal Netherlands Academy of Arts and Sciences

Elected Fellow of the Psychonomic Society

Member of the Society for Mathematical Psychology

Member of the American Psychological Association

Member of the Society for Experimental Psychology and Cognitive Science (Division 3 of the American Psychological Association)

Member of the European Society of Cognitive Psychology

### CONSULTING

2015                      Founder and statistical consultant in the Stats Store at the UvA Department of Psychology (<http://www.stats-store.socsci.uva.nl/>)

### PUBLICATIONS

#### SUBMITTED OR UNDER REVISION

Weigard, A., **Matzke, D.**, Tanis, C., & Heathcote, A. Cognitive process modeling addresses context independence violations in the ABCD study stop-signal task. *Manuscript submitted for publication.*

Boehm, U., Evans, N.J., Gronau, Q.F, **Matzke, D.**, Wagenmakers, E.-J., Heathcote, A. Computing and using Inclusion Bayes factors for mixed and random effect Diffusion Decision Models. *Manuscript submitted for publication.*

Heathcote, A., Verbruggen, F., Boehler, C. N., **Matzke, D.** Cognitive control of choices and action. *Manuscript submitted for publication.*

**Matzke, D.**, Strickland, L., Sripada, C., Weigard, A., Puri, R., He, J.L., Hirst, R.J., & Heathcote, A. Stopping timed actions. *Manuscript submitted for publication.*

He, J.L., Coxon, J.P., Sciberras, E., Efron, D., Anderson, V., Hazell, P., Hyde, C., Tanis, C., **Matzke, D.**, & Silk, T.J. Reconceptualizing inhibition in ADHD: A behavioral and diffusion imaging study. *Manuscript submitted for publication.*

Heathcote, A., Hannah, K., & **Matzke, D.** Priming and variable control in choice conflict tasks. *Manuscript submitted for publication.*

## 2021

Damaso, K.A.,M., Castro, S.C., Todd, J., Strayer, D.L., Provost, A., **Matzke, D.**, & Heathcote, A.J. (2021). A cognitive model of response omissions in distraction paradigms. *Memory & Cognition.*

Heathcote, A., & **Matzke, D.** (2021). The limits of marginality. *Computational Brain & Behavior.*

Aczel, B., Szasz, B., Nilsson, G., van den Akker, O.R., Albers, C.J., van Assen, M.A.L.M., ..., **Matzke, D.**, ..., & Wagenmakers, E.-J. (2021). Consensus-based guidance for conducting and reporting multi-analyst studies. *eLife*, 10:e72185.

He, J.L., Hirst, R.J., Puri, R., Coxon, J., Byblow, W., Hinder, M., ..., **Matzke, D.**, ..., Puts, N.A.J. OSARI, an open-source anticipated response inhibition task. *Behavior Research Methods.*

Shiffrin, R. M., **Matzke, D.**, Crystal, J. D., Wagenmakers, E.-J., Chandramouli, S. H., Vandekerckhove, J., Zorzi, M., Morey, R. D., & Murphy, M. (2021). Extraordinary claims, extraordinary evidence? A discussion. *Learning & Behavior*, 49, 265-275.

van Doorn, J., van den Bergh, D., Boehm, U., Dablander, F., Derks, K., Draws, T., ..., **Matzke, D.**, ..., & Wagenmakers, E.-J. (2021). The JASP guidelines for conducting and reporting a Bayesian analysis. *Psychonomic Bulletin & Review*, 28, 813–826.

Boehm, U., **Matzke, D.**, Gretton, M., Castro, S., Cooper, J., Skinner, M., Strayer, D., & Heathcote, A. (2021). Real-time prediction of fluctuations in cognitive workload. *Cognitive Research: Principles and Implications*, 6:30.

Tran, N.-H., van Maanen, L., Heathcote, A., & **Matzke, D.** (2021). Systematic quantitative parameter reviews in cognitive modeling: Towards robust and cumulative models of psychological processes. *Frontiers in Psychology: Quantitative Psychology and Measurement – Special issue on “Moving Beyond Non-Informative Prior Distributions: Achieving the Full Potential of Bayesian Methods for Psychological Research”*, 11:608287. doi: 10.3389/fpsyg.2020.608287

## 2020



Skippen, P., Fulham, W.R., Michie, P.T., **Matzke, D.**, Heathcote, A., & Karayanidis, F. (2020). Reconsidering electrophysiological markers of response inhibition in light of trigger failures in the stop-signal task. *Psychophysiology*, *57*, e13619.

Stephens, R.G., **Matzke, D.**, & Hayes, B.K. State-trace analysis – misrepresented and misunderstood: Reply to Ashby (2020). *Journal of Mathematical Psychology*, *96*, 102342.

**Matzke, D.**, Logan, G.D., & Heathcote, A. (2020). A cautionary note on evidence-accumulation models of response inhibition in the stop-signal paradigm. *Computational Brain & Behavior*, *3*, 269–288.

van den Bergh, D., van Doorn, J., Marsman, M., Draws, T., van Kesteren, E.-J., Derks, K., ..., **Matzke, D.**, & Wagenmakers, E.-J. (2020). A tutorial on conducting and interpreting a Bayesian ANOVA in JASP. *L'Année Psychologique*, *120*, 73-96.

Dahrendorf, M., Hoffmann, T., Mittenbühler, M., Wiechert, S., Sarafoglou, A., **Matzke, D.**, & Wagenmakers, E.-J. (2020). “Because it is the right thing to do”: Taking stock of the peer reviewers' openness initiative. *Journal of European Psychology Students*, *11*, 15-20.

Ly, A., Stefan, A., van Doorn, J., Dablander, F., van den Bergh, D., Sarafoglou, A., ..., **Matzke, D.**, ..., & Wagenmakers, E.-J. (2020). The Bayesian methodology of Sir Harold Jeffreys as a practical alternative to the p-value hypothesis test. *Computational Brain & Behavior*, *3*, 153-161.

Gronau, Q.F., Heathcote, A., & **Matzke, D.** (2020). Computing Bayes factors for evidence-accumulation models using Warp-III bridge sampling. *Behavioral Research Methods*, *52*, 918-937.

Sarafoglou, A., Hoogeveen, S., **Matzke, D.**, & Wagenmakers, E.-J. (2020). Teaching good research practices: Protocol of a Research Master course. *Psychology Learning and Teaching*, *9*, 46–59.

van Doorn, J., **Matzke, D.**, & Wagenmakers, E.-J. (2020). An in-class demonstration of Bayesian inference. *Psychology Learning and Teaching*, *9*, 36–45.

## 2019

Vandekerckhove, J., White, C.N., Trueblood, J.S., Rouder, J.N., **Matzke, D.**, Leite, F.P., ..., & Lee, M.D. (2019). Robustness and diversity in cognitive modeling. *Computational Brain & Behavior*, *2*, 271–276.

Lee, M., Criss, A.H., Devezer, B., Donkin, C., Etz, A., Leite, F., **Matzke, D.**, ..., & Vandekerckhove, J. (2019). Robust modeling in cognitive science. *Computational Brain & Behavior*, *2*, 141–153.

Verbruggen, F., Aron, A.R., Band, G.P.H., Beste, C., Bissett, P.G., Brockett, A.T., ..., **Matzke, D.**, ..., & Boehler, C.N. (2019). A consensus guide to capturing the ability to inhibit actions and impulsive behaviors in the stop-signal task. *eLIFE*, *8*, e46323.

Weigard, A., Heathcote, A., **Matzke, D.**, & Huang-Pollock, C. (2019). Cognitive modeling suggests that attentional failures drive longer stop-signal reaction time estimates in attention deficit/hyperactivity disorder. *Clinical Psychological Science*, *7*, 856-872.

Stephens, R.G., **Matzke, D.**, & Hayes, B.K. (2019). Disappearing dissociations in experimental psychology: Using state-trace analysis to test for multiple processes. *Journal of Mathematical Psychology*, *90*, 3–22.

Castro, S., Strayer, D., **Matzke, D.**, & Heathcote, A. (2019). Cognitive workload measurement and modeling under divided attention. *Journal of Experimental Psychology: Human Perception and Performance*, *45*, 826-839.

Heathcote, A., Lin, Y., Reynolds, A., Strickland, L., Gretton, M., & **Matzke, D.** (2019). Dynamic models of choice. *Behavior Research Methods*, *51*, 961-985.

**Matzke, D.**, Curley, S., Gong, C.Q., & Heathcote, A. (2019). Inhibiting responses to difficult choices. *Journal of Experimental Psychology: General*, *148*, 124-142.

Love, J., Selker, R., Marsman, M., Jamil, T., Dropmann, D., Verhagen, J., ..., **Matzke, D.**, ..., & Wagenmakers, E.-J. (2019). JASP- Graphical statistical software for common statistical designs. *Journal of Statistical Software*, *88*, 1-17.

Gronau, Q.F., Wagenmakers, E.-J., Heck, D.W., & **Matzke, D.** (2019). A simple method for comparing complex models: Bayesian model comparison for hierarchical multinomial processing tree models using Warp-III bridge sampling. *Psychometrika*, *84*, 261-284.

Skippen, P., **Matzke, D.**, Heathcote, A., Fulham, W.R., Michie, P., Karayanidis, F. (2019). Reliability of triggering inhibitory process is a better predictor of impulsivity than SSRT. *Acta Psychologica*, *192*, 104-117.

## 2018

Derks, K., Burger, J., van Doorn, J., Kossakowski, J.J., **Matzke, D.**, Atticciati, L., ..., & Wagenmakers, E.-J. (2018). Network models to organize a dispersed literature: A case of misunderstanding analysis of covariance. *Journal of European Psychology Students*, *9*, 48-57.

Boehm, U., Annis, J., Frank, M.J., Hawkins, G.E., Heathcote, A., Kellen, D., ..., **Matzke, D.**, & Wagenmakers, E.-J. (2018). Estimating between-trial variability parameters of the diffusion decision model: Expert advice and recommendations. *Journal of Mathematical Psychology*, *87*, 46-75.

Boehm, U., Marsman, M., **Matzke, D.**, & Wagenmakers, E.-J. (2018). On the importance of avoiding shortcuts in applying cognitive models to hierarchical data. *Behavioral Research Methods*, *50*, 1614-1631.

Beek, T.F., **Matzke, D.**, Pinto, Y., Rotteveel, M., Gierholz, A., Verhagen, J., ..., & Wagenmakers, E.-J. (2018). Incidental haptic sensations may not influence social judgements: A purely confirmatory replication attempt of Study 1 by Ackerman, Noreca, & Bargh (2010). *Journal of Articles in Support of the Null Hypothesis*, *14*, 69-90.

**Matzke, D.**, Verbruggen, F., & Logan, G. (2018). The stop-signal paradigm. In E.-J. Wagenmakers & J.T. Wixted (Eds.), *Stevens' handbook of experimental psychology and cognitive neuroscience, Volume five: Methodology (4th ed.)*, pp. 383-427. John Wiley & Sons, Inc.

Sebastian, A., Forstmann, B.U., & **Matzke, D.** (2018). Towards a model-based cognitive neuroscience of stopping: A neuroimaging perspective. *Neuroscience & Biobehavioral Reviews*, *90*, 130-136.

Wagenmakers, E.-J., Marsman, M., Jamil, T., Ly, A., Verhagen, A.J., Love, J., ..., **Matzke, D.**, ..., & Morey, R.D. (2018). Bayesian inference for psychology. Part I: Theoretical advantages and practical ramifications. *Psychonomic Bulletin & Review*, *25*, 35-57.

Wagenmakers, E.-J., Love, J., Marsman, M., Jamil, T., Ly, A., Verhagen, A.J., ..., **Matzke, D.**, ..., & Morey, R.D. (2018). Bayesian inference for psychology. Part II: Example applications with JASP. *Psychonomic Bulletin & Review*, *25*, 58-76.

**Matzke, D.**, Boehm, U., & Vandekerckhove, J. (2018). Bayesian inference for psychology. Part III: Parameter estimation in nonstandard models. *Psychonomic Bulletin & Review*, *25*, 77-101.

Ly, A., Boehm, U., Heathcote, A., Turner, B.M., Forstmann, B., Marsman, M., & **Matzke, D.** (2018). A flexible and efficient hierarchical Bayesian approach to the exploration of individual differences in cognitive-model-based neuroscience. In A.A. Moustafa (Ed.) *Computational models of brain and behavior*, pp. 467-480. Wiley Blackwell.

## 2017

Gronau, Q. F., Sarafoglou, A., **Matzke, D.**, Ly, A., Boehm, U., Marsman, M., ..., & Steingroever, H. (2017). A tutorial on bridge sampling. *Journal of Mathematical Psychology*, *81*, 80-97.

**Matzke, D.**, Ly, A., Selker, R., Weeda, W. D., Scheibehenne, B., Lee, M.D., & Wagenmakers, E.-J. (2017). Bayesian inference for correlations in the presence of estimation uncertainty and measurement error. *Collabra: Psychology*, *3*(1), 25.

Kryptos, A.-M., Blanken, T.F., Arnaudova, I., **Matzke, D.**, & Beckers, T. (2017). A primer on Bayesian analysis for experimental psychopathologists. *Journal of Experimental Psychopathology*, *8*, 140-157.

**Matzke, D.**, Hughes, M., Badcock, J.C., Michie, P., & Heathcote, A. (2017). Failures of cognitive control or attention? The case of stop-signal deficits in schizophrenia. *Attention, Perception, & Psychophysics*, *79*, 1078-1086.

Dutilh, G., Vandekerckhove, J., Ly, A., **Matzke, D.**, Pedroni, A., Frey, R., ..., & Wagenmakers, E.-J. (2017). A test of the diffusion model explanation of the worst performance rule using preregistration and blinding. *Attention, Perception, & Psychophysics*, *79*, 713-725.

Wagenmakers, E.-J., Verhagen, A.J., Ly, A., **Matzke, D.**, Steingroever, H., Rouder, J.N., & Morey, R.D. (2017). The need for Bayesian hypothesis testing in psychological science. In S.O. Lilienfeld & I. Waldman (Eds.), *Psychological science under scrutiny: Recent challenges and proposed solutions* (pp. 123-138). John Wiley and Sons.

**Matzke, D.**, Love, J., & Heathcote A. (2017). A Bayesian approach for estimating the probability of trigger failures in the stop-signal paradigm. *Behavior Research Methods*, *49*, 267-281.

## 2016

Cramer, A.O.J., van Ravenzwaaij, D., **Matzke, D.**, Steingroever, H., Wetzels, R., Grasman, R.P.P., ..., & Wagenmakers, E.-J. (2016). Hidden multiplicity in exploratory multiway ANOVA: Prevalence and remedies. *Psychonomic Bulletin & Review*, *23*, 640-647.

## 2015

Wagenmakers, E.-J., Verhagen, A.J., Ly, A., Bakker, M., Lee, M.D., **Matzke, D.**, ..., & Morey, R.D. (2015). A power fallacy. *Behavior Research Methods*, *47*, 913-917.

Wagenmakers, E.-J., Beek, T.F., Rotteveel, M., Gierholz, A., **Matzke, D.**, Steingrover, 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.

van Elk, M., **Matzke, D.**, Gronau, Q., Guan, M., Vandekerckhove, J., & Wagenmakers, E.-J. (2015). Meta-analyses are no substitute for registered replications: A skeptical perspective on religious priming. *Frontiers in Psychology: Personality and Social Psychology*, *6*:1365.

**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.), *The 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.

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**Matzke, D.** (2014). Bayesian explorations in mathematical psychology. *Doctoral dissertation*.

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**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

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**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.

**Number of citations: 6690, h-index: 31, i10-index: 46** (Google Scholar, 4 January, 2022)

## (INVITED) TALKS, KEYNOTES & WORKSHOPS

**Matzke, D.**, (2021). Flexible cognitive architectures for response inhibition. Invited talk at the University of Illinois, Urbana-Champaign, USA.

**Matzke, D.**, (2021). Flexible cognitive architectures for response inhibition. Keynote at the Summer School on Statistical Methods for Linguistics and Psychology, Potsdam, Germany.

**Matzke, D.**, (2021). Dynamic models of choice: Bayesian estimation and model comparison for evidence-accumulation architectures. Invited workshop at the 15<sup>th</sup> Conference of the Section “Methods and Evaluation” (FGME) in the German Psychological Society (DGPs), Mannheim, Germany.

**Matzke, D.**, (2021). Race models of stopping: From simple descriptive to complex cognitive process models. Keynote at the 15<sup>th</sup> Conference of the Section “Methods and Evaluation” (FGME) in the German Psychological Society (DGPs), Mannheim, Germany.

**Matzke, D.**, (2021). Cognitive architectures for stopping. Talk at the Annual Summer Interdisciplinary Conference, San Martino di Castrozza, Italy.

**Matzke, D.**, (2021). Cognitive architectures for stopping: From simple descriptive to cognitive process models of response inhibition. William K. Estes Early Career Award keynote at the Annual Meeting of the Society for Mathematical Psychology.

**Matzke, D.**, Strickland, L., Sripatha, C., Weigard, A., Puri, R., He, J.L., Hirst, R.J., & Heathcote, A. (2021). Stopping timed actions. Invited talk at Methods & Math Psych 2021.

**Matzke, D.**, (2019). Cognitive models of response inhibition. Invited talk at the University of California Irvine, USA.

**Matzke, D.**, Garton, R., Reynolds, A., Hinder, M.R., & Heathcote, A. (2019). A model-based analysis of response slowing in the stop-signal paradigm. Talk at the Annual Meeting of the Psychonomic Society, Montreal, Canada.

**Matzke, D.**, (2019). Inhibiting difficult choices: From simple descriptive to cognitive process models of the stop-signal paradigm. Invited talk at Ghent University, Belgium.

**Matzke, D.**, Wagenmakers, E.-J., Heck, D.W., & Gronau, Q.F. (2019). Bayesian model selection and model averaging for multinomial processing trees. Symposium talk at the Annual Meeting of the Society for Mathematical Psychology, Montreal, Canada.

**Matzke, D.** (2019). Inhibiting responses to difficult choices: From simple descriptive to cognitive process models of the stop-signal paradigm. Invited talk at the University of Western Australia, Australia.

**Matzke, D.**, Curley, S., Gong, C.Q., & Heathcote, A. (2019). Inhibiting responses to difficult choices. Talk at the Experimental Psychology Conference, Wellington, New Zealand.

**Matzke, D.**, Stephens, R.G., & Hayes, B.K. (2018). Disappearing dissociations in experimental psychology. Talk at the Annual Meeting of the Psychonomic Society, New Orleans, USA.

**Matzke, D.**, & Heathcote, A. (2018). Dynamic Models of Choice (DMC) workshop. Invited workshop at Heidelberg University, Germany.

**Matzke, D.**, Curley, S., & Heathcote, A. (2017). Response inhibition in the real world: A Bayesian hierarchical model for messy stop-signal data. Symposium talk at the Annual Meeting of the Psychonomic Society, Vancouver, Canada.

**Matzke, D.**, & Heathcote, A. (2017). The lognormal-race model of response inhibition: A simple process model of performance in the stop-signal paradigm. Talk at the Annual Meeting of the Society for Mathematical Psychology, Warwick, UK.

**Matzke, D.**, Wagenmakers, E.-J., & Gronau, Q.F. (2017). Bridge sampling: A simple yet powerful method for comparing complex cognitive models. Talk at the Australasian Mathematical Psychology Conference, Brisbane, Australia.

**Matzke, D.**, Boehm, U., Marsman, M., & Wagenmakers, E.-J. (2016). On the importance of avoiding shortcuts in modelling hierarchical data. Talk at the Annual Meeting of the Society for Mathematical Psychology, New Brunswick, New Jersey, USA.

**Matzke, D.**, Boehm, U., Marsman, M., & Wagenmakers, E.-J. (2016). On the importance of avoiding shortcuts in modelling hierarchical data. Talk at the Annual Summer Interdisciplinary Conference, Selva Val Gardena, Italy.

**Matzke, D.**, Badcock, J.C., Hughes, M.E., Michie, P.T., & Heathcote, A. (2016). A Bayesian approach for quantifying the contribution of trigger failures to response inhibition performance:

Evidence for triggering deficiencies in schizophrenia. Invited talk at the Annual Convention of the American Psychological Association, Chicago, Illinois, USA.

**Matzke, D.** (2016). Bayesian hierarchical methods in psychology: Two case studies in cognitive modeling. Invited talk at the University of Mannheim, Germany.

**Matzke, D.** (2015). A Bayesian approach for estimating SSRT distributions and the probability of trigger failures in the stop-signal paradigm. Invited talk at Vanderbilt University, USA.

**Matzke, D.,** Love, J., & Heathcote, A. (2015). A Bayesian approach for estimating the probability of trigger failures in the stop-signal paradigm. Talk at the Annual Summer Interdisciplinary Conference, Mammoth Lakes, California, 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 the Annual Meeting of the Society for Mathematical Psychology, Quebec City, Canada.

**Matzke, D.** (2014). A Bayesian parametric approach for estimating the distribution of stop-signal reaction times. Invited talk at the University of Newcastle, Australia.

**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 Conference of the European Society for Cognitive Psychology, 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 Annual Meeting of the Society for Mathematical Psychology, 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 Annual Meeting of the Society for Mathematical Psychology, 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 at the winter conference of De Nederlandse Vereniging voor Psychonomie (NVP; Dutch Psychonomic Society), 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 Annual Meeting of the Society for Mathematical Psychology, Medford, Massachusetts, USA.

**Matzke, D.,** & Wagenmakers, E.-J. (2009). Psychological interpretation of the ex-Gaussian and shifted Wald parameters: A diffusion model analysis. Poster at the Annual Meeting of the Society for Mathematical Psychology, Amsterdam, The Netherlands.

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

*Note: Only first-author presentations are listed.*