

## CONTACT INFORMATION

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## EMPLOYMENT HISTORY

*2021 – present*      **Professor**, Department of Cognitive Sciences  
 University of California, Irvine

*2021 – present*      **Affiliated Faculty**, Department of Logic and Philosophy of Science  
 University of California, Irvine

*2015 – present*      **Affiliated Faculty**, Department of Statistics  
 University of California, Irvine

*2011 – present*      **Affiliated Faculty**, Institute for Mathematical Behavioral Sciences  
 University of California, Irvine

*2016 – 2021*        **Associate Professor**, Department of Cognitive Sciences  
 University of California, Irvine

*2011 – 2016*        **Assistant Professor**, Department of Cognitive Sciences  
 University of California, Irvine

*2011 – 2016*        **Research Fellow**, Faculty of Psychology and Educational Sciences  
 University of Leuven, Belgium

*2010 – 2012*        **Postdoctoral Fellow**  
 Research Foundation—Flanders (FWO)

*2009 – 2010*        **Postdoctoral Research Associate**, Faculty of Medicine  
 University of Leuven, Belgium

## EDUCATION

*2005 – 2009*        PhD in Quantitative Psychology and Psychometrics  
 University of Leuven, Belgium

*2002 – 2005*        Master in Psychology (Licentiate)  
 University of Leuven, Belgium

*2000 – 2002*        Bachelor in Psychology (Candidate)  
 University of Leuven, Belgium

## PROFESSIONAL AFFILIATIONS (PAST AND PRESENT)

Fellow of the Psychonomic Society  
 Member of the Society for Mathematical Psychology  
 Member of the Psychometric Society  
 Member of the European Society for Cognitive Psychology  
 Member of the International Society for Research in Emotion  
 Member of the American Statistical Association  
 Senior Fellow at Army Combat Capabilities Development Command

# Research

## RESEARCH INTERESTS

Stochastic process models	Computational modeling of cognition
Bayesian statistics	Computational methods
Individual differences	Psychometrics
Integrative modeling	Data fusion
Robust science	Meta-analysis

## EXTRAMURAL GRANTS

<i>June 2021</i>	National Science Foundation grant #2051186: “Exploratory and confirmatory neurocognitive modeling with latent variables.” 36 months. Role: <b>Principal Investigator</b> (with R. Srinivasan). \$349,551.00
<i>September 2019</i>	National Science Foundation grant #1850849: “Critical tests of neurocognitive relationships.” 36 months. Role: <b>Principal Investigator</b> (with R. Srinivasan). \$674,807.00
<i>February 2018</i>	National Science Foundation grant #1754205: “RR: Workshop on Robust Social and Behavioral Sciences.” 12 months. Role: <b>Principal Investigator</b> (with M. D. Lee). \$62,391.00
<i>April 2017</i>	National Science Foundation grant #1658303: “Estimation of unidentified cognitive models with physiological data.” 24 months. Role: <b>Principal Investigator</b> (with R. Srinivasan). \$337,028.00
<i>April 2016</i>	National Science Foundation: Graduate Research Fellowship Award (DGE-1321846; Awarded to advisee Alexander Etz). 36 months. Role: <b>Adviser</b> . \$132,000.00
<i>January 2016</i>	William K. and Katherine W. Estes Fund (Psychonomic Society and Association for Psychological Science): “Summer school for computational cognitive modeling”. Role: <b>Contributor</b> (with S. Lewandowsky and K. Oberauer). \$15,000.00
<i>September 2015</i>	National Science Foundation grant #1534472: “Bayesian methods for meta-analysis in the presence of publication bias.” 36 months. Role: <b>Principal Investigator</b> . \$260,000.00
<i>July 2015</i>	European Society for Cognitive Psychology: “Summer school for computational cognitive modeling”. Role: <b>Contributor</b> (with S. Lewandowsky and K. Oberauer). \$22,000.00
<i>July 2015</i>	National Science Foundation: “Support for the Applications of Mathematical Psychology to Industry meeting”. Role: <b>Organizer</b> (with J. Trueblood). \$5,000.00
<i>June 2014</i>	John Templeton Foundation grant #48192: “A formal modeling framework for the dynamics of subjective well-being.” 36 months. Role: <b>Principal Investigator</b> . \$540,018.00
<i>April 2014</i>	National Science Foundation: Graduate Research Fellowship Award (DGE-1321846; Awarded to advisee Maime Guan). 36 months. Role: <b>Adviser</b> . \$121,500.00
<i>February 2014</i>	Volkswagen Foundation teaching grant: “Summer school for computational cognitive modeling”. Role: <b>Contributor</b> . (with S. Lewandowsky and K. Oberauer). \$70,000.00
<i>September 2012</i>	National Science Foundation grant #1230118: “Cognitive structural equation models.” 36 months. Role: <b>Principal Investigator</b> . \$250,000.00
<i>October 2010</i>	Research Foundation—Flanders postdoctoral research grant: “Dynamic cognitive psychometrics.” 36 months. \$200,000.00
<i>October 2009</i>	University of Leuven Research Council postdoctoral research grant: “A statistical framework for Approximate Bayesian Computation.” 12 months. \$65,000.00

## INTRAMURAL GRANTS

- July 2015 UC Irvine School of Social Sciences Office of the Dean: “Support for the Applications of Mathematical Psychology to Industry meeting”. Role: Organizer. \$3,000.00
- July 2015 UC Irvine School of Social Sciences Office of Graduate Affairs: “Support for the 48th Meeting of the Society for Mathematical Psychology”. Role: Principal organizer (with J. Trueblood). \$3,000.00
- July 2015 UC Irvine Department of Cognitive Sciences: “Support for the 48th Meeting of the Society for Mathematical Psychology”. Role: Principal organizer (with J. Trueblood). \$2,500.00
- November 2012 UC Irvine School of Social Sciences: “Interfacing Models with Brain Signals to Investigate Cognition”. Role: Co-Principal Investigator (with R. Srinivasan, and J. Krichmar). \$4,000.00
- June 2012 UC Irvine Summer Undergraduate Research Program (SURP): “Publication Bias in Three Prominent Psychological Journals”. Role: Adviser (with M. Guan). \$2,000.00

## PROFESSIONAL RECOGNITIONS

- July 2020 UC Irvine School of Social Sciences Outstanding Teaching Award (Spring 2020)
- December 2016 UC Irvine Social Science Assistant Professor Research Award (\$5,000)
- December 2016 My student Beth Baribault won the *Berkeley Initiative for Transparency in the Social Sciences*’ Leamer-Rosenthal Prize for Open Social Science for her work under my supervision (\$10,000)
- September 2015 UC Irvine School of Social Sciences Outstanding Teaching Award (Spring 2015)
- July 2014 *Society for Mathematical Psychology*’s William K. Estes Early Career Award (\$1,250)

## PUBLISHED WORK

79. Oravecz, Z., & **Vandekerckhove, J.** (in press). Quantifying evidence for—and against—Granger causality with Bayes factors. *Multivariate Behavioral Research*. Via [cidlab.com/paper/93](http://cidlab.com/paper/93).
78. **Vandekerckhove, J.**, (in press). Commensurability engineering is first and foremost a theoretical exercise. *Behavioral and Brain Sciences*. Via [cidlab.com/paper/90](http://cidlab.com/paper/90).
77. Wagenmakers, E., Gronau, Q., & **Vandekerckhove, J.** (preprint). Five Bayesian intuitions for the Stopping Rule Principle. *PsyArxiv*. Via [cidlab.com/paper/95](http://cidlab.com/paper/95).
76. Nunez, M., **Vandekerckhove, J.**, & Srinivasan, R. (preprint). A tutorial on fitting joint models of M/EEG and behavior to understand cognition. *PsyArxiv*. Via [cidlab.com/paper/94](http://cidlab.com/paper/94).
75. Weisman, M. J., Kott, A., Ellis, J. E., Murphy, B. J., Parker, T. W., Smith, S., & **Vandekerckhove, J.** (preprint). Quantitative measurement of cyber resilience: modeling and experimentation. *arXiv*. Via [cidlab.com/paper/92](http://cidlab.com/paper/92).
74. Heshmati, S., Muth, C., Li, Y., Roeser, R. W., Smyth, J. M., **Vandekerckhove, J.**, Chow, S., & Oravecz, Z. (preprint). Capturing the heterogeneous effects of a mobile-health psychological well-being intervention for early adults: results from a process-oriented approach. *PsyArxiv*. Via [cidlab.com/paper/89](http://cidlab.com/paper/89).
73. Kott, A., Weisman, M. J., **Vandekerckhove, J.**, Ellis, J. E., Parker, T. W., Murphy, B. J., & Smith, S. (2023). A methodology for quantitative measurement of cyber resilience (QMOCR). In *Army Research Labs Technical Report*. Via [cidlab.com/paper/96](http://cidlab.com/paper/96).

72. Weisman, M. J., Kott, A., & **Vandekerckhove, J.** (2023). Piecewise linear and stochastic models for the analysis of cyber resilience. In *57th Annual Conference on Information Sciences and Systems (CISS)*. Via [cidlab.com/paper/91](http://cidlab.com/paper/91).
71. Morey, R., Kaschak, M. P., Diez-Álamo, A. M., Glenberg, A. M., Zwaan, R., Lakens, D., Ibáñez, A., Garcia, A., Gianelli, C., Jones, J. L., Madden, J., Alifano, F., Bergen, B., Bloxson, N. G., Bub, D. N., Cai, Z. G., Chartier, C. R., Chatterjee, A., Conwell, E., Cook, S. W., Davis, J. D., Evers, E., Girard, S., Harter, D., Hartung, F., Herrera, E., Huettig, F., Humphries, S., Juanchich, M., Kühne, K., Lu, S., Lynes, T., Masson, M. E., Ostarek, M., Pessers, S., Reglin, R., Steegen, S., Thiessen, E. D., Thomas, L. E., Trott, S., **Vandekerckhove, J.**, Vanpaemel, W., Vlachou, M., Williams, K., & Ziv-Crispel, N. (2022). A pre-registered, multi-lab non-replication of the Action-sentence Compatibility Effect (ACE). *Psychonomic Bulletin & Review*, *29*, p. 1239. DOI: 10.3758/s13423-021-01927-8. Via [cidlab.com/paper/83](http://cidlab.com/paper/83).
70. Kott, A., Weisman, M. J., & **Vandekerckhove, J.** (2022). Mathematical modeling of cyber resilience. In *IEEE Military Communications Conference Proceedings*. DOI: 10.1109/MILCOM55135.2022.10017731. Via [cidlab.com/paper/79](http://cidlab.com/paper/79).
69. Ellis, J. E., Parker, T. W., **Vandekerckhove, J.**, Murphy, B. J., & Smith, S. (2022). An experimentation infrastructure for quantitative measurements of cyber resilience. In *IEEE Military Communications Conference Proceedings*. Via [cidlab.com/paper/80](http://cidlab.com/paper/80).
68. Sun, Q., Vo, K., Lui, K. K., Nunez, M., **Vandekerckhove, J.**, & Srinivasan, R. (2022). Decision SincNet: Neurocognitive models of decision making that predict cognitive processes from neural signals. In *Proceedings of the International Joint Conference on Neural Networks*. DOI: 10.48550/arXiv.2208.02845. Via [cidlab.com/paper/81](http://cidlab.com/paper/81).
67. Wiech, K., Eippert, F., **Vandekerckhove, J.**, Zaman, J., Placek, K., Tuerlinckx, F., Vlaeyen, J., & Tracey, I. (2022). Cortico-brainstem mechanisms of biased perceptual decision-making in the context of pain. *Journal of Pain*, *23*, p. 1372. DOI: 10.1016/j.jpain.2021.11.006. Via [cidlab.com/paper/82](http://cidlab.com/paper/82).
66. Etz, A., Goodman, S. N., & **Vandekerckhove, J.** (2022). Statistical inference in behavioral research: traditional and Bayesian approaches. In *Research Integrity: Best Practices for the Social and Behavioral Sciences*. Via [cidlab.com/paper/84](http://cidlab.com/paper/84).
65. Lucio, P., **Vandekerckhove, J.**, Polanczyk, G., & Cogo-Moreira, H. (2021). Is it worthwhile to take account of "guessing" in the performance of the Raven test? Calling for the principle of parsimony for test validation. *Journal of Psychoeducational Assessment*, *39*, p. 100–111. DOI: 10.1177/0734282920930923. Via [cidlab.com/paper/78](http://cidlab.com/paper/78).
64. Shiffrin, R. M., Matzke, D., Crystal, J. D., Wagenmakers, E., Chandramouli, S. H., **Vandekerckhove, J.**, Zorzi, M., Morey, R., & Murphy, M. C. (2021). Extraordinary claims, extraordinary evidence? A discussion. *Learning & Behavior*, *49*, p. 540. DOI: 10.3758/s13420-021-00474-5. Via [cidlab.com/paper/85](http://cidlab.com/paper/85).
63. Lui, K. K., Nunez, M., Cassidy, J. M., **Vandekerckhove, J.**, Cramer, S. C., & Srinivasan, R. (2021). Timing of readiness potentials reflect a decision-making process in the human brain. *Computational Brain & Behavior*, *4*, p. 547. DOI: 10.1007/s42113-020-00097-5. Via [cidlab.com/paper/86](http://cidlab.com/paper/86).
62. Devezer, B., Navarro, D. J., **Vandekerckhove, J.**, & Buzbas, E. O. (2021). The case for formal methodology in scientific reform. *Royal Society Open Science*, *8*, p. 200805. DOI: 10.1098/rsos.200805. Via [cidlab.com/paper/87](http://cidlab.com/paper/87).
61. Guan, M., Stokes, R., **Vandekerckhove, J.**, & Lee, M. (2020). A cognitive modeling analysis of risk in sequential choice tasks. *Judgment and Decision Making*, *15*, p. 823–850. Via [cidlab.com/paper/88](http://cidlab.com/paper/88).
60. van den Bergh, D., Bogaerts, S., Spreen, M., Flohr, R., **Vandekerckhove, J.**, Rhemtulla, M., Batchelder, W., & Wagenmakers, E. (2020). Cultural consensus theory for the evaluation of patients' mental health scores in forensic psychiatric hospitals. *Journal of Mathematical Psychology*, *98*, p. 102383. DOI: 10.1016/j.jmp.2020.102383. Via [cidlab.com/paper/77](http://cidlab.com/paper/77).

59. Oravecz, Z., & **Vandekerckhove, J.** (2020). A joint process model of consensus and longitudinal dynamics. *Journal of Mathematical Psychology*, *98*, p. 102386. DOI: 10.31234/osf.io/xyghj. Via cidlab.com/paper/76.
58. Aczel, B., Hoekstra, R., Gelman, A., Wagenmakers, E., Klugkist, I., Rouder, J., **Vandekerckhove, J.**, Lee, M., Morey, R., Vanpaemel, W., Dienes, Z., & van Ravenzwaaij, D. (2020). Discussion points for Bayesian inference. *Nature Human Behavior*, *4*, p. 561–563. DOI: 10.1038/s41562-019-0807-z. Via cidlab.com/paper/75.
57. Oravecz, Z., Dirsmith, J., Heshmati, S., **Vandekerckhove, J.**, & Brick, T. (2020). Psychological well-being and personality traits are associated with experiencing love in everyday life. *Personality and Individual Differences*, *154*, p. 109620. DOI: 10.1016/j.paid.2019.109620. Via cidlab.com/paper/73.
56. Heshmati, S., Oravecz, Z., Pressman, S., Batchelder, W., Muth, C., & **Vandekerckhove, J.** (2019). What does it mean to feel loved? Cultural agreement and individual differences. *Journal of Social and Personal Relationships*, *36*, p. 214–243. DOI: 10.1177/0265407517724600. Via cidlab.com/paper/47.
55. Dutilh, G., Annis, J., Brown, S., Cassey, P., Evans, N., Grasman, R., Hawkins, G., Heathcote, A., Holmes, W., Kryptos, A., Kupitz, C., Leite, F., Lerche, V., Lin, Y., Logan, G., Palmeri, T., Starns, J., Trueblood, J., van Maanen, L., van Ravenzwaaij, D., **Vandekerckhove, J.**, Visser, I., Voss, A., White, C., Wiecki, T., Rieskamp, J., & Donkin, C. (2019). The quality of response time data inference: A blinded, collaborative approach to the validity of cognitive models. *Psychonomic Bulletin & Review*, *26*, p. 1051–1069. DOI: 10.3758/s13423-017-1417-2. Via cidlab.com/paper/48.
54. Schubert, A., Nunez, M., Hagemann, D., & **Vandekerckhove, J.** (2019). Individual differences in cortical processing speed predict cognitive abilities: A model-based cognitive neuroscience account. *Computational Brain & Behavior*, *2*, p. 64–84. DOI: 10.1007/s42113-018-0021-5. Via cidlab.com/paper/70.
53. Lee, M., Criss, A., Devezer, B., Donkin, C., Etz, A., Leite, F., Matzke, D., Rouder, J., Trueblood, J., White, C., & **Vandekerckhove, J.** (2019). Robust modeling in cognitive science. *Computational Brain & Behavior*, *2*, p. 141–153. DOI: 10.1007/s42113-019-00029-y. Via cidlab.com/paper/71.
52. Nunez, M., Gosai, A., **Vandekerckhove, J.**, & Srinivasan, R. (2019). The latency of a visual evoked potential tracks the onset of decision making. *NeuroImage*, *197*, p. 93–108. DOI: 10.1016/j.neuroimage.2019.04.052. Via cidlab.com/paper/72.
51. **Vandekerckhove, J.**, White, C., Trueblood, J., Rouder, J., Matzke, D., Leite, F., Etz, A., Donkin, C., Devezer, B., Criss, A., & Lee, M. (2019). Robust diversity in cognitive science. *Computational Brain & Behavior*, *2*, p. 271–276. DOI: 10.1007/s42113-019-00066-7. Via cidlab.com/paper/74.
50. Mistry, P., Pothos, E., **Vandekerckhove, J.**, & Trueblood, J. (2018). A quantum probability account of individual differences in causal reasoning. *Journal of Mathematical Psychology*, *87*, p. 76–97. DOI: 10.1016/j.jmp.2018.09.003. Via cidlab.com/paper/69.
49. Etz, A., Haaf, J., Rouder, J., & **Vandekerckhove, J.** (2018). Bayesian inference and testing any hypothesis you can specify. *Advances in Methods and Practices in Psychological Science*, *1*, p. 281–295. DOI: 10.1177/2515245918773087. Via cidlab.com/paper/51.
48. **Vandekerckhove, J.**, Rouder, J., & Kruschke, J. (2018). Editorial: Bayesian methods for advancing psychological science. *Psychonomic Bulletin & Review*, *25*, p. 1–4. DOI: 10.3758/s13423-018-1443-8. Via cidlab.com/paper/50.
47. Baribault, B., Donkin, C., Little, D., Trueblood, J., Oravecz, Z., van Ravenzwaaij, D., White, C., De Boeck, P., & **Vandekerckhove, J.** (2018). Metastudies for robust tests of theory. *Proceedings of the National Academy of Sciences*, *115*, p. 2607–2612. DOI: 10.1073/pnas.1708285114. Via cidlab.com/paper/49.

46. Rouder, J., Haaf, J., & **Vandekerckhove, J.** (2018). Bayesian Inference in Psychology, Part IV: Parameter estimation and Bayes factors. *Psychonomic Bulletin & Review*, *25*, p. 102–113. DOI: 10.3758/s13423-017-1420-7. Via [cidlab.com/paper/46](http://cidlab.com/paper/46).
45. Matzke, D., Boehm, U., & **Vandekerckhove, J.** (2018). Bayesian Inference in Psychology, Part III: Bayesian parameter estimation in nonstandard models. *Psychonomic Bulletin & Review*, *25*, p. 77–101. DOI: 10.3758/s13423-017-1394-5. Via [cidlab.com/paper/45](http://cidlab.com/paper/45).
44. Etz, A., & **Vandekerckhove, J.** (2018). Introduction to Bayesian inference for psychology. *Psychonomic Bulletin & Review*, *25*, p. 5–34. DOI: 10.3758/s13423-017-1262-3. Via [cidlab.com/paper/44](http://cidlab.com/paper/44).
43. Okada, K., **Vandekerckhove, J.**, & Lee, M. (2018). Modeling when people quit: Bayesian censored geometric models with hierarchical and latent-mixture extensions. *Behavior Research Methods*, *50*, p. 406–415. DOI: 10.3758/s13428-017-0879-5. Via [cidlab.com/paper/43](http://cidlab.com/paper/43).
42. van Ravenzwaaij, D., Donkin, C., & **Vandekerckhove, J.** (2017). The EZ diffusion model provides a powerful test of simple empirical effects. *Psychonomic Bulletin & Review*, *24*, p. 547–556. DOI: 10.3758/s13423-016-1081-y. Via [cidlab.com/paper/41](http://cidlab.com/paper/41).
41. Dutilh, G., **Vandekerckhove, J.**, Ly, A., Matzke, D., Pedroni, A., Frey, R., Rieskamp, J., & Wagenmakers, E. (2017). A test of the diffusion model explanation for the Worst Performance Rule using preregistration and blinding. *Attention, Perception, and Performance*, *79*, p. 713–725. DOI: 10.3758/s13414-017-1304-y. Via [cidlab.com/paper/42](http://cidlab.com/paper/42).
40. Lucio, P., Salum, G., Rohde, L., Gadelha, A., Swardfager, W., **Vandekerckhove, J.**, Pan, P., Polanczyk, G., do Rosario, M., Jackowski, A., Mari, J., & Cogo-Moreira, H. (2017). Poor stimulus discriminability as a common neuropsychological deficit between ADHD and reading ability in young children: a moderated mediation model. *Psychological Medicine*, *47*, p. 255–266. DOI: 10.1017/S0033291716002531. Via [cidlab.com/paper/40](http://cidlab.com/paper/40).
39. Nunez, M., **Vandekerckhove, J.**, & Srinivasan, R. (2017). How attention influences perceptual decision making: Single-trial EEG correlates of drift-diffusion model parameters. *Journal of Mathematical Psychology*, *76*, p. 117–130. DOI: 10.1016/j.jmp.2016.03.003. Via [cidlab.com/paper/37](http://cidlab.com/paper/37).
38. Oravecz, Z., Muth, C., & **Vandekerckhove, J.** (2016). Do people agree on what makes one feel loved? A cognitive psychometric approach to the consensus on felt love. *PLoS ONE*, *11*, p. e0152803. DOI: 10.1371/journal.pone.0152803. Via [cidlab.com/paper/38](http://cidlab.com/paper/38).
37. Etz, A., & **Vandekerckhove, J.** (2016). A Bayesian perspective on the Reproducibility Project: Psychology. *PLoS ONE*, *11*, p. e0149794. DOI: 10.1371/journal.pone.0149794. Via [cidlab.com/paper/36](http://cidlab.com/paper/36).
36. Oravecz, Z., Tuerlinckx, F., & **Vandekerckhove, J.** (2016). Bayesian data analysis with the bivariate hierarchical Ornstein-Uhlenbeck process model. *Multivariate Behavioral Research*, *51*, p. 106–119. DOI: 10.1080/00273171.2015.1110512. Via [cidlab.com/paper/35](http://cidlab.com/paper/35).
35. Guan, M., & **Vandekerckhove, J.** (2016). A Bayesian approach to mitigation of publication bias. *Psychonomic Bulletin & Review*, *23*, p. 74–86. DOI: 10.3758/s13423-015-0868-6. Via [cidlab.com/paper/34](http://cidlab.com/paper/34).
34. **Vandekerckhove, J.**, & Wagenmakers, E. (2016). C. S. Peirce on the Crisis of Confidence and the “No More Bets” Heuristic. *The Winnower*, *4843*. DOI: 10.15200/winn.146611.14253. Via [cidlab.com/paper/39](http://cidlab.com/paper/39).
33. Oravecz, Z., Huentelman, M., & **Vandekerckhove, J.** (2016). Sequential Bayesian updating for Big Data. In *Big Data in Cognitive Science: From Methods to Insights*, p. 13–33. Via [cidlab.com/paper/29](http://cidlab.com/paper/29).
32. Kupitz, C., Buschkuehl, M., Jaeggi, S., Jonides, J., Shah, P., & **Vandekerckhove, J.** (2015). A diffusion model account of the transfer-of-training effect. In *Proceedings of the 37th Annual Conference of the Cognitive Science Society*. Via [cidlab.com/paper/32](http://cidlab.com/paper/32).

31. **Vandekerckhove, J.**, Matzke, D., & Wagenmakers, E. (2015). Model comparison and the principle of parsimony. In *Oxford Handbook of Computational and Mathematical Psychology*, p. 300–317. Via [cidlab.com/paper/19](http://cidlab.com/paper/19).
30. Van Elk, M., Matzke, D., Gronau, Q., Guan, M., **Vandekerckhove, J.**, & Wagenmakers, E. (2015). Meta-analyses are no substitute for registered replications: a skeptical perspective on religious priming. *Frontiers in Psychology*, 6, p. 1365. DOI: 10.3389/fpsyg.2015.01365. Via [cidlab.com/paper/33](http://cidlab.com/paper/33).
29. Guan, M., Lee, M., & **Vandekerckhove, J.** (2015). A hierarchical cognitive threshold model of human decision making on different length optimal stopping problems. In *Proceedings of the 37th Annual Conference of the Cognitive Science Society*, p. 824–829. Via [cidlab.com/paper/31](http://cidlab.com/paper/31).
28. Mistry, P., Trueblood, J., **Vandekerckhove, J.**, & Pothos, E. (2015). A latent-mixture quantum probability model of causal reasoning within a Bayesian inference framework. In *Proceedings of the 37th Annual Conference of the Cognitive Science Society*. Via [cidlab.com/paper/30](http://cidlab.com/paper/30).
27. Nunez, M., Srinivasan, R., & **Vandekerckhove, J.** (2015). Individual differences in attention influence perceptual decision making. *Frontiers in Psychology*, 6, p. 18. DOI: 10.3389/fpsyg.2015.00018. Via [cidlab.com/paper/28](http://cidlab.com/paper/28).
26. Oravecz, Z., **Vandekerckhove, J.**, & Batchelder, W. (2014). Bayesian Cultural Consensus Theory. *Field Methods*, 26, p. 207–222. DOI: 10.1177/1525822X13520280. Via [cidlab.com/paper/21](http://cidlab.com/paper/21).
25. Wabersich, D., & **Vandekerckhove, J.** (2014). Extending JAGS: A tutorial on adding custom distributions to JAGS (with a diffusion model example). *Behavior Research Methods*, 46, p. 15–28. DOI: 10.3758/s13428-013-0369-3. Via [cidlab.com/paper/18](http://cidlab.com/paper/18).
24. Salum, G., Sergeant, J., Sonuga-Barke, E., **Vandekerckhove, J.**, Gadelha, A., Pan, P., Moriyama, T., Graeff-Martins, A., Gomes de Alvarenga, P., do Rosario, M., Manfro, G., Polanczyk, G., & Rohde, L. (2014). Specificity of basic information processing and inhibitory control in attention deficit/hyperactivity disorder. *Psychological Medicine*, 44, p. 617–631. DOI: 10.1017/S0033291713000639. Via [cidlab.com/paper/17](http://cidlab.com/paper/17).
23. Salum, G., Sergeant, J., Sonuga-Barke, E., **Vandekerckhove, J.**, Gadelha, A., Pan, P., Moriyama, T., Graeff-Martins, A., Gomes de Alvarenga, P., do Rosario, M., Manfro, G., Polanczyk, G., & Rohde, L. (2014). Mechanisms underpinning inattention and hyperactivity: neurocognitive support for ADHD dimensionality. *Psychological Medicine*, 44, p. 3189–3201. DOI: 10.1017/S0033291714000919. Via [cidlab.com/paper/20](http://cidlab.com/paper/20).
22. Wabersich, D., & **Vandekerckhove, J.** (2014). The RWiener package: an R package providing distribution functions for the Wiener diffusion model. *The R Journal*, 6, p. 49–56. Via [cidlab.com/paper/22](http://cidlab.com/paper/22).
21. **Vandekerckhove, J.**, (2014). A cognitive latent variable model for the simultaneous analysis of behavioral and personality data. *Journal of Mathematical Psychology*, 60, p. 58–71. DOI: 10.1016/j.jmp.2014.06.004. Via [cidlab.com/paper/24](http://cidlab.com/paper/24).
20. Murphy, P., **Vandekerckhove, J.**, & Nieuwenhuis, S. (2014). Pupil-linked arousal determines variability in perceptual decision making. *PLOS Computational Biology*, 10, p. e1003854. DOI: 10.1371/journal.pcbi.1003854. Via [cidlab.com/paper/25](http://cidlab.com/paper/25).
19. Lee, M., Newell, B., & **Vandekerckhove, J.** (2014). Modeling the adaptation of search termination in human decision making. *Decision*, 1, p. 223–251. DOI: 10.1037/dec0000019. Via [cidlab.com/paper/26](http://cidlab.com/paper/26).
18. Zhang, S., Lee, M., **Vandekerckhove, J.**, Maris, G., & Wagenmakers, E. (2014). Time-varying boundaries for diffusion models of decision making and response time. *Frontiers in Psychology*, 5, p. 1364. DOI: 10.3389/fpsyg.2014.01364. Via [cidlab.com/paper/27](http://cidlab.com/paper/27).

17. Wiech, K., **Vandekerckhove, J.**, Zaman, J., Tuerlinckx, F., Vlaeyen, J., & Tracey, I. (2014). Influence of prior information on pain involves biased perceptual decision-making. *Current Biology*, *24*, p. R679–R681. DOI: 10.1016/j.cub.2014.06.022. Via [cidlab.com/paper/23](http://cidlab.com/paper/23).
16. **Vandekerckhove, J.**, Guan, M., & Styracula, S. (2013). The consistency test may be too weak to be useful: Its systematic application would not improve effect size estimation in meta-analyses. *Journal of Mathematical Psychology*, *57*, p. 170–173. DOI: 10.1016/j.jmp.2013.03.007. Via [cidlab.com/paper/16](http://cidlab.com/paper/16).
15. Pe, M., **Vandekerckhove, J.**, & Kuppens, P. (2013). A diffusion model account of the relationship between the emotional flanker task and depression and rumination. *Emotion*, *13*, p. 739–747. DOI: 10.1037/a0031628. Via [cidlab.com/paper/15](http://cidlab.com/paper/15).
14. Dutilh, G., Forstmann, B., **Vandekerckhove, J.**, & Wagenmakers, E. (2013). A diffusion model account of age differences in posterror slowing. *Psychology and Aging*, *28*, p. 64–76. DOI: 10.1037/a0029875. Via [cidlab.com/paper/14](http://cidlab.com/paper/14).
13. Dutilh, G., **Vandekerckhove, J.**, Forstmann, B., Keuleers, E., Brysbaert, M., & Wagenmakers, E. (2012). Testing theories of post-error slowing. *Attention, Perception, & Psychophysics*, *7*, p. 454–465. DOI: 10.3758/s13414-011-0243-2. Via [cidlab.com/paper/13](http://cidlab.com/paper/13).
12. Oravecz, Z., Tuerlinckx, F., & **Vandekerckhove, J.** (2011). A hierarchical latent stochastic differential equation model for affective dynamics. *Psychological Methods*, *16*, p. 468–490. DOI: 10.1037/a0024375. Via [cidlab.com/paper/12](http://cidlab.com/paper/12).
11. **Vandekerckhove, J.**, Tuerlinckx, F., & Lee, M. (2011). Hierarchical diffusion models for two-choice response times. *Psychological Methods*, *16*, p. 44–62. DOI: 10.1037/a0021765. Via [cidlab.com/paper/11](http://cidlab.com/paper/11).
10. **Vandekerckhove, J.**, Verheyen, S., & Tuerlinckx, F. (2010). A crossed random effects diffusion model for speeded semantic categorization data. *Acta Psychologica*, *133*, p. 269–282. DOI: 10.1016/j.actpsy.2009.10.009. Via [cidlab.com/paper/10](http://cidlab.com/paper/10).
9. Wetzels, R., **Vandekerckhove, J.**, Tuerlinckx, F., & Wagenmakers, E. (2010). Bayesian parameter estimation in the Expectancy Valence model of the Iowa gambling task. *Journal of Mathematical Psychology*, *54*, p. 14–27. DOI: 10.1016/j.jmp.2008.12.001. Via [cidlab.com/paper/9](http://cidlab.com/paper/9).
8. Oravecz, Z., Tuerlinckx, F., & **Vandekerckhove, J.** (2009). A hierarchical Ornstein-Uhlenbeck model for continuous repeated measurement data. *Psychometrika*, *74*, p. 395–418. DOI: 10.1007/s11336-008-9106-8. Via [cidlab.com/paper/7](http://cidlab.com/paper/7).
7. Dutilh, G., **Vandekerckhove, J.**, Tuerlinckx, F., & Wagenmakers, E. (2009). A diffusion model decomposition of the practice effect. *Psychonomic Bulletin & Review*, *16*, p. 1026–1036. DOI: 10.3758/16.6.1026. Via [cidlab.com/paper/8](http://cidlab.com/paper/8).
6. **Vandekerckhove, J.**, Tuerlinckx, F., & Lee, M. (2008). A Bayesian approach to diffusion process models of decision-making. In *Proceedings of the 30th Annual Conference of the Cognitive Science Society*, p. 1429–1434. Via [cidlab.com/paper/4](http://cidlab.com/paper/4).
5. Panis, S., De Winter, J., **Vandekerckhove, J.**, & Wagemans, J. (2008). Identification of everyday objects on the basis of fragmented versions of outlines. *Perception*, *37*, p. 271–289. DOI: 10.1068/p5516. Via [cidlab.com/paper/6](http://cidlab.com/paper/6).
4. **Vandekerckhove, J.**, & Tuerlinckx, F. (2008). Diffusion Model Analysis with MATLAB: A DMAT Primer. *Behavior Research Methods*, *40*, p. 61–72. DOI: 10.3758/BRM.40.1.61. Via [cidlab.com/paper/5](http://cidlab.com/paper/5).
3. **Vandekerckhove, J.**, Panis, S., & Wagemans, J. (2007). The concavity effect is a compound of local and global effects. *Perception & Psychophysics*, *69*, p. 1253–1260. DOI: 10.3758/BF03193960. Via [cidlab.com/paper/2](http://cidlab.com/paper/2).



2. Spruyt, A., Hermans, D., De Houwer, J., **Vandekerckhove, J.**, & Eelen, P. (2007). On the predictive validity of indirect attitude measures: Prediction of consumer choice behavior on the basis of affective priming in the picture–picture naming task. *Journal of Experimental Social Psychology*, *43*, p. 599–610. DOI: 10.1016/j.jesp.2006.06.009. Via [cidlab.com/paper/3](http://cidlab.com/paper/3).
1. **Vandekerckhove, J.**, & Tuerlinckx, F. (2007). Fitting the Ratcliff diffusion model to experimental data. *Psychonomic Bulletin & Review*, *14*, p. 1011–1026. DOI: 10.3758/BF03193087. Via [cidlab.com/paper/1](http://cidlab.com/paper/1).

## SOFTWARE

- Vandekerckhove, J.** (2020). MathPsych Virtual [Website, software, and manual]. An online conference venue for events organized by the Society for Mathematical Psychology. Available via [mathpsych.org](http://mathpsych.org)
- Vandekerckhove, J.** (2017). Build-A-Bayes [Educational online app]. Available via [osf.io/mvp53](http://osf.io/mvp53)
- Vandekerckhove, J.** (2015). Trinity [Software and manual]. Available via [sw.cidlab.com](http://sw.cidlab.com)
- Wabersich, D., Lee, M. D., & **Vandekerckhove, J.** (2013). jags-alcove [Software and manual]. Available via [sw.cidlab.com](http://sw.cidlab.com)
- Wabersich, D., & **Vandekerckhove, J.** (2013). jags-wiener [Software and manual]. Available via [sw.cidlab.com](http://sw.cidlab.com)
- Wabersich, D., Lee, M. D., & **Vandekerckhove, J.** (2013). RAlcove [Software and manual]. Available via [sw.cidlab.com](http://sw.cidlab.com)
- Wabersich, D., Lee, M. D., & **Vandekerckhove, J.** (2013). RWiener [Software and manual]. Available via [sw.cidlab.com](http://sw.cidlab.com)
- Oravecz, Z., Tuerlinckx, F., & **Vandekerckhove, J.** (2012). BHOUM: Bayesian Hierarchical Ornstein-Uhlenbeck Modeling [Software and manual]. Available via [bayesian.zitaoravecz.net](http://bayesian.zitaoravecz.net)
- Oravecz, Z., **Vandekerckhove, J.**, & Batchelder, W. H. (2012). Bayesian Cultural Consensus Toolbox [Software and manual]. Available via [bayesian.zitaoravecz.net](http://bayesian.zitaoravecz.net)
- Vandekerckhove, J.**, & Tuerlinckx, F. (2009). wiener.odc and wienereta.odc [Software and manual]. Available via [sw.cidlab.com](http://sw.cidlab.com)
- Vandekerckhove, J.**, & Tuerlinckx, F. (2007). The Diffusion Model Analysis Toolbox [Software and manual]. Available from [sw.cidlab.com](http://sw.cidlab.com)
- Vandekerckhove, J.** (2006). General simulated annealing algorithm. Available via [sw.cidlab.com](http://sw.cidlab.com)

## DISSERTATION

- Vandekerckhove, J.** (2009). Extensions and applications of the diffusion model for two-choice response times. Unpublished doctoral dissertation.

## OTHER PUBLICATIONS

- Vandekerckhove, J.** (2016, December). In Vivo: Basics of Bayes (a.k.a. “Afterthoughts”). *Computational Modeling in Cognition*. Via [psyarxiv.com/9mc2h](http://psyarxiv.com/9mc2h)
- Vandekerckhove, J.** (2019, December). Freedom of choice vs. undisclosed flexibility: Researcher degrees of freedom in model-based inference. *Psychonomic Society Featured Content*. Via [featuredcontent.psychonomic.org](http://featuredcontent.psychonomic.org)
- Vandekerckhove, J.** (2019, September). On being SMARTer than Vincent. *Psychonomic Society Featured Content*. Via [featuredcontent.psychonomic.org](http://featuredcontent.psychonomic.org)

- Vandekerckhove, J.** (2019, August). Detecting Bigfoot vs. brain waves: New approaches to multivariate data analysis. *Psychonomic Society Featured Content*. Via [featuredcontent.psychonomic.org](https://featuredcontent.psychonomic.org)
- Vandekerckhove, J.** (2019, May). You can obscure a lot by just plotting: Cognitive science of data presentation. *Psychonomic Society Featured Content*. Via [featuredcontent.psychonomic.org](https://featuredcontent.psychonomic.org)
- Vandekerckhove, J.** (2019, February). Weighting or besting? Speeded multi-attribute choice [Original title: The weighting is the hardest part]. *Psychonomic Society Featured Content*. Via [featuredcontent.psychonomic.org](https://featuredcontent.psychonomic.org)
- Vandekerckhove, J.** (2018, February). From classical to new to real: A brief history of #BayesInPsych. *Psychonomic Society Featured Content*. Via [featuredcontent.psychonomic.org](https://featuredcontent.psychonomic.org)

## MEDIA

- I maintain **cidlab.com** to distribute research results and publications; and various other websites to announce events and workshops.
- My lab provides support for **The Bayes Factor**, a podcast on Bayesian inference and the people behind it.
- My research has featured in numerous media outlets, including the *New York Times*, *National Public Radio*, the *Chronicle of Higher Education*, *WIRED Magazine*, *Science News*, and *Nature News*.

# Service

## GRADUATE ADVISING

<i>2022 – present</i>	Kathleen Medriano (chair)
<i>2022 – present</i>	José-Luis Baroja (chair)
<i>2021 – present</i>	Adriana Chávez De la Peña (chair)
<i>2016 – 2022</i>	Alexander Etz (chair) — now instructional faculty at UT Austin
<i>2014 – 2020</i>	Colin Kupitz (chair) — now researcher at Air Force Research Labs
<i>2014 – 2019</i>	Beth Baribault (chair) — now postdoc at UC Berkeley
<i>2013 – 2019</i>	Maimie Guan (with M. D. Lee) — now researcher at Apple, Inc.
<i>2013 – 2018</i>	Irina Danileiko (with M. D. Lee) — now researcher at Wizards of the Coast, Inc.
<i>2012 – 2017</i>	Michael D. Nunez (with R. Srinivasan) — now faculty at University of Amsterdam

## OTHER MENTORING ACTIVITIES

<i>2017 – 2019,</i> <i>2020 – 2021</i>	Assistant project scientist Michael D. Nunez (with R. Srinivasan)
<i>2018</i>	Assistant project scientist Ravi Selker (with M. D. Lee)
<i>2016 – 2017</i>	Visiting researcher Anna-Lena Schubert
<i>2013 – 2014</i>	Research specialist Dominik Wabersich

## DEPARTMENTAL SERVICE

<i>2017 – 2022</i>	Vice Chair for Graduate Affairs, Cognitive Sciences
<i>2017 – 2022</i>	Chair of the Graduate Admissions Committee of Cognitive Sciences
<i>2013 – 2017</i>	Undergraduate Director of B.S. Cognitive Sciences
<i>2012 – present</i>	Academic personnel committee member (5) and chair (2)
<i>2012 – present</i>	Search committee member (5) and chair (2)
<i>2011 – present</i>	Doctoral committees (9), advancement committees (13), concentration exams (9)

## OTHER SERVICE

<i>2019 – 2022</i>	<b>Standing Conference Chair</b> , Society for Mathematical Psychology
<i>2019 – 2022</i>	<b>Executive Board Member</b> ( <i>ex officio</i> ), Society for Mathematical Psychology
<i>2017 – 2021</i>	<b>Representative</b> (elected), School of Social Sciences to the Senate Assembly
<i>2017 – present</i>	<b>Member</b> , Faculty Advisory Committee for Research Cyberinfrastructure

## UCI TEACHING

<i>Undergraduate</i>	Probability and Statistics in Psychology; Advanced experimental methods in psychology (lecture and lab); Honors advanced experimental methods in psychology (lecture and lab); Computational lab skills
<i>Graduate</i>	Algorithmic statistics; Bayesian inference; Computational statistics; Social data science; Software development; Transparent and reproducible science; Computational lab skills

## EXTERNAL TEACHING

- 2010 – present **Lecturer and co-organizer**, biennial Computational Cognitive Modeling summer school
- September 2018 **Invited lecturer**, Workshop at University of Potsdam, “Cognitive psychometrics for multimodal data”
- September 2016 **Invited lecturer**, Workshop at University of Toronto, “A practical course in Bayesian graphical modeling” (with M. D. Lee)
- March 2015 **Invited lecturer**, seminar for Interdisciplinary Data Sciences Consortium, University of South Florida, Tampa, “Cognitive psychometrics and cognitive latent variable models”
- July 2015 **Invited lecturer**, Workshop at University of Zurich, “Cognitive psychometrics and cognitive latent variable modeling”
- December 2010 **Invited lecturer**, University of Zurich doctoral program, “A practical course in Bayesian graphical modeling” (with M. D. Lee)
- September 2010 **Invited lecturer**, University of Zurich doctoral program, “Programming models in MATLAB”
- 2006 – 2011 **Teaching assistant** (2006 – 2008, 2010 – 2011), substitute local coordinator (2007), and co-lecturer (2008) “Socrates-Erasmus Intensive Program on Mathematical and Computational Models in the Psychological Sciences”
- 2005 – 2008 **Teaching assistant** and tutor for various undergraduate courses on statistics. Co-lecturer for undergraduate courses on mathematical modeling

## EDITORIAL AND AD-HOC REVIEWER SERVICE

- 2020 – 2021 **Associate editor**, *Psychonomic Bulletin & Review*
- 2018 – 2019 **Associate editor**, *Psychonomic Society Digital Content*
- 2017 – 2022 **Editorial board member**, *Advances in Methods and Practices in Psychological Science*
- 2015 – 2018 **Guest lead editor**, *Psychonomic Bulletin & Review*, Special issue on statistical recommendations (with J. N. Rouder and J. K. Kruschke)
- 2016 – 2018 **Panelist**, *National Science Foundation*, Advisory Panel for the Methodology, Measurement, and Statistics (MMS) Program
- 2016 – 2019 **Consulting editor**, *Behavior Research Methods*
- 2016 – 2018 **Tutorial editor**, *Journal of Mathematical Psychology*
- 2014 – 2016 **Consulting editor**, *Journal of Mathematical Psychology*

**Ad hoc reviewer** for *Acta Psychologica*; *Advances in Methods and Practices in Psychological Science*; *the Annual Meeting of the Society for Cognitive Science (conference)*; *Behavior Research Methods*; *Clinical Epidemiology*; *Cognition*; *Cognition, Brain, and Behavior*; *Cognitive Psychology*; *Cognitive Science*; *Collabra*; *Decision*; *Entropy*; *Experimental Psychology*; *iPerception*; *Journal of Cognitive Neuroscience*; *Journal of Experimental Psychology: General*; *Journal of Mathematical Psychology*; *Journal of Memory and Language*; *Memory & Cognition*; *Methodology*; *Perspectives in Psychological Science*; *PLOS ONE*; *Proceedings of the National Academy of Science*; *Psychological Science*; *Psychological Methods*; *Psychological Research*; *Psychological Review*; *Psychometrika*; *Psychonomic Bulletin & Review*; *Quarterly Journal of Experimental Psychology*; and others.

**Ad hoc reviewer** for the *European Research Council*; the *Interuniversity Graduate School of Psychometrics and Sociometrics*; the *National Endowment for the Humanities*; the *National Science Foundation*; and others.

## EVENTS ORGANIZED

- July 2022* **Organizer** (with D. Kellen), “55th Annual Meeting of the Society for Mathematical Psychology,” Toronto, Ontario
- July 2022* **Organizer**, “55th Annual Meeting of the Society for Mathematical Psychology,” a virtual conference
- July 2021* **Organizer**, “54th Annual Meeting of the Society for Mathematical Psychology,” a virtual conference
- July 2020* **Organizer**, “53rd Annual Meeting of the Society for Mathematical Psychology,” Toronto, Ontario a virtual conference
- July 2019* **Organizer**, “52nd Annual Meeting of the Society for Mathematical Psychology,” Montreal, Quebec
- July 2018* **Organizer** (with R. Shiffrin), “On the relationship between scientific practice and statistical practice,” Madison, WI
- July 2018* **Organizer** (with M. D. Lee), “Workshop on robust social science,” Orlando, FL
- May 2017* **Organizer** (with Z. Oravecz), “Models and methods of well-being,” Boston, MA
- November 2016* **Organizer** (with A. H. Criss and E.-J. Wagenmakers), “Computational approaches to cognition,” Boston, MA
- May 2016* **Organizer**, “Cognitive psychometrics in action,” Chicago, IL
- November 2015* **Organizer** (with A. H. Criss and E.-J. Wagenmakers), “Mathematical Psychology at Psychonomics,” Chicago, IL
- July 2015* **Organizer**, “Applications of mathematical psychology to industry meeting,” Newport Beach, CA
- July 2015* **Organizer** (with J. S. Trueblood), “48th Annual Meeting of the Society for Mathematical Psychology,” Newport Beach, CA
- July 2015* **Organizer**, “Teaching Bayesian statistics with JASP,” Newport Beach, CA
- November 2014* **Organizer**, “Using BayesFactor for practical Bayesian analysis.” Irvine, CA
- March 2014* **Organizer**, “Workshop on recent advances in Bayesian inference.” Irvine, CA
- November 2013* **Organizer** (with J. Krichmar and R. Srinivasan), “Workshop on interfacing models with brain signals to investigate cognition.” Irvine, CA
- August 2010* **Organizer**, “Practical applications of models for response time.” Portland, OR

## OTHER SERVICE TO THE FIELD

- 2014* **Developer**, “Minimal frustration” automated scheduler for the 47th Annual Meeting of the Society for Mathematical Psychology.