

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

2024 **Visiting Professor**
 Sciences Po Bordeaux, France

2011 – 2023 **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
 Senior Fellow at Air Force Materiel Command
 Senior Fellow at Army Combat Capabilities Development Command
 Member of the Society for Mathematical Psychology
 Member of the American Statistical Association
 Member of the Psychometric Society
 Member of the Association for Computing Machinery
 Associate Member of IEEE
 Member of the European Society for Cognitive Psychology

Research

RESEARCH INTERESTS

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

EXTRAMURAL FUNDING

<i>February 2025</i>	National Research Council, Research Associate Program. Role: Senior Fellow . 12 months.
<i>May 2022</i>	National Research Council, Research Associate Program. Role: Senior Fellow . 12 months.
<i>June 2021</i>	National Science Foundation grant #2051186: “Exploratory and confirmatory neurocognitive modeling with latent variables.” 48 months. Role: Principal Investigator (with R. Srinivasan). \$349,551.00
<i>June 2021</i>	National Science Foundation grant #2105661: “IGE: Enhancing doctoral research training through cascading mentorship (Anteater huddles).” 48 months. Role: Co-Investigator (with B. Sarnecka). \$420,299.00
<i>September 2019</i>	National Science Foundation grant #1850849: “Critical tests of neurocognitive relationships.” 48 months. Role: Principal Investigator (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: Principal Investigator (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: Principal Investigator (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: Adviser . \$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: Contributor (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: Principal Investigator . \$260,000.00
<i>July 2015</i>	European Society for Cognitive Psychology: “Summer school for computational cognitive modeling”. Role: Contributor (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: Organizer (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: Principal Investigator . \$540,018.00
<i>April 2014</i>	National Science Foundation: Graduate Research Fellowship Award (DGE-1321846; Awarded to advisee Maime Guan). 36 months. Role: Adviser . \$121,500.00
<i>February 2014</i>	Volkswagen Foundation teaching grant: “Summer school for computational cognitive modeling”. Role: Contributor . (with S. Lewandowsky and K. Oberauer). \$70,000.00

- September 2012 National Science Foundation grant #1230118: “Cognitive structural equation models.” 36 months. Role: **Principal Investigator**. \$250,000.00
- October 2010 Research Foundation—Flanders: “Dynamic cognitive psychometrics.” 36 months. **Postdoctoral Fellow** (personal fellowship). \$200,000.00
- October 2009 University of Leuven Research Council: “A statistical framework for Approximate Bayesian Computation.” 12 months. Role: **Postdoctoral Research Associate** (personal fellowship). \$65,000.00

INTRAMURAL FUNDING

- December 2025 UC Irvine Division of Teaching Excellence and Innovation: “Beyond vibe coding: principled AI-assisted programming”. Role: Principal Investigator. \$27,500.00
- 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 2025 Best Poster Award at *MathPsych/ICCM 2025* (with E. Shin and A. F. Chávez De la Peña)
- July 2024 Best Poster Award at *MathPsych/ICCM 2024* (with K. Medriano and Z. Oravecz)
- July 2023 Best Poster Award at *MathPsych/ICCM/EMPG 2023* (with K. Medriano and Z. Oravecz)
- July 2022 People’s Choice Award for Best Talk at *2022 Virtual MathPsych* (with A. F. Chávez De la Peña and J. Rouder)
- July 2020 UC Irvine School of Social Sciences Outstanding Teaching Award (Spring 2020)
- December 2016 UC Irvine Social Science Assistant Professor Research Award
- 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

PREPRINTS

- PR5. **Vandekerckhove, J.**, & Fox, E. L. (preprint). Fast uncertainty quantification in EZ cognitive models. *PsyArXiv*. Via cidlab.com/paper/123.
- PR4. Bridgeford, E. W., Campbell, I., Chen, Z., Lin, Z., Ritz, H., **Vandekerckhove, J.**, & Poldrack, R. A. (preprint). Twelve quick tips for AI-assisted coding in science. *arXiv*. Via cidlab.com/paper/121.
- PR3. McCullen, J. R., Baribault, B., & **Vandekerckhove, J.** (preprint). Chance level performance in expert diagnoses with applied kinesiology. *PsyArXiv*. Via cidlab.com/paper/120.
- PR2. Rouder, J., Chávez De la Peña, A. F., Mehrvarz, M., & **Vandekerckhove, J.** (preprint). On Cronbach’s merger: Why experiments may not be suitable for measuring individual differences. *PsyArXiv*. Via cidlab.com/paper/101.

- PR1. Wagenmakers, E., Gronau, Q., & **Vandekerckhove, J.** (preprint). Five Bayesian intuitions for the Stopping Rule Principle. *PsyArXiv*. Via cidlab.com/paper/95.

PEER REVIEWED JOURNAL ARTICLES

- JA86. Alcalay, R., & **Vandekerckhove, J.** (in press). Epistemic disadvantage in open science practices. *Social Epistemology*. DOI: 10.1080/02691728.2026.2669557 . Via cidlab.com/paper/125.
- JA85. Medriano, K., & **Vandekerckhove, J.** (in press). A reconstruct-then-bootstrap test for the sufficiency of diffusion processes. *Computational Brain & Behavior*. Via cidlab.com/paper/122.
- JA84. Etz, A., Chávez De la Peña, A. F., Baroja, L., Medriano, K., & **Vandekerckhove, J.** (in press). The HDI+ROPE decision rule is logically incoherent but we can fix it. *Psychological Methods*. DOI: 10.1037/met0000660. Via cidlab.com/paper/100.
- JA83. Davis-Stober, C. P., Sokratous, K., & **Vandekerckhove, J.** (in press). Illusions of replication, illusions of truth. *Computational Brain & Behavior*. DOI: 10.1007/s42113-026-00276-w. Via cidlab.com/paper/124.
- JA82. Chávez De la Peña, A. F., Shin, E., & **Vandekerckhove, J.** (2026). Robust Bayesian hypothesis testing with the hierarchical EZ-DDM. *Behavior Research Methods*, 58, p. 177. DOI: 10.3758/s13428-026-03066-1. Via cidlab.com/paper/119.
- JA81. Williams, L., Kim, S., Li, Y., Heshmati, S., **Vandekerckhove, J.**, Roeser, R. W., & Oravecz, Z. (2025). How much we express love predicts how much we feel loved in daily life. *PLOS ONE*, 20, p. e0323326. DOI: 10.1371/journal.pone.0323326. Via cidlab.com/paper/116.
- JA80. Shiffrin, R. M., Trueblood, J., Kellen, D., & **Vandekerckhove, J.** (2025). Dialogues about the practice of science. *Proceedings of the National Academy of Sciences*, 122, p. e2423782122. DOI: 10.1073/pnas.2423782122. Via cidlab.com/paper/110.
- JA79. Davis-Stober, C. P., Sarafoglou, A., Aczel, B., Chandramouli, S. H., Errington, T. M., Field, S. M., Fishbach, A., Freire, J., Ioannidis, J. P., Oberauer, K., Pestilli, F., Ressler, S., Schad, D. J., Ter Schure, J., Tentori, K., van Ravenzwaaij, D., **Vandekerckhove, J.**, & Gundersen, O. (2025). How can we make sound replication decisions?. *Proceedings of the National Academy of Sciences*, 122, p. e2401236121. DOI: 10.1073/pnas.2401236121. Via cidlab.com/paper/109.
- JA78. Kim, S., Hakun, J., Li, Y., Harrington, K. D., Elbich, D. B., Sliwinski, M., **Vandekerckhove, J.**, & Oravecz, Z. (2025). Optimizing the Color Shapes Task for ambulatory assessment and drift diffusion modeling: A factorial experiment. *JMIR Formative Research*, 9, p. 66300. DOI: 10.2196/66300. Via cidlab.com/paper/107.
- JA77. Boag, R. J., Innes, R., Stevenson, N., Bahg, G., Busemeyer, J. R., Cox, G. E., Donkin, C., Frank, M. J., Hawkins, G., Heathcote, A., Hedge, C., Lerche, V., Lilburn, S., Logan, G. D., Matzke, D., Miletic, S., Osth, A. F., Palmeri, T., Sederberg, P. B., Singmann, H., Smith, P. L., Stafford, T., Steyvers, M., Strickland, L. J., Trueblood, J., Tsetsos, K., Turner, B. M., Usher, M., van Maanen, L., van Ravenzwaaij, D., **Vandekerckhove, J.**, Voss, A., Weichart, E. R., Weindel, G., White, C., Evans, N. J., Brown, S., & Forstmann, B. (2025). An expert guide to planning experimental tasks for evidence accumulation modelling. *Advances in Methods and Practices in Psychological Science*, 8, p. 1-41. DOI: 10.1177/25152459251336127. Via cidlab.com/paper/106.
- JA76. Oravecz, Z., Sliwinski, M., Kim, S., Williams, L., Katz, M., & **Vandekerckhove, J.** (2025). Partially observable predictor models for identifying cognitive markers. *Computational Brain & Behavior*, 8, p. 410-420. DOI: 10.1007/s42113-025-00238-8. Via cidlab.com/paper/105.
- JA75. Heshmati, S., Muth, C., Li, Y., Roeser, R. W., Smyth, J. M., **Vandekerckhove, J.**, Chow, S., & Oravecz, Z. (2025). Who benefits from mobile health interventions? A dynamical systems analysis of psychological well-being in early adults. *Applied Psychology: Health and Well-Being*, . Via cidlab.com/paper/89.

- JA74. Chávez De la Peña, A. F., & **Vandekerckhove, J.** (2025). An EZ Bayesian hierarchical drift diffusion model for response time and accuracy. *Psychonomic Bulletin & Review*, *32*, p. 3067-3087. DOI: 10.3758/s13423-025-02729-y. Via cidlab.com/paper/102.
- JA73. Weisman, M. J., Kott, A., Ellis, J. E., Murphy, B. J., Parker, T. W., Smith, S., & **Vandekerckhove, J.** (2025). Quantitative measurement of cyber resilience: modeling and experimentation. *Transactions on Cyber-Physical Systems*, *9*, p. 1-25. DOI: 10.1145/3703159. Via cidlab.com/paper/92.
- JA72. Oravec, Z., **Vandekerckhove, J.**, Hakun, J., Kim, S., Katz, M., Wang, C., Lipton, R. B., Derby, C. A., Roque, N. A., & Sliwinski, M. (2025). Computational phenotyping of cognitive decline with retest learning. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, *80*, p. gbaf030. DOI: 10.1093/geronb/gbaf030. Via cidlab.com/paper/108.
- JA71. Villarreal, J., Chávez De la Peña, A. F., Mistry, P., Menon, V. E., **Vandekerckhove, J.**, & Lee, M. D. (2024). Bayesian graphical modeling with the circular drift diffusion model. *Computational Brain & Behavior*, *7*, p. 181-194. DOI: 10.1007/s42113-023-00191-4. Via cidlab.com/paper/98.
- JA70. **Vandekerckhove, J.**, (2024). Commensurability engineering is first and foremost a theoretical exercise. *Behavioral and Brain Sciences*, *47*, p. e63. DOI: 10.1017/S0140525X23002224. Via cidlab.com/paper/90.
- JA69. Oravec, Z., & **Vandekerckhove, J.** (2024). Quantifying evidence for—and against—Granger causality with Bayes factors. *Multivariate Behavioral Research*, *59*, p. 1148-1158. DOI: 10.1080/00273171.2023.2214890. Via cidlab.com/paper/93.
- JA68. Nunez, M. D., Fernandez, K., Srinivasan, R., & **Vandekerckhove, J.** (2024). A tutorial on fitting joint models of M/EEG and behavior to understand cognition. *Behavior Research Methods*, *56*, p. 6020-6050. DOI: 10.3758/s13428-023-02331-x. Via cidlab.com/paper/94.
- JA67. Montgomery, L. E., Baldini, C. M., **Vandekerckhove, J.**, & Lee, M. D. (2024). Where's Waldo, Ohio? Using cognitive models to improve the aggregation of spatial knowledge. *Computational Brain & Behavior*, *7*, p. 242-254. DOI: 10.1007/s42113-024-00200-0. Via cidlab.com/paper/103.
- JA66. Vo, K., Sun, J. Q., Nunez, M. D., **Vandekerckhove, J.**, & Srinivasan, R. (2024). Deep latent variable joint cognitive modeling of neural signals and human behavior. *NeuroImage*, *291*, p. 120559. DOI: 10.1016/j.neuroimage.2024.120559. Via cidlab.com/paper/104.
- JA65. Chwiesko, C., Janecek, J., Doering, S., Hollearn, M., McMillan, L., **Vandekerckhove, J.**, Lee, M. D., Ratcliff, R., & Yassa, M. (2023). Parsing memory and non-memory contributions to age-related declines in mnemonic discrimination performance: A hierarchical Bayesian diffusion decision modeling approach. *Learning & Memory*, *30*, p. 296-309. DOI: 10.1101/lm.053838.123. Via cidlab.com/paper/99.
- JA64. 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.
- JA63. 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.

- JA62. 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.
- JA61. Lui, K. K., Nunez, M. D., 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.
- JA60. 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.
- JA59. 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.
- JA58. Guan, M., Stokes, R., **Vandekerckhove, J.**, & Lee, M. D. (2020). A cognitive modeling analysis of risk in sequential choice tasks. *Judgment and Decision Making*, 15, p. 823–850. Via cidlab.com/paper/88.
- JA57. 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.
- JA56. 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.
- JA55. Aczel, B., Hoekstra, R., Gelman, A., Wagenmakers, E., Klugkist, I., Rouder, J., **Vandekerckhove, J.**, Lee, M. D., 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.
- JA54. 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.
- JA53. Dutilh, G., Annis, J., Brown, S., Cassey, P., Evans, N. J., Grasman, R., Hawkins, G., Heathcote, A., Holmes, W., Kryptos, A., Kupitz, C., Leite, F., Lerche, V., Lin, Y., Logan, G. D., 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.
- JA52. **Vandekerckhove, J.**, White, C., Trueblood, J., Rouder, J., Matzke, D., Leite, F., Etz, A., Donkin, C., Devezer, B., Criss, A., & Lee, M. D. (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.
- JA51. Nunez, M. D., 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.
- JA50. Lee, M. D., 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.

- JA49. Schubert, A., Nunez, M. D., 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.
- JA48. 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.
- JA47. Okada, K., **Vandekerckhove, J.**, & Lee, M. D. (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.
- JA46. 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.
- JA45. 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.
- JA44. 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.
- JA43. 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.
- JA42. **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.
- JA41. 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.
- JA40. 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.
- JA39. Nunez, M. D., **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.
- JA38. 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.
- JA37. 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.
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- JA3. **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.
- JA2. 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.
- JA1. **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.

PEER REVIEWED BOOK CHAPTERS

- BC5. Williams, L., Heshmati, S., **Vandekerckhove, J.**, & Oravecz, Z. (2025). Current methodological approaches for studying the association between love and psychological well-being in daily life. In *The International Handbook of Love*. DOI: 10.1007/978-3-031-76665-7_75-1. Via cidlab.com/paper/117.
- BC4. Weisman, M. J., Kott, A., Ellis, J. E., Murphy, B. J., Parker, T. W., Smith, S., & **Vandekerckhove, J.** (2025). Experimental measurements of cyber resilience. In *Cyber Resilience: Applied Perspectives. Risk, Systems and Decisions*, p. 181-196. DOI: 10.1007/978-3-031-90109-6_9. Via cidlab.com/paper/118.
- BC3. 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.
- BC2. 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.
- BC1. **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.

PEER REVIEWED CONFERENCE PROCEEDINGS PAPERS

- PP5. 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.
- PP4. Ellis, J. E., Parker, T. W., **Vandekerckhove, J.**, Murphy, B. J., Smith, S., Kott, A., & Weisman, M. J. (2022). An experimentation infrastructure for quantitative measurements of cyber resilience. In *IEEE Military Communications Conference Proceedings*. Via cidlab.com/paper/80.

- PP3. 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.
- PP2. Sun, J. Q., Vo, K., Lui, K. K., Nunez, M. D., **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.
- PP1. **Vandekerckhove, J.**, Tuerlinckx, F., & Lee, M. D. (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.

TECHNICAL REPORTS (NOT PEER REVIEWED)

- TR1. 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). *Army Research Labs Technical Report, 0*. Via cidlab.com/paper/96.

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
- Vandekerckhove, J.** (2017). Build-A-Bayes [Educational online app]. Available via osf.io/mvp53
- Vandekerckhove, J.** (2015). Trinity [Software and manual]. Available via sw.cidlab.com
- Wabersich, D., Lee, M. D., & **Vandekerckhove, J.** (2013). jags-alcove [Software and manual]. Available via sw.cidlab.com
- Wabersich, D., & **Vandekerckhove, J.** (2013). jags-wiener [Software and manual]. Available via sw.cidlab.com
- Wabersich, D., Lee, M. D., & **Vandekerckhove, J.** (2013). RAlcove [Software and manual]. Available via sw.cidlab.com
- Wabersich, D., & **Vandekerckhove, J.** (2013). RWiener [Software and manual]. Available via sw.cidlab.com
- Oravec, Z., Tuerlinckx, F., & **Vandekerckhove, J.** (2012). BHOUM: Bayesian Hierarchical Ornstein-Uhlenbeck Modeling [Software and manual]. Available via bayesian.zitaoravec.net
- Oravec, Z., **Vandekerckhove, J.**, & Batchelder, W. H. (2012). Bayesian Cultural Consensus Toolbox [Software and manual]. Available via bayesian.zitaoravec.net
- Vandekerckhove, J.**, & Tuerlinckx, F. (2009). wiener.odc and wienereta.odc [Software and manual]. Available via sw.cidlab.com
- Vandekerckhove, J.**, & Tuerlinckx, F. (2007). The Diffusion Model Analysis Toolbox [Software and manual]. Available from sw.cidlab.com
- Vandekerckhove, J.** (2006). General simulated annealing algorithm. Available via 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., Kellen, D., Trueblood, J. S., & Shiffrin, R. M. (2025, March). The structures that fund, publish, and evaluate science shape its progress. *PNAS Updates*. Via <https://www.pnas.org/post/update/structures-fund-publish-and-evaluate-science>

Westfall, H.A., & **Vandekerckhove, J.** (2025, February). Cover Image: Dialogues on the Practice of Science. *Cover image for volume 122(5) of Proceedings of the National Academy of Sciences*.

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

Vandekerckhove, J. (2019, September). On being SMARTer than Vincent. *Psychonomic Society Featured Content*. Via 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

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

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

Vandekerckhove, J. (2018, February). From classical to new to real: A brief history of #BayesInPsych. *Psychonomic Society Featured Content*. Via featuredcontent.psychonomic.org

Vandekerckhove, J. (2016, December). In Vivo: Basics of Bayes (a.k.a. “Afterthoughts”). *Computational Modeling in Cognition*. Via psyarxiv.com/9mc2h

MEDIA

- I maintain cidlab.com to distribute research results and publications; and various other websites to announce events and workshops.
- I maintain mathpsych.org to announce events, job listings, and to run online conferences.
- I provide 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*.

Teaching and 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) → instructional faculty at UT Austin
<i>2014 – 2020</i>	Colin Kupitz (chair) → researcher at Air Force Research Labs
<i>2014 – 2019</i>	Beth Baribault (chair) → postdoc at UC Berkeley
<i>2013 – 2019</i>	Maimie Guan (with M. D. Lee) → researcher at Apple, Inc.
<i>2013 – 2018</i>	Irina Danileiko (with M. D. Lee) → researcher at Wizards of the Coast
<i>2012 – 2017</i>	Michael D. Nunez (with R. Srinivasan) → faculty at University of Amsterdam

OTHER MENTORING ACTIVITIES

<i>2017 – 2021</i>	Associate 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)

CAMPUS SERVICE

<i>2026 – present</i>	Chair , UC Irvine Council on Research, Computing, & Libraries
<i>2025 – present</i>	Member (elected), UC Irvine Council on Research, Computing, & Libraries
<i>2017 – 2021</i>	Representative (elected), School of Social Sciences to the Senate Assembly
<i>2017 – present</i>	Member , Faculty Advisory Committee for Research Cyberinfrastructure

OUTSIDE SERVICE

<i>2024</i>	Secretary/Treasurer Search Chair , Society for Mathematical Psychology
<i>2019 – present</i>	Standing Conference Chair , Society for Mathematical Psychology
<i>2019 – present</i>	Executive Board Member (<i>ex officio</i>), Society for Mathematical Psychology

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); Cognitive modeling; Computational lab skills
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Graduate 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

March 2024 **Visiting professor**, Sciences Po Bordeaux, “Responsible consumption of research in the social sciences”

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

2026 – present **Editorial board member**, *Individual Differences in Cognition*

2024 – 2025 **Guest editor**, *Proceedings of the National Academy of Science*, Special feature on the practice of science (with R. Shiffrin, J. S. Trueblood, and D. Kellen)

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 *Deutsche Forschungsgemeinschaft*; *European Research Council*; *Dutch Research Council*; *National Endowment for the Humanities*; *National Institutes of Health*; *National Science Foundation*; and others.

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.

EVENTS ORGANIZED

- July 2023* **Co-organizer** (with R. Shiffrin), “Workshop on Statistical Inference and Scientific Inference,” Selva, Italy
- June 2023* **Organizer**, “56th Annual Meeting of the Society for Mathematical Psychology,” a virtual conference
- 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.
- 2020* **Developer**, The **virtual.mathpsych.org** reusable platform for online conferences.