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Education

2017 – 2023	**Ph.D., Stanford University** Graduate School of Education Dissertation title: *Computational Validity.*
2019 – 2021	**M.S., Stanford University** Computer Science
2010 – 2012	**M.S., Drexel University** Education
2001 – 2005	**B.S., Drexel University** Physics

Academic Appointments

2023 – · · · · **Assistant Professor of Applied Statistics**, New York University,
Steinhardt School of Culture, Education, and Human Development,
Department of Applied Statistics, Social Science, and the Humanities

Publications

Journal Articles

1. Caffarra, S., **Kanopka**, **K.**, Kruper, J., Richie-Halford, A., Roy, E., Rokem, A., & Yeatman, J. D. (2024). Development of the alpha rhythm is linked to visual white matter pathways and visual detection performance. *Journal of Neuroscience*, *44*(6).

2. **Kanopka**, **K.**, Claro, S., Loeb, S., West, M. R., & Fricke, H. (2024). Changes in social-emotional learning: Examining student development over time. *AERA Open, in press*.

3. Biernacki, P. J., Altavilla, J., **Kanopka**, **K.**, Hsieh, H., & Solano-Flores, G. (2023). Long-term english learners' mathematics course trajectories: Downstream consequences of early remediation on college preparation. *International Multilingual Research Journal*, *17*(2), 122–138.

4. Ramamurthy, M., Richie-Halford, A., **Kanopka**, **K.**, Hartsough, A., Osuna, K., Gorno-Tempini, M. L., & Yeatman, J. D. (2023). Can a gamified, rapid, online assessment of letter encoding ability in kindergarten and first grade children predict future reading development? *Journal of Vision*, *23*(9), 5858–5858.

5. Ulitzsch, E., Domingue, B. W., Kapoor, R., **Kanopka**, **K.**, & Rios, J. A. (2023). A probabilistic filtering approach to non-effortful responding. *Educational Measurement: Issues and Practice*.

6. Domingue, B. W., **Kanopka**, **K.**, Mallard, T. T., Trejo, S., & Tucker-Drob, E. M. (2022). Modeling interaction and dispersion effects in the analysis of gene-by-environment interaction. *Behavior genetics*, *52*(1), 56–64.

7. Domingue, B. W., **Kanopka**, **K.**, Stenhaug, B., Sulik, M. J., Beverly, T., Brinkhuis, M., Circi, R., Faul, J., Liao, D., McCandliss, B., et al. (2022). Speed–accuracy trade-off? not so fast: Marginal changes in speed have inconsistent relationships with accuracy in real-world settings. *Journal of Educational and Behavioral Statistics*, *47*(5), 576–602.

8. Domingue, B. W., **Kanopka**, **K.**, Trejo, S., Rhemtulla, M., & Tucker-Drob, E. M. (2022). Ubiquitous bias and false discovery due to model misspecification in analysis of statistical interactions: The role of the outcome's distribution and metric properties. *Psychological Methods*.

9. Domingue, B. W., **Kanopka**, **K.**, Stenhaug, B., Soland, J., Kuhfeld, M., Wise, S., & Piech, C. (2021). Variation in respondent speed and its implications: Evidence from an adaptive testing scenario. *Journal of Educational Measurement*, *58*(3), 335–363.

10. Yeatman, J. D., Tang, K. A., Donnelly, P. M., Yablonski, M., Ramamurthy, M., Karipidis, I. I., Caffarra, S., Takada, M. E., **Kanopka**, **K.**, Ben-Shachar, M., et al. (2021). Rapid online assessment of reading ability. *Scientific reports*, *11*(1), 6396.

Conference Proceedings

1. Mongkhonvanit, K., **Kanopka**, **K.**, & Lang, D. (2019). Deep knowledge tracing and engagement with moocs. *Proceedings of the 9th international conference on learning analytics & knowledge*, 340–342.

Preprints

1. Domingue, B., & **Kanopka**, **K.** (2023). The item response warehouse (irw). *PsyArXiv*.
2. Domingue, B., **Kanopka**, **K.**, Ulitzsch, E., & Zhang, L. (2023). Implied probabilities of polytomous response functions for model-based prediction and comparison. *PsyArXiv*.
3. Kapoor, R., Fahle, E., **Kanopka**, **K.**, Klinowski, D., Ribeiro, A. C. T., & Domingue, B. (2023). Differences in time usage as a competing hypothesis for observed group differences in accuracy with an application to observed gender differences in pisa data. *PsyArXiv*.
4. Ma, W. A., Richie-Halford, A., Burkhardt, A., **Kanopka**, **K.**, Chou, C., Domingue, B., & Yeatman, J. D. (2023). Roar-cat: Rapid online assessment of reading ability with computerized adaptive testing. *PsyArXiv*.
5. Trejo, S., & **Kanopka**, **K.** (2023). The phenotype differences model reveals genetic effects on mortality using incomplete sibling data. *SocArXiv*.
6. Zhang, L., **Kanopka**, **K.**, Rahal, C., Ulitzsch, E., Zhang, Z., & Domingue, B. (2023). The intermodel vigorish for model comparison in confirmatory factor analysis with binary outcomes. *PsyArXiv*.
7. Domingue, B., **Kanopka**, **K.**, Kapoor, R., Pohl, S., Chalmers, P., Rahal, C., & Rhemtulla, M. (2022). The intermodel vigorish as a lens for understanding (and quantifying) the value of item response models for dichotomously coded items. *PsyArXiv*.
8. **Kanopka**, **K.**, & Domingue, B. (2022a). A position sensitive irt mixture model. *PsyArXiv*.
9. Domingue, B., Rahal, C., Faul, J., Freese, J., **Kanopka**, **K.**, Rigos, A., Stenhaug, B., & Tripathi, A. (2021). The intermodel vigorish (imv) as a flexible and portable approach for quantifying predictive accuracy with binary outcomes. *SocArXiv*.

Policy Briefs

1. **Kanopka**, **K.**, Claro, S., Loeb, S., West, M. R., & Fricke, H. (2020). What do changes in social-emotional learning tell us about changes in academic and behavioral outcomes? *Policy Analysis for California Education*.

Selected Presentations

Invited Talks

1. **Kanopka**, **K.**, & Moeller, K. Following the capital: Using investment networks to understand venture capital's influence on education. In: Society for Research into Higher Education Digital University Network Event on the Political Economy of EdTech. 2023.
2. **Kanopka**, **K.** Good luck with the blue book! an irt mixture model for position effects. In: Berkeley Evaluation & Assessment Research (BEAR) Seminar at UC Berkeley. 2021.

Conference Presentations

1. Domingue, B., **Kanopka**, **K.**, Kapoor, R., Pohl, S., Chalmers, R. P., Rahal, C., & Rhemtulla, M. Applying the intermodel vigorish to quantify the value of item response modeling. In: Annual Meeting of the National Council on Measurement in Education. 2023.

2. **Kanopka**, **K.**, & Domingue, B. Projecting the performance of polytomous item response models onto a common scale with the intermodel vigorish. In: International Conference on Computational and Methodological Statistics. 2023.

3. **Kanopka**, **K.**, Domingue, B., Ulitzsch, E., Kapoor, R., Pohl, S., Chalmer, R. P., Rahal, C., & Rhemtulla, M. Bookmaking for item responses: Prediction, profits, and the imv. In: International Objective Measurement Workshop. 2023.

4. **Kanopka**, **K.**, & Hook, T. J. Following the capital: Using investment networks to understand venture capital's influence on education. In: Annual Meeting of the Comparative and International Education Society. 2023.

5. **Kanopka**, **K.**, Lang, D., & Alvero, A. Weighing algorithmic tradeoffs: Observations from 60,000 admission essays. In: Annual Meeting of the National Council on Measurement in Education. 2023.

6. **Kanopka**, **K.**, Yeatman, J., & Burkhardt, A. Incorporating response time using drift diffusion models in an online reading assessment. In: Annual Meeting of the National Council on Measurement in Education. 2023.

7. Kapoor, R., **Kanopka**, **K.**, & Domingue, B. Revisiting angrist et al. (2021): Merging international assessment data is not easy. In: Annual Meeting of the National Council on Measurement in Education. 2023.

8. Kapoor, R., Ruiz-Primo, M. A., Hernandez, P., & **Kanopka**, **K.** Online response process procedures: Affordances and constraints to collect, analyze, and interpret validity information. In: Annual Meeting of the American Educational Research Association. 2023.

9. Ulitzsch, E., Rios, J. A., Kapoor, R., **Kanopka**, **K.**, & Domingue, B. A probabilistic filtering approach to accounting for noneffortful responding. In: Annual Meeting of the National Council on Measurement in Education. 2023.

10. Wang, N., Li, M., **Kanopka**, **K.**, Dong, D., Hernandez, P., & Ruiz-Primo, M. A. Modeling context characteristics for contextualized assessment: A bayesian contextualized item response model. In: Annual Meeting of the National Council on Measurement in Education. 2023.

11. **Kanopka**, **K.** Profiling changes in student writing: From failure to success. In: Annual Meeting of the National Council on Measurement in Education. 2022.

12. **Kanopka**, **K.**, & Domingue, B. Good luck with the blue book: Computational approaches to fairness and validity in admissions testing. In: Annual Meeting of the American Educational Research Association. 2022.

13. Moeller, K., & **Kanopka**, **K.** Who profits from edtech? an intersectional feminist analysis of venture capital investment in education. In: Annual Meeting of the American Educational Research Association. 2022.

14. **Kanopka**, **K.**, & Domingue, B. Addressing the blue book problem: Application of a position-sensitive irt mixture model to enem 2014. In: International Meeting of the Psychometric Society. 2021.

15. **Kanopka**, **K.**, & Domingue, B. An irt mixture model for item position effects. In: Annual Meeting of the National Council on Measurement in Education. 2021.

16. **Kanopka**, **K.**, Hernandez, P., Wang, N., Ruiz-Primo, M. A., Li, M., & Minstrell, J. An application of multiple correspondence analysis to the experimental study of item context. In: Annual Meeting of the American Educational Research Association. 2021.

17. Moeller, K., **Kanopka**, **K.**, & French, J. Venture capitalists as educational actors: Understanding the racialized political economy of silicon valley investments in education technology. In: Annual Meeting of the American Educational Research Association. 2021.

18. Moeller, K., **Kanopka**, **K.**, & French, J. Venture capitalists as educational actors: Understanding the racialized political economy of silicon valley investments in education technology. In: Annual Meeting of the Comparative and International Education Society. 2021.

19. Ruiz-Primo, M. A., Li, M., **Kanopka**, **K.**, Hernandez, P., Dong, D., Wang, N., & Minstrell, J. Analysis and review of context in science: Effects in student performance. In: Annual Meeting of the American Educational Research Association. 2021.

20. Alvero, A., Sedlacek, Q., & **Kanopka**, **K.** A call for critical and constructive data science in teacher eduaction. In: AERA Conference on Educational Data Science. 2020.

21. Claro, S., **Kanopka**, **K.**, West, M., Loeb, S., & Fricke, H. Exploring the relationship between changes in social-emotional skills and achievement. In: Annual Meeting of the American Educational Research Association (Conference Cancelled). 2020.

22. Ruiz-Primo, M. A., Li, M., Minstrell, J., Dong, D., **Kanopka**, **K.**, & Hernandez, P. Mapping the characteristics of contexts in science items: The case of forces and motion items. In: Annual Meeting of the American Educational Research Association (Conference Cancelled). 2020.

23. Hernandez, P., Ruiz-Primo, M. A., Zhai, X., & **Kanopka**, **K.** Validity study of linked items to determine student fundamental ideas. In: Annual Meeting of the American Educational Research Association. 2019.

24. **Kanopka**, **K.** Addressing defensive objections: Adversarial examples in automatic essay scoring. In: Annual Meeting of the American Educational Research Association. 2019.

25. **Kanopka**, **K.** Diagnosing non-parallelism in hierarchically contextualized physics assessments. In: Annual Meeting of the National Association for Research in Science Teaching. 2019.

26. Munoz-Najar Galvez, S., **Kanopka**, **K.**, & Alvero, A. Identifying (dis)continuities in edtech's discourse of invention. In: Text Analysis Across Domains. 2019.

27. Ruiz-Primo, M. A., Li, M., Minstrell, J., Zhai, X., Dong, D., **Kanopka**, **K.**, & Hernandez, P. Testing the generalization to the domain inference: The use of contextualized clusters of items. In: Annual Meeting of the National Council on Measurement in Education. 2019.

28. Ruiz-Primo, M. A., Li, M., Minstrell, J., Zhai, X., **Kanopka**, **K.**, Hernandez, P., & Dong, D. Contextualized science assessments: Addressing the use of information and generalization of inferences of students' performance. In: Annual Meeting of the American Educational Research Association. 2019.

29. Zhai, X., Ruiz-Primo, M. A., Li, M., Dong, D., **Kanopka**, **K.**, Hernandez, P., & Minstrell, J. Using many-facet rasch model to examine student performance on contextualized science assessment. In: Annual Meeting of the American Educational Research Association. 2019.

Awards and Fellowships

2021 **Gerald J Lieberman Fellowship**, Stanford University

Summer Internship, Educational Testing Service

2017 **Stanford Graduate Fellowship in Science & Engineering**, Stanford University

Courses Taught

New York University

2024 **APSTA-GE 2094**: Modern Approaches in Measurement

APSTA-GE 2044: Generalized Linear Models and Extensions

2023 **APSTA-GE 2352**: Practicum in Applied Statistics: Statistical Computing

Stanford University

EDUC 423B (SOC 302B): Introduction to Education Data Science: Data Analysis

2019 **EDUC 200A**: Introduction to Data Analysis and Interpretation

Professional Activities

Professional Memberships

2017 – · · · · American Educational Research Association

2018 – · · · · National Council on Measurement in Education

2019 – · · · · Psychometric Society

Service to Field

Editorial	New Directions for Evaluation (Editorial Board)
Reviewer	Educational Measurement: Issues and Practice
	Educational Assessment
	AERA Open
	New Directions for Evaluation
	Journal of Leisure Research

Organized Sessions

2023 **CMStatistics**: Applied statistical and psychometrics issues in measurement (with Daphna Harel)