

Marwin Machay Indio do Brasil do Carmo

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EDUCATION

University of California, Davis, Ph.D. Quantitative Psychology 2023–Present

Advisor: [Philippe Rast, Ph.D.](#)

Research topics: Intra-individual variability, Mixed-effects location scale models, Bayesian inference, Gaussian graphical models

University of São Paulo, M.Sc. Psychiatry 2021–2023

Recipient of a Master's Fellowship from Sao Paulo Research Foundation (FAPESP)

Advisor: [Renatha El-Rafihi Ferreira, Ph.D.](#)

Rio de Janeiro State University, Bachelor in Psychology 2014–2019

PUBLICATIONS

Peer-Reviewed Journal Articles

* denotes manuscript in Portuguese

1. Rafihi-Ferreira, R., Hasan, R., Toscanini, A. C., Linares, I. M. P., Borges, D. S., Brasil, I. P., **Carmo, M.**, Neto, F. L., Morin, C. (2024). Acceptance and commitment therapy versus cognitive behavioral therapy for insomnia: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*. <https://doi.org/10.1037/ccp0000881>
2. **Carmo, M. M. I. B.**, Leme, V. B. R., Quiterio, P. L. (2024). Social skills and people with disabilities: overview of Brazilian research. *Psicologia Escolar e Educacional*. <https://doi.org/10.1590/2175-35392024-246235-T>
3. Rafihi-Ferreira, R., **Carmo, M. M. I. B.**, Bassoli, L., Hasan, R., Aizawa, I. M. I., & Toscanini, A. C. (2022). Cognitive and psychological factors associated with severe insomnia in Brazilian women: A cross-sectional study. *Psicologia: Reflexão e Crítica*. <https://doi.org/10.1186/s41155-022-00243-x>
4. *Quiterio, P. L., Nunes, L. R. O. P., Camelo, B. L., Silva, J. P., & **Carmo, M. M. I. B.** (2021). Promoting the social skills of future teachers focusing on inclusive education. *Estudos e Pesquisa em Psicologia*. <https://doi.org/h43p>
5. *Quiterio, P. L., Leme, V. B. R., **Carmo, M. M. I. B.**, Silva, J. P., & Camelo, B. L. (2021). Family guidance program developed in the applied psychology service of a public university. *Psicologia Clínica*.
6. ***Carmo, M. M. I. B.**, Gilla, C. G., & Quiterio, P. L. (2020). A study about the inclusion of people with disabilities in the Brazilian labour market. *Interação em Psicologia*. <https://doi.org/h43q>

Under Review

1. **Carmo, M.**, Williams, D. R., & Rast, P. Beyond Average Scores: Identification of Consistent and Inconsistent Academic Achievement in Grouping Units. Under review at *Journal of Educational and Behavioral Statistics*. [\[preprint\]](#)
2. **Carmo, M.**, Rafihi-Ferreira, R., Paulos-Guarnieri, L., & Pires, M. L. N. The Sleep Acceptance Scale (SAS): Development, Psychometric Properties, and Applications. Under review at *Behavioral Sleep Medicine*.
3. Conway, B. A., **Carmo, M. M. I. B.**, Filho, H. S. L. S., Alves, M. M., Hasan, R., Toscanini, A. C., & Rafihi-Ferreira, R. Personality traits and insomnia: direct and anxiety-mediated associations. Under review at *Journal of Sleep Research*.

Manuscripts in Preparation

1. **Carmo, M.**, Morin, C. M., Hasan, R., Toscanini, A. C., & Rafihi-Ferreira, R. *The network of dysfunctional beliefs about sleep: a structural re-analysis of the DBAS-16*. [\[preprint\]](#)
2. Ingram, E. O., **Carmo, M.**, Manderino, L., Rast, P., & Karr, J. E. *Exploratory Analysis of Post-Concussion-Like Symptom Networks in College Students with and Without a Remote History of Concussion*. [In preparation for submission]

Blogs

1. **Carmo, M. M. I. B.** (2022). Simulating post selection inference. [\[post\]](#)
2. **Carmo, M. M. I. B.** (2021). Regression Artifact - Re-running Farmus et. al (2019). [\[post\]](#)

PRESENTATIONS

Selected Conference Presentations

1. **Carmo, M.**, Williams, D. R., & Rast, P. (2024, July). A holistic view of academic performance: beyond averages with MELSM and spike- and-slab. *89th Annual Meeting of the Psychometric Society*, Prague, Czech Republic. [\[poster\]](#)
2. Ingram, E. O., **Carmo, M.**, Manderino, L., Rast, P., Karr, J. E. (2025, February). Network centrality of post-concussion symptoms in young adults with and without a remote history of concussion. *Annual Rehabilitation Psychology Conference*, Louisville, Kentucky, USA.
3. Ingram, E. O., **Carmo, M.**, Manderino, L., Rast, P., Karr, J. E. (2025, March). A network approach to post-concussion symptoms: Comparing central symptoms between young adults with and without concussion history. *World Congress on Brain Injury by the International Brain Injury Association*, Montreal, Canada.

Departmental Presentations

1. Beyond Average Scores: Identification of Consistent and Inconsistent Academic Achievement in Grouping Units (Winter 2025). *UC Davis Quantitative Research Seminar*.
2. A holistic view of academic performance: Beyond Averages with MELSM and Spike-and-Slab (Spring 2024). *UC Davis Quantitative Research Seminar*.

METHODS ESTABLISHED

Spike-and-Slab Mixed-Effects Location Scale Model (SS-MELSM): The SS-MELSM is a technique for simultaneously modeling location and scale parameters while incorporating a spike-and-slab prior to select or shrink random effects. It involves identifying clusters with unusually large or small within-cluster variance in academic achievement, which can indicate inconsistent or consistent performance. This method is implemented in the R package [ivd](#).

TEACHING EXPERIENCE

University of California, Davis
Graduate Student Teaching Assistant

September 2023–Present
Davis, CA

- PSC103B: Statistical Analysis of Psychological Data – **3 quarters** (Winter 24, Spring 24, and Winter 25)
 - Led laboratory sessions, graded assignments and exams, and held office hours.
- PSC012Y: Data Visualization in the Social Sciences – **1 quarter** (Fall 24)
 - Led laboratory sessions, graded assignments, and held office hours.
- PSC001: General Psychology – **1 quarter** (Fall 23)
 - Graded assignments and held office hours.

Psicometria Online Academy
Virtual Teaching Assistant (Psychometrics)

May 2022–October 2024
Remote

- Provided support to students' questions in topics such as general linear models, multivariate statistics, structural equation modeling, factor analysis, item response theory and research methods.

MENTORSHIP ROLES

Undergraduate Research Mentor
Max Vo, UC Davis

Winter 2025–Present

- Mentored an undergraduate student in developing an interactive Shiny app using R to visualize and analyze intra-cluster variance. This app will work as a user-friendly interface for the [ivd](#) R package, enabling researchers to explore and analyze complex datasets interactively, enhancing accessibility for non-technical users.

SUBSTANTIAL ACTIVITIES DURING GRADUATE SCHOOL

- Led a break-out room for international students in the virtual event *Pathways to Graduate School in Quantitative Methods* held in the Fall of 2023. This event seeks to instruct prospective students interested in pursuing Quantitative methods graduate degrees.

SKILLS

Programming

- R: exploratory data analysis, data cleaning, data visualization, statistical data analyses, programmatic reporting (R Markdown/ Quarto), web scraping, dashboards, packages development, Shiny apps development.
- Python: exploratory data analysis, data cleaning, data visualization.

Tools

- Statistical softwares: R, Stan, SPSS, JASP, JAMOV
- Reporting: RMarkdown, Quarto, L^AT_EX
- Version control: Git and Github
- Reference management: Zotero
- Data collection and management: REDCap