

Robert G. Moulder Jr.

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PROFESSIONAL APPOINTMENTS

- Research Scientist** 2021 - Present
University of Colorado Boulder
Institute of Cognitive Science
NSF National AI Institute for Student-AI Teaming
- Postdoctoral Researcher** 2021
University of Zürich
URPP Dynamics of Healthy Aging

EDUCATION

- Ph.D. Quantitative Psychology** 2020
University of Virginia
Department of Psychology
Research Topic: Dynamical Systems
Dissertation: Latent Multivariate Maximal Lyapunov Exponents
Adviser: Steven Boker
- B.S. Psychology** 2014
Minors: Mathematical Science & Statistics
University of North Florida
Department of Psychology
Research Topic: Individual Differences
Adviser: Christopher Leone

HONORS & AWARDS

13. **Finalist for Best Paper Award** 2021
Zhou, G., Moulder, R., Sun, C., & D'Mello, S. K. 2022.
Investigating Temporal Dynamics Underlying Successful Collaborative Problem Solving Behaviors with Multilevel Vector Autoregression. *Proceedings of the 15th International Educational Data Mining Conference (EDM 22)*.
12. **Member - Consortium on Metrics and Evidence for Healthy Ageing** 2021 - 2023
World Health Organization
11. **Raven Society Member** 2019
Honor Society at the University of Virginia
10. **Jefferson Scholar** 2018 - 2020
Jefferson Scholars Foundation
9. **Guest Researcher - Dynamics of Healthy Aging** 2018 - 2020
University of Zürich
8. **Max Planck LIFE Program Alumni** 2017 - 2019
University of Virginia/Max Planck Institute

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| 7. Santa Fe Institute GWCSS Alumni
<i>Santa Fe Institute, Santa Fe, NM</i> | 2016 |
| 6. Graduate Research Fellowship
<i>University of Virginia</i> | 2015 - 2020 |
| 5. Graduate Research Assistantship
<i>University of North Florida</i> | 2014 |
| 4. Outstanding Undergraduate Psychology Student
<i>University of North Florida</i> | 2014 |
| 3. SOARS Presentation Award Winner
<i>University of North Florida</i> | 2014 |
| 2. Undergraduate Research Fellowship
<i>University of North Florida</i> | 2013 - 2014 |
| 1. Outstanding Undergraduate Research Award
<i>University of North Florida</i> | 2013 |

FUNDING

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| 6. Novel Methods to Prospectively Predict the Occurrence of Severe Behavior Problems in Youth
Romani (PI CU Anschutz), D'Mello (Co-PI CU Boulder), Moulder (Co-I Boulder)
<i>Amount: \$49,932.00</i>
<i>University of Colorado AB NEXUS Grant</i> | 2023 |
| 5. SMEP Travel Grant
<i>Amount: \$1,500.00</i>
<i>Society of Multivariate Experimental Psychology</i> | 2019 |
| 4. Jefferson Scholars Foundation Research Grant
<i>Amount: \$5,000.00</i>
<i>Jefferson Scholars Foundation</i> | 2018 |
| 3. NIH Grant MD011766-01A1 Key Personnel
<i>University of Virginia/Wayne State University</i> | 2017 |
| 2. SMEP Travel Grant
<i>Amount: \$1,000.00</i>
<i>Society of Multivariate Experimental Psychology</i> | 2016 |
| 1. Student-Mentor Academic Research Team (SMART) Grant
<i>Amount: \$1,500.00</i>
<i>University of North Florida</i> | 2013 |

REPRESENTATIVE WORKS

- **Moulder, R. G.**, Martynova, E., & Boker, S. M. (2022). Extracting nonlinear dynamics from psychological and behavioral time series through havok analysis. *Multivariate Behavioral Research*, 1–25. <https://doi.org/10.1080/00273171.2021.1994848> (IF = 3.7)
- **Moulder, R. G.**, Daniel, K. E., Teachman, B. A., & Boker, S. M. (2022). Tangle: A metric for quantifying complexity and erratic behavior in short time series. *Psychological Methods*, 27, 82–98. <https://doi.org/10.1037/met0000386> (IF = 11.3)

- **Moulder, R. G.**, Boker, S. M., Ramseyer, F., & Tschacher, W. (2018). Determining synchrony between behavioral time series: An application of surrogate data generation for establishing falsifiable null-hypotheses. *Psychological Methods, 23*, 757–773. <https://doi.org/10.1037/met0000172> (IF = 8.2)

PUBLICATIONS

Journal Articles¹

34. Janela, D., Areias, A. C., Molinos, M., **Moulder, R. G.**, Magalhães, I., Bento, V., Cardeano, M., Yanamadala, V., Correia, F. D., Atherton, J., & Costa, F. (2024). Digital care program for urinary incontinence in females: A large-scale, prospective, cohort study. *Healthcare, 12*(2). <https://doi.org/10.3390/healthcare12020141>
33. * Guralnik, T., **Moulder, R. G.**, Merom, D., & Zilcha-Mano, S. (In-Press). A multimodal and multi-dyad approach to measuring flexibility in psychotherapy. *Psychotherapy Research*
32. Lou, M., **Moulder, R. G.**, Weber, E., & Christina, R. (In Press). The mediating role of affective states in short-term effects of activity engagement on working memory in older age. *Gerontology*
31. Yucel, M., & **Moulder, R. G.** (In Press). Gossiping for a reason: Revised gossip functions questionnaire. *Evolution and Human Behavior*
30. Areias, A. C., Molinos, M., **Moulder, R. G.**, Janela, D., Scheer, J. K., Bento, V., Yanamadala, V., Cohen, S. P., Correia, F. D., & Costa, F. (2023). The potential of a multimodal digital care program in addressing healthcare inequities in musculoskeletal pain management. *npj Digital Medicine, 6*(1), 188. <https://doi.org/10.1038/s41746-023-00936-2>
29. Breideband, T., **Moulder, R. G.**, Martinez, G. J., Caruso, M., Mark, G., Striegel, A. D., & D’Mello, S. (2023). ‘location, location, location’: An exploration of different workplace contexts in remote teamwork during the covid-19 pandemic. *Proc. ACM Hum.-Comput. Interact., 7*(CSCW1). <https://doi.org/10.1145/3579504>
28. Cui, D., Janela, D., Costa, F., Molinos, M., Areias, A. C., **Moulder, R. G.**, Scheer, J. K., Bento, V., Cohen, S. P., Yanamadala, V., et al. (2023). Randomized-controlled trial assessing a digital care program versus conventional physiotherapy for chronic low back pain. *npj Digital Medicine, 6*(1), 121. <https://doi.org/10.1038/s41746-023-00870-3>
27. Scheer, J. K., Costa, F., Janela, D., Molinos, M., Areias, A. C., **Moulder, R. G.**, Lains, J., Bento, V., Yanamadala, V., & Correia, F. D. (2023). Sleep disturbance in musculoskeletal conditions: Impact of a digital care program. *Journal of Pain Research, 33–46*. <https://doi.org/10.1002/bdm.2312>
26. Luo, M., **Moulder, R. G.**, & Röcke, C. (2023). The short-term effects of activity engagement on working memory performance in older age. *Psychology and Aging, 38*(2), 117. <https://doi.org/10.1037/pag0000727>
25. Luo, M., **Moulder, R. G.**, Breitfelder, L. K., & Röcke, C. (2023). Daily activity diversity and daily working memory in community-dwelling older adults. *Neuropsychology, 37*(2), 181. <https://doi.org/10.1037/neu0000878>
24. Ahn, P. H., Van Swol, L. M., Lu, R. M., Kim, S. J., Park, H., & **Moulder, R. G.** (2023). Innovative ideas desire earlier communication: Exploring reverse serial-order effect and liberating cognitive constraint for organizational problem-solving. *Journal of Behavioral Decision Making, e2312*. <https://doi.org/10.1002/bdm.2312>

¹A * indicates joint first-authorship

23. Daniel, K. E., **Moulder, R. G.**, Teachman, B. A., & Boker, S. M. (2022). Stability and spread: A novel method for quantifying transitions within multivariate binary time series data. *Behavior Research Methods*, 1–19. <https://doi.org/10.3758/s13428-022-01942-0>
22. Janela, D., Costa, F., Molinos, M., **Moulder, R. G.**, Lains, J., Francisco, G. E., Bento, V., Cohen, S. P., & Correia, F. D. (2022). Asynchronous and tailored digital rehabilitation of chronic shoulder pain: A prospective longitudinal cohort study. *Journal of Pain Research*, 15, 53–66. <https://doi.org/10.2147/JPR.S343308>
21. Costa, F., Janela, D., Molinos, M., **Moulder, R. G.**, Lains, J., Bento, V., Scheer, J., Yanamadala, V., Correia, F. D., & Cohen, S. P. (2022). Digital rehabilitation for acute low back pain: A prospective longitudinal cohort study. *Journal of Pain Research*, 15, 1873–1887. <https://doi.org/10.2147/JPR.S369926>
20. Beltzer, M. L., **Moulder, R. G.**, Baker, C., Comer, K., & Teachman, B. A. (2022). Effects of mass shootings on mental illness stigma in the united states. *Personality and Social Psychology Bulletin*, 01461672221097180. <https://doi.org/10.1177/01461672221097180>
19. Costa, F., Janela, D., Molinos, M., **Moulder, R.**, Bento, V., Lains, J., Scheer, J., Yanamadala, V., Cohen, S., & Correia, F. D. (2022). Impacts of digital care programs for musculoskeletal conditions on depression and work productivity: Longitudinal cohort study. *Journal of Medical Internet Research*, 24, e38942. <https://doi.org/10.2196/38942>
18. Golino, H., Christensen, A. P., **Moulder, R.**, Kim, S., & Boker, S. M. (2022). Modeling latent topics in social media using dynamic exploratory graph analysis: The case of the right-wing and left-wing trolls in the 2016 us elections. *Psychometrika*, 87, 156–187. <https://doi.org/10.1007/s11336-021-09820-y>
17. **Moulder, R. G.**, Martynova, E., & Boker, S. M. (2022). Extracting nonlinear dynamics from psychological and behavioral time series through havok analysis. *Multivariate Behavioral Research*, 1–25. <https://doi.org/10.1080/00273171.2021.1994848>
16. Janela, D., Costa, F., Molinos, M., **Moulder, R. G.**, Lains, J., Francisco, G. E., Bento, V., Cohen, S. P., & Correia, F. D. (2022). Asynchronous and tailored digital rehabilitation of chronic shoulder pain: A prospective longitudinal cohort study. *Journal of Pain Research*, 15, 53–66. <https://doi.org/10.2147/JPR.S343308>
15. **Moulder, R. G.**, Daniel, K. E., Teachman, B. A., & Boker, S. M. (2022). Tangle: A metric for quantifying complexity and erratic behavior in short time series. *Psychological Methods*, 27, 82–98. <https://doi.org/10.1037/met0000386>
14. Hamel, L. M., **Moulder, R.**, Harper, F. W., Penner, L. A., Albrecht, T. L., & Eggly, S. (2021). Examining the dynamic nature of nonverbal communication between black patients with cancer and their oncologists. *Cancer*, 127, 1080–1090. <https://doi.org/10.1002/cncr.33352>
13. Behrens, F., Snijdwint, J. A., **Moulder, R. G.**, Prochazkova, E., Sjak-Shie, E. E., Boker, S. M., & Kret, M. E. (2020). Physiological synchrony is associated with cooperative success in real-life interactions. *Scientific Reports*, 10. <https://doi.org/10.1038/s41598-020-76539-8>
12. Bastiaansen, J. A., Kunkels, Y. K., Blaauw, F. J., Boker, S. M., ..., **Moulder, R.**, ..., & Bringmann, L. F. (2020). Time to get personal? the impact of researchers choices on the selection of treatment targets using the experience sampling methodology. *Journal of Psychosomatic Research*, 137. <https://doi.org/10.1016/j.jpsychores.2020.110211>
11. Beltzer, M., **Moulder, R.**, Starns, A., & Teachman, B. (2020). Explicit-implicit discrepancy in macro-level mental illness stigma is linked to prevalence and care. *Journal of Social and Clinical Psychology*,

10. Golino, H., **Moulder, R.**, Shi, D., Christensen, A. P., Garrido, L. E., Nieto, M. D., Nesselroede, J., Sadana, R., Thiyagarajan, J. A., & Boker, S. M. (2020). Entropy fit indices: New fit measures for assessing the structure and dimensionality of multiple latent variables. *Multivariate Behavioral Research*, 1–29. <https://doi.org/10.1080/00273171.2020.1779642>
9. Buttrick, N., **Moulder, R.**, & Oishi, S. (2020). Historical change in the moral foundations of political persuasion. *Personality and Social Psychology Bulletin*, 46, 1523–1537. <https://doi.org/10.1177/0146167220907467>
8. Boker, S. M., **Moulder, R. G.**, & Sjobeck, G. R. (2020). Constrained fourth order latent differential equation reduces parameter estimation bias for damped linear oscillator models. *Structural Equation Modeling: A Multidisciplinary Journal*, 27, 202–218. <https://doi.org/10.1080/10705511.2019.1641816>
7. Krol, K. M., **Moulder, R. G.**, Lillard, T. S., Grossmann, T., & Connelly, J. J. (2019). Epigenetic dynamics in infancy and the impact of maternal engagement. *Science Advances*, 5, 680–696. <https://doi.org/10.1126/sciadv.aay0680>
6. Hamel, L. M., **Moulder, R.**, Albrecht, T. L., Boker, S., Eggly, S. S., & Penner, L. (2018). Nonverbal synchrony as a behavioral marker of patient and physician race-related attitudes and a predictor of outcomes in oncology interactions: Protocol for a secondary analysis of video-recorded cancer treatment discussions. *BMJ Open, epub ahead*, 1–9. <https://doi.org/10.1136/bmjopen-2018-023648>
5. **Moulder, R. G.**, Boker, S. M., Ramseyer, F., & Tschacher, W. (2018). Determining synchrony between behavioral time series: An application of surrogate data generation for establishing falsifiable null-hypotheses. *Psychological Methods*, 23, 757–773. <https://doi.org/10.1037/met0000172>
4. Alloway, T. P., **Moulder, R.**, Horton, J. C., Leedy, A., Archibald, L. M. D., Burin, D., Injoque-Ricle, I., Passolunghi, M. C., & Santos, F. H. D. (2017). Is it a small world after all? investigating the theoretical structure of working memory cross-nationally. *Journal of Cognition and Culture*, 17, 331–353. <https://doi.org/10.1163/15685373-12340010>
3. Alloway, T. P., Gerzina, A., & **Moulder, R.** (2016). Investigating the roles of affective processes, trait impulsivity, and working memory in impulsive buying behaviors. *Comprehensive Psychology*, 5, 216522281665964. <https://doi.org/10.1177/2165222816659640>
2. Nicholson, J. S., Truelove, H. B., Barton, J. M., & **Molder, R. G.** (2016). Measuring college students' community service attitudes validly and efficiently: Development of a short version of the community service attitudes scale. *Journal of community engagement and higher education*, 8
1. Leone, C., Gainey, L., & **Moulder, R.** (2016). Angel or demon? self-monitoring differences in the mental representations of current versus former romantic partners. *Self and Identity*, 15, 432–451. <https://doi.org/10.1080/15298868.2016.1152292>

Peer-Reviewed Conference Proceedings

5. **Moulder, R.**, Booth, B., Abitino, A., & D'Mello, S. (2023). Recurrence quantification analysis of eye gaze dynamics during team collaboration. *LAK23: 13th International Learning Analytics and Knowledge Conference*, 430–440. <https://doi.org/10.1145/3576050.3576113>
4. Ahn, P., Swol, L. V., Lu, R., Kim, S., Park, H., & **Moulder, R.** (In Press). A reversed serial-order effect for decisions in group creative processes. *Proceedings of the 108th National Communication Association Conference*

3. **Moulder, R. G.**, Duran, N. D., & D'Mello, S. K. (2022). Assessing multimodal dynamics in multi-party collaborative interactions with multi-level vector autoregression. *Proceedings of the International Conference on Multimodal Interaction ICMI '22*, 615–625. <https://doi.org/10.1145/3536221.3556595>
2. Zhou, G., **Moulder, R.**, Sun, C., & D'Mello, S. (2022). Investigating temporal dynamics underlying successful collaborative problem solving behaviors with multilevel vector autoregression. In A. Mitrovic & N. Bosch (Eds.), *Proceedings of the 15th international conference on educational data mining* (pp. 290–301). International Educational Data Mining Society. <https://doi.org/10.5281/zenodo.6853137>
1. Johnson, N., **Moulder, R.**, & Seppi, K. (2019). Trajectories and influencing factors of student confidence across a semester. *2019 IEEE Frontiers in Education Conference (FIE)*, 1–8. <https://doi.org/10.1109/FIE43999.2019.9028493>

Book Chapters

2. Boker, S. M., **Moulder, R.** (In Press). Dynamical Systems and Differential Equation Models of Change. *APA Handbook of Research Methods in Psychology, Second edition*.
1. Boker, S. M., Tiberio, S. S., & **Moulder, R. G.** (2018). Robustness of time delay embedding to sampling interval misspecification. *Continuous time modeling in the behavioral and related sciences* (pp. 239–258). Springer

Media Reports

1. World Health Organization (2021). The Baseline Report for the Decade of Healthy Ageing 2021 - 2030. <https://www.who.int/publications/m/item/decade-of-healthy-ageing-baseline-report>

Dissertation

1. **Moulder, R. G.**, (2020) Latent Multivariate Maximal Lyapunov Exponents. *Doctoral dissertation, University of Virginia, Charlottesville, United States*. Retrieved from <https://doi.org/10.18130/v3-6f76-0y53>

Undergraduate Honors Thesis

1. **Moulder, R.** (2014). A new approach to identifying individual differences using data mining analyses. *University of North Florida, Jacksonville, FL*.

UNDER PEER REVIEW

- **Moulder, R. G.**, & D'Mello, S. (Under Review). Quantifying Multimodal Dynamics in Groups Containing Members of Mixed-Distinguishability Using Dynamic Bayesian Network Models.
- **Moulder, R. G.**, Breideband, T., Mark, G., Striegel, A. D., & D'Mello, S. (Under Review). A Dynamic Bayesian Model of Emotional Contagion Between Team Members and Their Supervisors in Remote Teams.
- D'Mello, S. K., **Moulder, R. G.**, & Jensen, E. (Under Review). Momentary Measures of Emotions During Learning Prospectively Predict Standardized Test Score.

PRESENTATIONS

Invited Talks

5. **Moulder, R.** (2023). Interesting Applications of Bayesian Statistics *University of Virginia Charlottesville Virginia*; Sep 20, 2023.

4. **Moulder, R.** (2023). Nonlinear Dynamical Systems Analysis of Team Collaboration. *University of Miami Psychology Department* Miami, Florida; April 6, 2023.
3. **Moulder, R.** (2022). Multimodal Synchronization in Collaborative Problem Solving: A Network Approach. *Attuned 2022 the 1st Conference on Attunement* Interlaken, Switzerland; July 30, 2022.
2. **Moulder, R.** & Kim, Y. (2021). Synchrony and Co-regulation in Cardiovascular Signals Between Cancer Patients and Their Care Givers. *Invited talk to the Miami Psychological Science Research Group*; Dec 14, 2021.
1. **Moulder, R.** (2019). Tangle: A Complexity Metric for Short Time Series. *UVA Psychology Student Choice Colloquium* Charlottesville, VA; February 10, 2020.

Invited Expert Panel Discussions

1. **Moulder, R.**, Lin, C., & Zhang, F. (2023). AI 2.0, *In AI, Advanced Computing, Quantum & Human Health Event*. Moderator: Brooks, I., *University of Colorado Anschutz* Aurora, Colorado; December 6, 2023.

Conference Symposia

16. **Moulder, R.** Nonlinear Latent Differential Equations. *Symposium presented at the Association for Psychological Science (APS) Annual Convention 2023*; Washington DC; May 25-28, 2019.
15. Golino, H. & **Moulder, R.** (Chairs) (2019). Advances and Applications of Exploratory Graph Analysis in Psychological Science. *Symposium presented at the Association for Psychological Science (APS) Annual Convention 2019*; Washington DC; May 22-26, 2019.
14. Kim, E., Griffel, P., **Moulder, R.**, Fu, C., Luo, M., Martin, M., Weibel, R., & Roecke, C. (2021). Day-to-Day Mobility, Affect, and Stress Couplings in Swiss Older Adults. *Symposium presented at the 2021 Annual Gerontological Society of America (GSA) Conference*; Dec 17, 2021.
13. Martynova, E., **Moulder, R.**, & Boker, S. (2021). HAVOK Extensions for Psychological Time Series Forecasting. *Virtual talk presented to the annual New England Sequencing & Timing (NEST) Conference*; April 17, 2021.
12. **Moulder, R.**, & Boker, S. (2019). Quantifying Sensitive Dependence of Initial Condition Using Structural Equation Modeling. In X. Yang and N. Ram (Co-Chairs), *Analysis of Developmental and Complex Systems: Understanding the Dynamics of Aging*. Symposium conducted at the annual meeting of the Gerontological Society of America; Chicago, IL; November 13-17, 2019.
11. **Moulder, R.** (2019). Tangle: A new measure of time series complexity. *Presentation at the 2019 Meeting of the Society of Multivariate Experimental Psychology (SMEP 2019)*; Baltimore, Maryland; October 9-12, 2019.
10. **Moulder, R.** (2019). Tangle: a computationally efficient measure of time series complexity *Presentation at the 2019 International Meeting of the Psychometric Society (IMPS 2019)*; Santiago, Chile; July 15-19, 2019.
9. **Moulder, R.** (2019). Modeling Nonlinear Human Behavior Through Intermittent Forcing: A HAVOK Analysis. *Presentation at the Max Planck International Research School for the Life Course*; Ann Arbor, MI; May 28-31, 2019.
8. **Moulder, R.**, & Tong, X. (2019). Testing for Interindividual Differences in Intraindividual Change in Bayesian Growth Curve Modeling. In X. Tong (Chair), *Advanced Bayesian Methods in Popular Psychological Modeling*. *Symposium presented at the Association for Psychological Science (APS) Annual Convention 2019*; Washington DC; May 22-26, 2019.

7. **Moulder, R.** (2019). Tangle: Defining a New Measure of Time Series Complexity. *Presentation at the Max Planck International Research School for the Life Course*; Charlottesville, Virginia; October 12–15, 2018.
6. Beltzer, M.L., **Moulder, R.G.**, Baker, C., Comer, K., Teachman, B.A. (2018, November). From Sandy Hook to Sutherland Springs: How mass shootings affect stigma about mental illness. In M.L. Beltzer (Chair), *Mental illness and violence: Risks, misconceptions, and the role of policy. Symposium presented at the annual meeting of the Association for Behavioral and Cognitive Therapies*; Washington, D.C.
5. **Moulder, R.** (2018). Structural Equation Modeling for the Estimation of Multivariate Latent Lyapunov Exponents. *Presentation at the Max Planck International Research School for the Life Course*; Berlin, Germany; May 31 - June 4, 2018.
4. **Moulder, R.**, Hamel, L., Albrecht, T., Boker, S., Foster, T., Eggly, S., & Penner, L. (2018). Oncology Patient Racial Attitudes Influence Motion Synchrony in Patient Physician Dyads. *Presentation at the 2018 New England Sequencing and Timing Conference (NEST)*; Storrs, Connecticut; February 21, 2018.
3. Beltzer, M.L., **Moulder, R.**, Starns, A., & Teachman, B.A. (2017). Stigma in America: Large-scale effects of implicit and explicit beliefs about the dangerousness of individuals with mental illness. In A. Werntz & M.L. Beltzer (Co-Chairs), *Perceptions of Mental Illness and Its Treatment: Individual Differences, Malleability, and National Trends. Symposium presented at the Association for Psychological Science (APS) Annual Convention 2017*; Boston, MA; May 25-28, 2017.
2. **Moulder, R.** (2017). Windowed Spectral Coherence: A Method for Evaluating Spectral Coherence Between Time Series with Multiple Time-Lags. *Presentation at the 2017 Modern Modeling Methods Conference (M3)*; Storrs, CT; May 22-25, 2017.
1. Beltzer, M.L., **Moulder, R.G.**, Starns, A., Teachman, B.A. (2017). Stigma in America: Large-scale effects of implicit and explicit beliefs about the dangerousness of individuals with mental illness. *Presented at the Huskey Graduate Research Exhibition*; Charlottesville, VA; March 21, 2017.

Poster Presentations

19. **Moulder, R.**, Tsai, T. C., Hurwitz, B., Spiegel, D., Kim, Y. (2022). Cardiovascular coregulation to a series of acute interpersonal stressors: Innovative methodological approach to study regulation to a chronic illness in the family. *Poster presentation at the American Psychosomatic Society Annual Conference*, Long Beach, CA. March 23 - 26, 2022.
18. **Moulder, R.** (2019). Tangle: A new measure of time series complexity. *Poster presentation at the 2019 Meeting of the Society of Multivariate Experimental Psychology (SMEP 2019)*; Baltimore, Maryland; October 9-12, 2019.
17. **Moulder, R.**, Penner, L., Boker, S., Albrecht, T., Eggly, S., & Hamel, L. (2019). Nonverbal Synchrony Assessment Methodology for Archival Videos: An Oncology Example. *Poster presented at the 65th Annual Meeting of the Southeastern Psychological Association (SEPA)*; Jacksonville, Florida; March 20 - March 23, 2019.
16. **Moulder, R.**, Penner, L., Boker, S., Albrecht, T., Eggly, S., & Hamel, L. (2019). Differences in Nonverbal Synchrony Between Racially Concordant and Racially Discordant Physician/Oncology Patient Dyads. *Poster presented at the 20th Herbstakademie on Synchronization in Embodied Interaction*; Heidelberg, Germany; February 28 - March 7, 2019.
15. **Moulder, R.**, Boker, S., Ramseyer, F., & Tschacher, W. (2017). Methods for assessing nonverbal

synchrony. *Poster presented at the Max Planck International Research School for the Life Course*; Zurich, Switzerland; October 15-18, 2017.

14. **Moulder, R.**, Boker, S., Ramseyer, F., & Tschacher, W. (2017). Methods for assessing nonverbal synchrony. *Poster presented at the 19th Herbstakademie on Embodied Aesthetics: Resonance in Perception, Expression and Therapy*; Freiburg, Germany; October 6-7, 2017.
13. **Moulder, R.**, & Tong, X. (2017). Overcoming the Boundary Problem in Bayesian Growth Curve Modeling: A Data Permutation Method for Testing Random Slopes. *Poster presented at the 2017 Modern Modeling Methods Conference (M3)*; Storrs, CT; May 22-25, 2017.
12. Beltzer, M.L., **Moulder, R.G.**, Starns, A., & Teachman, B.A. (2016). Politics and policy tied to implicit and explicit beliefs about the dangerousness of mental illness. *Poster presented at the 2016 Annual Meeting of the Association for Behavioral and Cognitive Therapies (ABCT)*; New York, NY; October 27-30, 2016.
11. **Moulder, R.** (2016). Interacting Psychological Theories: Using Agent Based Models to Combine Psychological Theories. *Presentation at the 22nd Annual Santa Fe Institute Graduate Workshop in Complexity in Social Science (GWCSS)*; Santa Fe, NM; June 26 - July 8, 2016.
10. **Moulder, R.**, & Boker, S. (2016). Similarities in Motion and Movement: Comparing Methods of Obtaining Synchronicity Between Individuals in Dyadic Systems. In S. M. Boker (Chair), *Dynamical Systems and Differential Equation Models*. Symposium conducted at the 28th annual meeting of the American Psychological Association; Chicago, IL; May 26-29, 2016.
9. Sciallo, M., **Moulder, R.**, & Leone, C. (2015). Self-Monitoring in Husbands and Wives: Dyadic Differences in Marital Satisfaction and Intimacy. *Presentation at the 61st annual meeting of Southeastern Psychological Association*, Hilton Head, SC; March 18-21, 2015.
8. **Moulder, R.**, & Leone, C. (2014). Structuring Personality: What Can Artificial Neural Networks and Hierarchical Clustering Tell Us About Self-Esteem? *Poster presentation at the annual meeting of the Society of Southeastern Social Psychologists*, Athens, GA
7. **Moulder, R.**, Leone, C., Beane, D., & Bernadel, R. (2013). Self-monitoring differences and networking in the virtual social world. *Poster presentation at the annual meeting of the Society of Southeastern Social Psychologists*, Augusta, GA.
6. **Moulder, R.**, Beane, D., & Leone, C. (2013). On-line social capital and belonging motivation. *Poster presentation at the Showcase of Osprey Advancements in Research & Scholarship*, Jacksonville, FL.
5. **Moulder, R.**, Beane, D., & Leone, C. (2013). Social capital “gains and losses”: How neuroticism plays a role in online relationships. *Poster presentation at the annual meeting of Society of Southeastern Social Psychologists*, Gainesville, FL.
4. **Moulder, R.**, Beane, D., & Leone, C. (2013). “Different (key)strokes for different folks?”: Belonging motivation and on-line social capital. *Poster presentation at the annual meeting of Southeastern Psychological Association*, Atlanta, GA.
3. **Moulder, R.**, & Zitek, E. (2012). Getting what they deserve: A study on punishment and psychological entitlement. *Poster presentation at the Showcase of Osprey Advancements in Research & Scholarship*, Jacksonville, FL.
2. **Moulder, R.**, Beane, D., & Leone, C. (2012). Social capital: As plain as the nose on your Face(book): Self-monitoring and Facebook usage. *Poster presentation at the annual meeting of Society of Southeastern Social Psychologists*, Gainesville, FL.

1. **Moulder, R.**, Beane, D., & Leone, C. (2012). Self-monitoring and Facebook usage. *Poster presentation at the Florida Undergraduate Research Conference*, DeLand, FL.

TEACHING

Primary Instructor

1. **Special Topics: Dyadic Data Analysis (PSYC 4541)** Spring 2024
University of Colorado Boulder

Teaching Assistant

8. **Quantitative Methods II Teaching Assistant (PSYC 7720)** Spring 2019
Primary Instructor: Xin Tong
University of Virginia
7. **Quantitative Methods I Teaching Assistant (PSYC 7710)** Fall 2018
Primary Instructor: Hudson Golino
University of Virginia
6. **Introduction to Machine Learning Teaching Assistant (PSYC 5559)** Spring 2018
Primary Instructor: Hudson Golino
University of Virginia
5. **Structural Equation Modeling Teaching Assistant (PSYC 8735)** Spring 2018
Primary Instructor: Steven Boker
University of Virginia
4. **Multivariate Data Analysis Teaching Assistant (PSYC 7760)** Fall 2017
Primary Instructor: Steven Boker
University of Virginia
3. **Res. Methods and Data Analysis I Lab Instructor (PSYC 3005 LAB)** Fall 2014-
Spring 2015
Primary Instructor: Fred Smyth
University of Virginia
2. **Office of Undergraduate Research Teaching Assistant** Fall 2014-
Spring 2015
Primary Instructor: LouAnne Hawkins
University of North Florida
1. **Social Psychology Teaching Assistant (PSY 3004)** Spring 2014
Primary Instructor: Christopher Leone
University of North Florida

Methodological Workshops

10. **Methods for Modeling Nonlinear Dynamical Systems and Complexity in Behavioral Science - 2 day** 2023
University of Haifa
Workshop Hosts: **Moulder, R.** & *Timur Guralnik*
9. **Bayesian Data Analysis Using JAGS and rjags - 1 day** 2022
University of Colorado Boulder
Workshop Hosts: **Moulder, R.**

- | | |
|--|-----------|
| 8. Training in Advanced Quantitative Research Methods (SEM) - 5 day
<i>University of North Florida</i>
Workshop Hosts: Moulder, R. , <i>Valladares, T., Mazen, J., & Daniel, K.</i> | 2020 |
| 7. Power Analysis in R Workshop - 1 day
<i>University of Virginia</i>
Workshop Hosts: <i>Fehrman, C., Jamison, L., Martynova, E., Mazen, J., Moulder, R., Sjobeck, G., & Valladares, T.</i> | 2020 |
| 6. Text Analysis in R Workshop - 1 day
<i>University of Virginia</i>
Workshop Hosts: <i>Fehrman, C., Martynova, E., Mazen, J., Moulder, R., Sjobeck, G., & Valladares, T.</i> | 2019 |
| 5. Applied Structural Equation Modeling (SEM) Workshop - 1 day
<i>University of Virginia</i>
Workshop Hosts: <i>Fehrman, C., Mazen, J., Moulder, R., Sjobeck, G., & Valladares, T.</i> | 2018 |
| 4. Motion Energy Analysis (MEA) Workshop - 2 Days
<i>University of Zürich</i>
Workshop Hosts: <i>Ramseyer, F. & Moulder, R.</i> | 2018 |
| 3. Using R and Shiny to Create Statistical Teaching Tools - 1 day
<i>University of Virginia</i>
Workshop Hosts: Moulder, R. | 2016-2017 |
| 2. Specialized Data Analysis with R and Ωnyx - 1 day
<i>University of North Florida</i>
Workshop Hosts: Moulder, R. | 2015 |
| 1. Data Collection Using Media Lab and Qualtrics - 2 day
<i>University of North Florida</i>
Workshop Hosts: Moulder, R. | 2014 |

Free Statistical Tutorial Videos

- | | |
|--|------|
| 4. Intermediate OpenMx - Growth Curve Analysis - Path Modeling
Three free instructional videos: http://youtu.be/vrHaAdjC97A (1,000+ views) | 2017 |
| 3. Intermediate OpenMx - Growth Curve Analysis - Matrix Modeling
Three free instructional videos: http://youtu.be/-vF_CohFlkE (1,000+ views) | 2017 |
| 2. Beginner OpenMx - Growth Curve Analysis - Path Modeling
Three free instructional videos: http://youtu.be/h6AaL6G12bU (5,000+ views) | 2017 |
| 1. Beginner OpenMx - Growth Curve Analysis - Matrix Modeling
Three free instructional videos: http://youtu.be/h6AaL6G12bU (3,000+ views) | 2017 |

SERVICE

Committee Memberships

- | | |
|--|----------------|
| • Jefferson Scholars Foundation At-Large Selection Committee Member
<i>Jefferson Scholars Foundation</i> | 2019 - Present |
|--|----------------|

- **Psychology Graduate Social Committee Chair** 2017 - 2019
University of Virginia

Consulting

- **Longitudinal Methodology and Statistical Inference** 2021 - Present
SWORD Health, New York NY
- **Dynamical Systems and Data Analysis** 2018 - Present
Psychology Department, University of Zürich
- **Freelance Statistician & Data Scientist: 100+ 5-Star Ratings** 2017 - Present
www.UpWork.com
- **Dynamic Data Analysis and Methodology** 2015 - Present
Barbara Ann Karmanos Cancer Institute, Wayne State University
- **Consulting Methodologist - Healthy Cities Initiative** 2019 - 2021
World Health Organization
- **Nesselrode Lab Open Statistical Consulting** 2015 - 2020
Psychology Department, University of Virginia
- **Data Analysis and Methodology** 2015 - 2020
Person by Situation Lab, University of North Florida
- **National Business Research Institute** 2017 - 2019
National Business Research Institute, Plano TX
- **Machine Learning Analysis** 2014 - 2015
UNF Honors Department, University of North Florida

Chief Journal Editor

- **Jefferson Journal of Science and Culture Volume 5: Beauty and Aesthetic**
<https://journals.sfu.ca/jjsc/index.php/journal/index>

Article Review

- **Basic and Applied Social Psychology**
<https://www.tandfonline.com/loi/hbas20>
- **British Journal of Mathematical and Statistical Psychology**
<https://www.wiley.com/en-us/exportProduct/pdf/9780JRNL73886>
- **British Medical Journal Open**
<https://bmjopen.bmj.com/>
- **Discourse Processes**
<https://www.tandfonline.com/toc/hdsp20/current>
- **Multivariate Behavioral Research**
<https://www.tandfonline.com/toc/hmbr20/current>
- **Scandinavian Journal of Occupational Therapy**
<https://www.tandfonline.com/loi/iocc20>
- **Structural Equation Modeling: A Multidisciplinary Journal**
<https://www.tandfonline.com/loi/hsem20>

- **Transactions on Affective Computing**

<https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=5165369>

Grant Review

- **European Research Council**

<https://erc.europa.eu/>

OPEN SOURCE SOFTWARE

- Golino, H., Christensen, A. P. and **Moulder, R.** (2020). EGAnet: Exploratory Graph Analysis–A framework for estimating the number of dimensions in multivariate data using network psychometrics. <https://cran.r-project.org/web/packages/EGAnet/EGAnet.pdf>
- **Moulder, R.** & Martynova, E. (2019). An R package for HAVOK (Hankel Alternative View of Koopman) analysis of nonlinear time series data. <https://github.com/RobertGM111/havok>
- **Moulder, R.** (2019). An R function for computing Tangle complexity of a time series. <https://github.com/RobertGM111/Tangle>

PROFESSIONAL REFERENCES

- **Dr. Steven Boker**
 - Affiliation: University of Virginia
 - Email: smb3u@virginia.edu
- **Dr. Sidney D’Mello**
 - Affiliation: University of Colorado Boulder
 - Email: sidney.dmello@colorado.edu
- **Dr. Hudson Golino**
 - Affiliation: University of Virginia
 - Email: hfg9s@virginia.edu
- **Dr. Lauren Hamel**
 - Affiliation: Wayne State University/Karmanos Cancer Center
 - Email: hamell@karmanos.org