Joshua N. Pritikin

Education

2014–2016 **Ph.D. Psychology**, *University of Virginia*, Charlottesville, VA (advisers Steven Boker and Timo von Oertzen).

Topic: *Unbelievably fast estimation of nested multilevel structural equation models*

2011–2013 **M.A. Psychology**, *University of Virginia*, Charlottesville, VA (advisers Steven Boker, Karen Schmidt, and Timo von Oertzen).

Topic: *Item Factor Analysis: A primer and new open-source implementation*

2007–2009 **B.S. Psychology**, *University of Oregon*, Eugene, OR.

Awards and Honors

2014-2015 Developing Students for Leadership in Data-intensive Research and Innovation from The Jefferson Trust $20,000

2008-2009 Osher Reentry scholarship $4500

Publications

Pritikin, J. N., Schmitt, J. E., & Neale, M. C. (2019). Cloud computing for voxel-wise SEM analysis of MRI data. *Structural Equation Modeling: A Multidisciplinary Journal*, *26*(3), 470–480. doi:10.1080/10705511.2018.1521285

Schmitt, J. E., Neale, M. C., Clasen, L. S., Liu, S., Seidlitz, J., Pritikin, J. N., . . . Raznahan, A. (2019). A comprehensive quantitative genetic analysis of cerebral surface area in youth. *Journal of Neuroscience*, *39*(16), 3028–3040. doi:10.1523/JNEUROSCI.2248-18.2019

Schmitt, J. E., Raznahan, A., Clasen, L. S., Wallace, G. L., Pritikin, J. N., Lee, N. R., . . . Neale, M. C. (2019). The dynamic associations between cortical thickness and general intelligence are genetically-mediated. *Cerebral Cortex*, 1–10. doi:10.1093/cercor/bhz007

Falk, C. F., & Pritikin, J. N. (2018). Computer programming in quantitative analysis. In B. Frey (Ed.), *The SAGE Encyclopedia of Educational Research, Measurement, and Evaluation* (1:335–1:339). Thousand Oaks, CA: SAGE.

Pritikin, J. N., Brick, T. R., & Neale, M. C. (2018). Multivariate normal maximum likelihood with both ordinal and continuous variables, and data missing at random. *Behavior Research Methods*, *50*(2), 395–401. doi:10.3758/s13428-017-1011-6

Pritikin, J. N. (2017). A comparison of parameter covariance estimation methods for item response models in an expectation-maximization framework. *Cogent Psychology*, *4*(1), 1279435. doi:10.1080/23311908.2017.1279435

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Pritikin, J. N., Hunter, M. D., von Oertzen, T., Brick, T. R., & Boker, S. M. (2017). Many-level multilevel structural equation modeling: An efficient evaluation strategy. *Structural Equation Modeling: A Multidisciplinary Journal*, *24*(5), 684–698. doi:10.1080/10705511.2017.1293542

Pritikin, J. N., Rappaport, L. M., & Neale, M. C. (2017). Likelihood-based confidence intervals for a parameter with an upper or lower bound. *Structural Equation Modeling: A Multidisciplinary Journal*, *24*(3), 395–401. doi:10.1080/10705511.2016.1275969

Neale, M. C., Hunter, M. D., Pritikin, J. N., Zahery, M., Brick, T. R., Kirkpatrick, R., . . . Boker, S. M. (2016). OpenMx 2.0: Extended structural equation and statistical modeling. *Psychometrika*, *81*(2), 535–549. doi:10.1007/s11336-014-9435-8

Pritikin, J. N. (2016). A computational note on the application of the Supplemented EM algorithm to item response models. *arXiv preprint arXiv:1605.00860*. arXiv: 1605.00860 [`stat.CO`]

Pritikin, J. N., & Schmidt, K. M. (2016). Model builder for Item Factor Analysis with OpenMx. *R Journal*, *8*(1), 182–203.

Boker, S. M., Brick, T. R., Pritikin, J. N., Wang, Y., von Oertzen, T., Brown, D., . . . Neale, M. C. (2015). Maintained individual data distributed likelihood estimation. *Multivariate Behavioral Research*, *50*(6), 706–720. doi:10.1080/00273171.2015.1094387

Kelly, G., Mobbs, S., Pritikin, J. N., Mayston, M., Mather, M., Rosenbaum, P., . . . Forsyth, R. (2015). Gross motor function measure-66 trajectories in children recovering after severe acquired brain injury. *Developmental Medicine and Child Neurology*, *57*(3), 241–247. doi:10.1111/dmcn.12592

Pritikin, J. N., Hunter, M. D., & Boker, S. M. (2015). Modular open-source software for Item Factor Analysis. *Educational and Psychological Measurement*, *75*(3), 458–474. doi:10.1177/0013164414554615

Pritikin, J. N., & Schmidt, K. (2013). A self-report measure for familiarity with mental silence. In W. v. Moer, D. A. Çelik, & J. L. Hochheimer (Eds.), *Spirituality in the 21st century: Journeys beyond Entrenched Boundaries* (pp. 23–31). Oxford, United Kingdom: Inter-Disciplinary Press.

Pritikin, J. N. (2007). We ought to characterize dyadic prospects. In *International Conference on Affective Computing and Intelligent Interaction: Doctoral Consortium*. Lisbon, Portugal.

In Process

Brick, T. R., & Pritikin, J. N. (in preparation). Regularized structural equation modeling.

Hendriks, T., Pritikin, J. N., & Choudhary, R. (in preparation). Character strengths and virtues in long-term meditation practitioners: A cross-sectional survey.

Hunter, M. D., & Pritikin, J. N. (in preparation). Extended ordinal variable standardization in weighted least squares modeling.

Kirkpatrick, R. M., Hunter, M. D., Pritikin, J. N., & Neale, M. C. (in preparation). Combining structural equation modeling with genomic-relatedness-matrix restricted maximum likelihood in OpenMx.

Neale, M. C., & Pritikin, J. N. (in preparation). Variance components of neuroimaging, cognitive, psychological and behavioral assessments in ABCD 2.0.

Pritikin, J. N., & Schmidt, K. M. (in preparation). Initial map of physical activity flow propensities.

Pritikin, J. N., Verhulst, B., & Neale, M. C. (in preparation). Genome-wide structural equation modeling revisited.

Pritikin, J. N. (submitted). A factor model with ordinal paired comparison indicators.

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Misc. Teaching Experience

2019 Mar	International Behavioral Genetics Workshop. Boulder, CO
2018 Fall	Statistics for Genetic Studies I. Richmond, VA
2018 Jan	Introduction to R. National University of Singapore, Singapore
2017 Fall	Statistics for Genetic Studies I. Richmond, VA
2017 Oct	Advanced Genetic Epidemiology Statistical Workshop. Richmond, VA
2015 Oct	Advanced Genetic Epidemiology Statistical Workshop: Applications to Drug Abuse. Richmond, VA

Conference Presentations

2017 May 27	*Bayesian model for characteristics of physical activities.* APS, Boston, MA
2017 May 23	*Toward multilevel variance decomposition of interactions in non-linear structural equation models.* Modern Modeling Methods, University of Connecticut, CT
2016 Jul 15	*Multilevel structural equation model rotation.* International Meeting of the Psychometric Society, Asheville, NC
2016 May 25	*Introduction to Relational SEM and an Efficient Computational Strategy for Relational SEM.* Modern Modeling Methods, University of Connecticut, CT
2015 Mar 23	*Statistical Modeling Without Seeing the Data.* 2015 Huskey Research Exhibition, University of Virginia, VA
2015 Feb 21	*Modern Test Theory Primer.* Workshop taught at The 5th International Symposium on Assessment in Music Education, Williamsburg, VA
2013 Mar 08	*A self-report measure for familiarity with mental silence.* Paper presented at The 3rd Global Conference on Spirituality in the 21st Century: Theory, Praxis and Pedagogy, Lisbon, Portugal.

Positions

2016-present	**Postdoctoral Fellow**, *Virginia Commonwealth University*.
2015-2016	**Research Assistant**, *University of Virginia*, OpenMx Project.
2013-2014	**Teaching Assistant**, *University of Virginia*. Undergraduate Advanced Research Methods & Data Analysis series (4005, 4006). Undergraduate Introduction to Statistics for Psychology Majors (3006).
2011-2012	**Grader**, *University of Virginia*. Undergraduate Introduction to Statistics for Psychology Majors series (3005, 3006).
2009–2011	**Software Engineer**, *Palo Alto Software*, Eugene, OR. Worked on two products: Email management for customer service teams and LivePlan business planning software (Java, cloud computing).
2002–2006	**Husband/Father**, Nashik, India. Spent a lot of time thinking about what I wanted to do with my life.

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1996–2001	**Software Engineer**, *NatWest/Deutsche Bank*, New York City, NY.
	Developed equities program trading system (Qt, Perl, C++, ObjectStore).
1993–1995	**Software Engineer**, *Various Companies*, New York City, NY.
1990–1992	**Undergraduate Student**, *Carnegie Mellon University*, Pittsburgh, PA.
	Math/Computer Science Major

Department Presentations

2019 May 30	A Factor Model with Paired Comparison Indicators
2016 Dec 08	Confidence intervals for a parameter with an upper or lower bound
2016 Mar 17	Fast estimation of multilevel structural equation models
2015 Apr 16	Arne's transient hypofrontality hypothesis: A bridge between flow and meditation
2014 Oct 16	Examination of the likelihood function by simulation of a fictional Hamiltonian system
2014 Mar 27	Numeric derivatives: Pushing the accuracy limits
2013 Oct 17	Item Factor Analysis: Everything I told you in the spring was wrong, and current status
2013 Mar 28	A new implementation of Item Factor Analysis: Accuracy, flexibility, and speed
2012 Nov 01	Navigating the bowels of Marginal Maximum Likelihood: An expectation-maximization Item Response Theory estimation algorithm
2012 Apr 19	Is there a link between flow and meditation?
2011 Dec 05	Oscillation around non-stationary equilibria

Manuscripts Reviewed For

African Journal of Business Management

Cogent Business & Management

Cogent Education

Cogent Medicine

Cogent Psychology

Cogent Social Science

Frontiers in Applied Mathematics and Statistics (Quant. Psychology and Measurement)

Frontiers in Human Neuroscience (Application of Neural Technology to Neuro-Management and Neuro-Marketing)

Frontiers in Psychology (Quant. Psychology and Measurement)

Journal of Happiness Studies

Structural Equation Modeling: A Multidisciplinary Journal

Popular Press

Bartz, A. (2018). Into the flow. *Cadillac Magazine*, *5*(1), 42–45.

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