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

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

Pritikin, J. N., Brick, T. R., & Neale, M. C. (in press). Multivariate normal maximum likelihood with both ordinal and continuous variables, and data missing at random. *Behavior Research Methods*.

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

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`]

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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.

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. (2015). *Rpf: Response probability functions* [Computer software]. Version 0.51. R package version 0.51. Retrieved February 24, 2016, from https://CRAN.R-project.org/package=rpf

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

Pritikin, J. N., Driver, C., Bharadwaj, V., Schmidt, K. M., Manocha, R., Thomas, S. L., et al. (in preparation). A self report measure for Transient Implicit Explicit Synchronization (TIES).

Pritikin, J. N. & Schmidt, K. M. (in preparation). Relative characteristics of physical activities.

Misc. Teaching Experience

2017 Oct	**Faculty** Advanced Genetic Epidemiology Statistical Workshop. Richmond, VA
2015 Oct	**Faculty** 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

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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.

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

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 Education

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Cogent Psychology

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

Frontiers in Psychology (Quant. Psychology and Measurement)

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