

Norkshop

Prof Alexandre Morin

Topic:	The Bifactor ESEM framework:
	A way to see the forest and the trees in
	psychometric measurement
Date:	29 May 2023
Time:	10:30

Place:

In-person attendance: Optentia Indaba, A13-G13 Virtual attendance: Zoom link will be sent when confirming attendance

RSVP: Lynn Booysen (lynn.booysen@nwu.ac.za) by 25 May 2023

About the Presenter:

Professor Alexandre J.S. Morin received his PhD in psychology from the Université de Montréal in 2005. He defines himself as a lifespan developmental psychologist, with broad research interests anchored in the social determinants of psychological well-being at various life stages and in various settings, such as schools and organisations. He has a more specific interest in studying self-concept development in adolescence, and workplace commitment and motivation among working adults. Many of his 300+ publications are anchored in a substantive-methodological synergy framework, and thus represent joint ventures in which new methodological developments are applied to substantively important issues. Methodologically, he is known for his work related to bifactor exploratory structural equation modeling, person-centered analyses, longitudinal analyses, and psychometric validation. Consistent with the multidisciplinary focus of his research, he was identified as a "Highly Cited Researcher" by the Web of Science in 2019, 2020, 2021, and 2022 in the cross-field category, identified as the 12th most productive researcher in educational psychology (Greenbaum et al., 2016, Educational Psychology Review, 28, 2, 215-223), and as one of the top 100 most influential Canadian researchers in Psychology (https://research.com/scientists-rankings/psychology/ca). More information on his work can be found on his lab's webpage: https://smslabstats.weebly.com/

Abstract:

This presentation will highlight an overarching psychometric approach of broad relevance to investigations of two sources of construct-relevant psychometric multidimensionality present in many complex multidimensional instruments routinely used in psychological and educational research. These two sources of construct-relevant psychometric multidimensionality are related to: (a) the conceptually-related nature of many constructs, which is reinforced by the fallible nature of our indicators; (b) the hierarchical nature of many constructs being assessed. Exploratory structural equation modeling (ESEM), a framework that extends the structural equation modeling (SEM) framework to incorporate latent factors defined according to exploratory factor analysis (EFA) specifications captures the first source of multidimensionality, whereas bifactor models captures the second source. The broad bifactor-ESEM framework does both, while allowing users to benefit from all advantages traditionally associated with CFA/SEM analyses, including: (a) multiple-group or longitudinal tests of measurement invariance, (b) goodness-of-fit, (c) predictions among latent factors corrected for measurement error, (d) a priori specification (i.e., confirmatory) using target rotation, (e) methodological controls, and (f) longitudinal analyses. This presentation seeks to introduce applied researchers to this new analytic framework.