The Department of Educational Psychology's Research Methods, Measurement, & Evaluation (RMME) program and the Department of Statistics at the University of Connecticut present:

Partially Ordered Responses and Applications

Dr. Edward Ip, Wake Forest School of Medicine

Friday, 2/26/2021, 12pm

https://uconn-cmr.webex.com/uconn-cmr/j.php?MTID=mc1ed9d99b7e6b63ab2796d729867e365

Partially ordered set (poset) responses are prevalent in fields such as psychology, education, and health. For example, the psychopathologic classification of no anxiety (NA), mild anxiety (MA), anxiety with depression (AwD), and severe anxiety (SA) form a poset. Due in part to the lack of analytic tools, poset responses are often collapsed into other data forms such as ordinal data. During such a process, subtle information within a poset is inevitably lost. In this presentation, a longitudinal latent-variable model for poset responses and its application to health data will be described. It is argued that latent variable modeling enables the integration of information from both ordinal and nominal components in a poset. Using the abovementioned example, NA>{MA,AwD}>SA form the ordinal component, and MA and AwD form the nominal component. Specifically, it will be demonstrated that the latent variable model "discovers" implicit ordering within the nominal categories. This is possible because both intra-person and inter-person information are borrowed to reinforce inference. Some potential applications of the poset model will also be highlighted.

Dr. Edward Ip is a Professor in the Department of Biostatistics and Data Science, in the Wake Forest School of Medicine. He received his master's in education and PhD in statistics, both from Stanford. His research interests include latent variable modeling and longitudinal data analysis. He is currently Editor of the journal, Psychometrika, Application Reviews and Case Studies (ARCS) section.

ONLINE INTERDISCIPLINARY SEMINARS ON STATISTICAL METHODOLOGY FOR SOCIAL AND BEHAVIORAL RESEARCH: Support for this seminar comes from Department of Educational Psychology's Research Methods, Measurement, & Evaluation (RMME) program and the Department of Statistics at the University of Connecticut (UCONN), the Statistical and Applied Mathematical Sciences Institute (SAMSI), and the New England Statistical Society (NESS). This seminar aims to promote connection between the statistics and social/behavioral science communities and encourage interdisciplinary research across faculty and students.

For announcements and WebEx live streaming links, please contact Tracy Burke (tracy.burke@uconn.edu). For questions related to the seminars, please feel free to contact the session organizers, Prof. Xiaojing Wang (xiaojing.wang@uconn.edu) and/or Prof. Betsy McCoach (betsy.mccoach@uconn.edu).

Additional Session Meeting Information:	*Join by video system*
	Dial 1202868603@uconn-cmr.webex.com
	You can also dial 173.243.2.68 and enter your meeting number.
Meeting # 120 286 8603	
Password: RMMESTAT	*Join by phone*
	+1-415-655-0002 US Toll
	Access code: 120 286 8603