IOPS & UT Winter Conference, December 8, 2022

Practical information

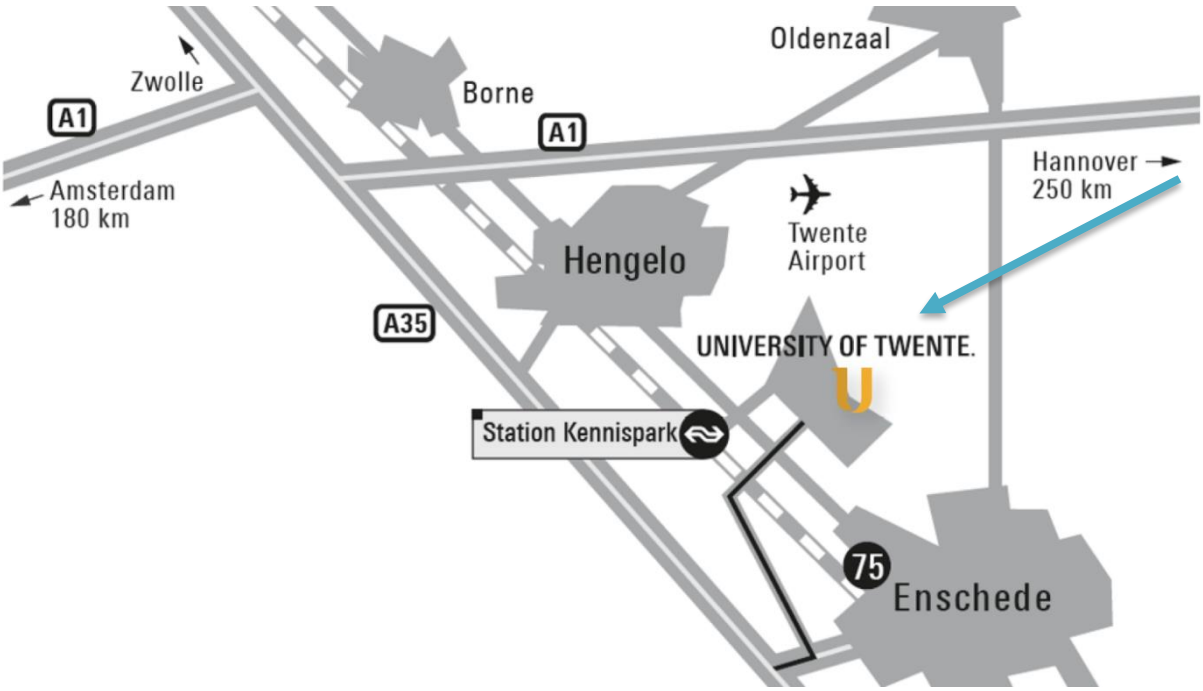
Conference venue: *U Park hotel*
De Veldmaat 8,
7522 NM Enschede

Dinner: *U Park hotel*
De Veldmaat 8
7522 NM Enschede

Conference Venue

U Park hotel

De Veldmaat 8
7522 NM Enschede



8 December, Enschede

How to access the U Park hotel?

By Train

By regional train

Information about train connections and delays is available at https://www.ns.nl/en.
Leave the train at stop Enschede Kennispark station. For continuation by bus, see: 'By bus; From Kennispark Enschede station'. The walking distance from Enschede Kennispark station to the U Parkhotel is approximately 19 minutes.

By Intercity train

Leave the train at stop Central Station Enschede. For continuation by bus, see 'By bus; From Central Station Enschede'.

By Car

From the A1 motorway follow the A35 motorway towards Enschede. Than take exit No. 26A Enschede-West/University. At the end of the exit, turn right at the traffic lights and keep following the University signs. Follow the U Parkhotel signs from the University main entrance. On the map of the UT building number 45 (Hogenkamp HO).

By Bus

Information about bus lines can be consulted at https://9292.nl/en.

From station Kennispark Enschede:
Line 1 towards the University will enter the campus. Leave the bus at stop De Zul. The walking distance from stop De Zul to the U Parkhotel is approximately 3 minutes (300 meters). Line 1 leaves about 4 times per hour and the travel time is approximately 3 minutes.

Lines 8 and 9 to Hengelo do not enter the campus, but stop at the main university entrance (Kennispark/UT). The walking distance to the U Parkhotel is approximately 9 minutes (750 meters).

From Central Station Enschede:
Line 1 towards the University will enter the campus. Leave the bus at stop De Zul. The walking distance from stop De Zul to the U Parkhotel is approximately 3 minutes (300 meters). Line 1 leaves about 4 times per hour and the travel time is approximately 14 minutes.

Lines 8 and 9 to Hengelo do not enter the campus, but stop at the main university entrance (Kennispark / UT). The walking distance from stop Kennispark/UT to the U Parkhotel is approximately 9 minutes (750 meters).

From Central Station Hengelo:
Lines 8 and 9 run from Hengelo to Enschede will not enter the campus, but stop at the main university entrance (Kennispark/UT). The walking distance from stop Kennispark/UT to the U Parkhotel is approximately 9 minutes (750 meters).

8 December, Enschede

Accommodation

It is conference delegates' responsibility to make their own accommodation reservations. Here a list of hotels (in all categories) most of which close to the station or city center and conference venue.

U Park hotel
De Veldmaat 8
7522 NM ENSCHEDE
https://www.uparkhotel.nl/en/sleep/

Fletcher Hotel-Restaurant De Broeierd
Hengelosestraat 725
7521 PA ENSCHEDE
https://www.fletcherhotelenschede.nl/en/

Intercity Hotel Enschede
Willem Wilminkplein 5
7511 PG Enschede
https://intercityhotel-enschede.h-rez.com/

Van der Valk hotel Enschede
Zuiderval 140
7543EZ ENSCHEDE
https://www.vandervalkhotelenschede.nl/en/

Program Overview

Program Thursday 8 December

10.00 – 11.00 **Board Meeting IOPS**

10.30 – 11.00 **PhD Meeting**

11.00 – 11.15 **Receipt with coffee and tea**

11.15 – 11.30 **Official Opening**

11.30 – 12.00 Manuel Haqiqatkhah - Skewness and staging: Does the floor effect induce bias in multilevel AR(1) models?
Discussant(s): Khadiga Sayed

12.00 – 12.30 Jeroen Mulder - The random intercept cross-lagged panel model
Discussant(s): Felix Clouth, Manuel Haqiqatkhah

12.30 – 13.30 **Lunch**

13.30 – 14.00 Marvin Neumann - Encouraging Evidence-based Decision Making: Improving Test Use in Practice.
Discussant(s): Merle-Marie, Anna Langener

14.00 – 14.30 Jasmine Muradchanian - The role of results in deciding to publish
Discussant(s): Khadiga Sayed, Pia Andresen

14.30 – 15.00 **Break**

15.00 – 15.30 Felix Clouth – Causal Inference for Latent Class Analysis
Discussant(s): Mihai Constantin, Merle-Marie

15.30 – 16.00 Khadiga Sayed - Refinement of the extended crosswise model with a number sequence randomizer: Evidence from three different studies in the UK
Discussant(s): Daan de Jong

16.00 – 17.00 **Invited presentation**
Stef Baas - Bayesian Covariance Structure Modeling of Multi-Way Nested and Crossed Data - Applied Mathematics UT

17.00 – 18.00 **Poster Session & Reception**

18.30 **Conference dinner**
IOPS 2022 awards Best Poster & Best Oral Presentation

Best Poster & Oral Presentations
Voting forms for best presentations:
Best Poster Presentation
Best Oral Presentation

Evaluation
In order to plan and improve our future conferences, we would like to ask for your feedback by filling out this Evaluation Form after the conference. Thank you so much.

Name	Title & Abstract
Jasmine Muradchanian	**Title:** The role of results in deciding to publish **Abstract:** The standard method of disseminating science has been publication of study results in scientific journals. However, not all study results reach publication, meaning that our published literature is a selected sample of scientific knowledge as a whole. Whether or not a paper gets published may relate to characteristics such as, for example, the statistical significance of the findings. If this forms the basis for differential publication, then this will result in a selection bias in the sense that the published scientific knowledge is not a good representation of the scientific knowledge that actually exists. This type of bias has been called publication bias. In order to see where and to what extent in the process of generating a scientific paper publication bias occurs, we conducted a study based on surveys completed by authors, reviewers, and editors. In this talk, I would like to present our findings.
Marvin Neumann	**Title**: Encouraging Evidence-based Decision Making: Improving Test Use in Practice **Abstract**: In many situations, decision makers use multiple pieces of information such as test scores and behavioral observations to make important decisions. For example, doctors make diagnoses, judges decide a verdict, and managers decide who to hire for a job. In these situations, decision makers typically combine the information in their head (holistic or clinical combination). Yet, there exist robust findings that more valid decisions are made when information is combined through an algorithm (mechanical or statistical, actuarial combination). So, algorithms are rarely used to combine information in practice, which results in suboptimal decisions. In this talk, I will provide a brief overview of my PhD thesis on encouraging evidence-based decision making in practice. One reason why algorithms are rarely used is that decision-makers' autonomy is restricted in mechanical combination. I will demonstrate how decision makers can retain autonomy in mechanical combination and still make substantially more valid decisions compared to pure holistic combination.
Jeroen Mulder	**Title:** The random intercept cross-lagged panel model **Abstract:** The random intercept cross-lagged panel model (RI-CLPM) is a popular model among psychologists for studying reciprocal effects in longitudinal panel data. It extends the traditional cross-lagged panel model (CLPM) by separating stable (for the duration of the study), between-unit variance from fluctuating, within-unit variance. Autoregressive effects can then be interpreted as purely within-unit effects and carry-over (rather than estimates of stability of the rank-order of units, as is the case in the CLPM), and cross-lagged effects can then be interpreted as the within-unit effect or "spillover" of one domain into another.

	A frequently asked question by substantive researchers in relation to the RI-CLPM, is about the required sample size for detecting hypothesized effects. Although various texts and software packages have been published concerning power analyses for structural equation models (SEM) generally, none have proposed a power analysis strategy that is tailored to the particularities of the RI-CLPM. This can be problematic because mismatches between the power analysis design, the model, and reality, can negatively impact the validity of the recommended sample size and number of repeated measures. This presentation proposes and demonstrates a 6-step Monte Carlo power analysis strategy that is tailored to the RI-CLPM. The strategy is created with usability for applied researchers in mind and is implemented in the R-package *powRICLPM*. The focus is on the (basic) bivariate RI-CLPM, with extensions available to include various (stationarity) constraints over time, measurement error (leading to the stable trait autoregressive trait state model), and non-normal data, and the usage of bounded estimation.
Manuel Haqiqatkhah	**Title:** Skewness and staging: Does the floor effect induce bias in multilevel AR(1) models? **Abstract:** Multilevel autoregressive models are popular choices for the analysis of intensive longitudinal data in psychology. Empirical studies have found a positive correlation between autoregressive parameters of affective time series and the between-person measures of psychopathology, a phenomenon known as the staging effect. However, it has been argued that such findings may represent a statistical artifact: Although common models assume normal error distributions, empirical data (for instance, measurements of negative affect among healthy individuals) often exhibit the floor effect, that is response distributions with high skewness, low mean, and low variability. In this paper, we investigated whether---and to what extent---the floor effect leads to erroneous conclusions by means of a simulation study. We describe three dynamic models which have meaningful substantive interpretations and can produce floor-effect data. We simulate multilevel data from these models, varying skewness but keeping the autoregressive parameter fixed across individuals, while also varying the number of time points and cases. Analyzing these data with the standard multilevel AR(1) model we found that positive bias only occurs when modeling with random residual variance, whereas modeling with fixed residual variance leads to negative bias. We discuss the implications of our study for data collection and modeling choices.
Felix Clouth	**Title:** Causal Inference for Latent Class Analysis **Abstract:** Causal inference techniques such as inverse propensity weighting (IPW) are becoming increasingly popular in medical, social, and behavioral research. When data is collected with an observational study design rather than in a randomized controlled trial, treatment effect estimates will be confounded. However, causal inference provides a toolbox for accounting for these confounding effects and to estimate average treatment effects (ATE) based on observational data. IPW can easily be combined with standard statistical models such as generalized

	linear models or survival analysis. However, sometimes the outcome of interest is not directly observable and a measurement model is needed, e.g., when analyzing patient reported outcome measures data. Latent class analysis (LCA) and its extensions have gained in popularity for analyzing such data as it explicitly models the multidimensionality of these constructs. Recently, we proposed a stepwise approach to incorporate IPW in LCA. First, the measurement model (latent class model without auxiliary variables) is estimated on the unweighted dataset and individuals are classified. Next, the structural model (the effect of the treatment on class membership) is estimated taking into account the classification errors from the first step and IPW. In this talk, I will present our analysis strategy for incorporating IPW in LCA and give an overview of possible extensions of this framework.
Khadiga Sayed	**Title:** Refinement of the extended crosswise model with a number sequence randomizer: Evidence from three different studies in the UK **Abstract:** The Extended Crosswise Model (ECWM) is a randomized response model with neutral response categories, relatively simple instructions, and the availability of a goodness-of-fit test. This paper refines this model with a number sequence randomizer that virtually precludes the possibility to give evasive responses. The motivation for developing this model stems from a strategic priority of WADA (World Anti-Doping Agency) to monitor the prevalence of doping use by elite athletes. For this model we derived a maximum likelihood estimator that allows for binary logistic regression analysis. Three studies were conducted on online platforms with a total of over 6, 000 respondents; two on controlled substance use and one on compliance with COVID-19 regulations in the UK during the first lockdown. The results of these studies are promising. In this presentation, i will display our findings. **Key words:** Randomized response; Self-protective responses; Goodness-of-fit; Unrelated questions; WADA; Extended Crosswise model