

The background of the image is a scenic aerial photograph of the Minneapolis-St. Paul metropolitan area. It features the Mississippi River flowing through the city, lined with vibrant autumn foliage in shades of yellow, orange, and red. In the distance, the city's skyline is visible, dominated by numerous skyscrapers and modern buildings. The overall atmosphere is bright and sunny, suggesting a clear day.

# IMPS 2025



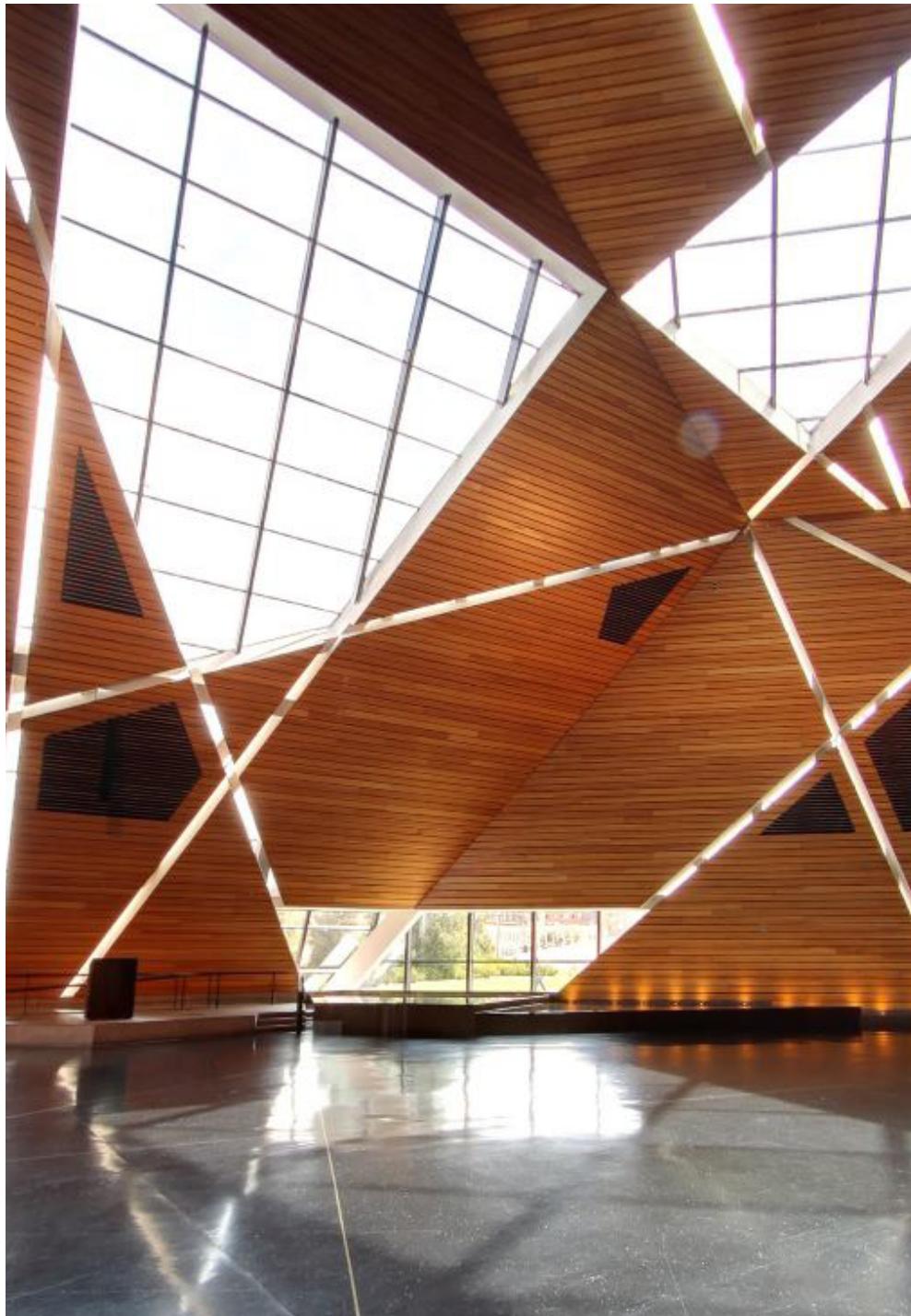
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University of Minnesota • Minneapolis, MN, USA  
July 15-18, 2025 • Short Courses July 14

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Dear Attendees and Guests,

We are delighted to welcome you to IMPS 2025, the 90th Annual Meeting of the Psychometric Society, taking place in the beautiful City of Lakes, Minneapolis, Minnesota, USA. This year's conference is hosted by the Department of Educational Psychology in the College of Education and Human Development (CEHD) at the University of Minnesota–Twin Cities, in collaboration with the Psychometric Society. The meeting will be held at the Graduate Minneapolis by Hilton and the McNamara Alumni Center, both located on the University's main campus and easily accessible via the local light rail system.

The meeting will begin on Monday, July 14, with four parallel short courses. In the evening of July 14th, from 6:30 to 8:30 p.m., registered graduate students are invited to attend a Student Dinner Mixer at the Topgolf Swing Suite, located in the Graduate Minneapolis by Hilton. This event offers complimentary dinner and drinks, as well as the opportunity to connect with fellow students from around the world in a relaxed setting. On Tuesday, July 15, the Welcome Reception and Poster Session will take place jointly from 5:15 to 7:15 p.m. in Memorial Hall at the McNamara Alumni Center. During the session, presenters will be available at their posters to discuss their work and exchange ideas with conference attendees. Finally, this year, we are excited to host our Closing Conference Banquet Reception at the Nicollet Island Pavilion on Friday, July 18, from 6:00 to 9:00 p.m. The venue offers breathtaking views of the Minneapolis skyline and the historic Merriam Street Bridge and Boom Island–Nicollet Island Bridge.

This year promises to be a vibrant meeting with over 300 presentations, close to 100 posters, and attendees from over 30 countries. In addition, the conference features two distinguished keynote speakers, six invited speakers, as well as Dissertation Award, Early Career Award, and Lifetime Achievement Award presentations. Topics covered range from the philosophy of psychometrics to artificial intelligence and from high dimensional statistics to formal models for psychological processes, showing the breadth and versatility of the discipline. We look forward to a bristling IMPS with inspiring discussion and rich intellectual exchange. We hope that you will enjoy a productive meeting, and thank you for joining us.



Denny Borsboom, University of Amsterdam  
President of the Psychometric Society

## **Local Organizing Committee**

- Dr. Nidhi Kohli, Royal and Virginia Anderson Professor of Quantitative Methods  
Dr. Wenchao Ma, John P. Yackel Professor in Educational Assessment and Measurement  
Dr. Nana Kim, Assistant Professor  
Dr. Haoran Li, Assistant Professor



**Short Course #1:**  
[Bayesian Psychometric Modeling and Blavaan](#)

Monday, July 14, 2025  
9:00 a.m. - 5:00 p.m. (*Full Day*)  
Location: GH: Think 4

Speaker:  
Ed Merkle



**Short Course #3:**  
[Modeling Item-Level Heterogeneous Treatment Effects: A Tutorial in R](#)

Monday, July 14, 2025  
9:00 a.m. - 12:30 p.m. (*Half Day*)  
Location: GH: Think 3

Speaker:  
Joshua Gilbert



**Short Course #2:**  
[Cognitive Diagnosis Models: Theory and Applications in R](#)

Monday, July 14, 2025  
9:00 a.m. - 5:00 p.m. (*Full Day*)  
Location: GH: Think 5

Speakers:  
Wenchao Ma, Jimmy de la Torre, and  
Sangbeak Ye



**Short Course #4:**  
[Development of Interactive Shiny Modules for Psychometric Research Dissemination](#)

Monday, July 14, 2025  
2:00 p.m. - 5:30 p.m. (*Half Day*)  
Location: GH: Think 3

Speakers:  
Patrícia Martinková & Jan Netík



# IMPS 2025 Keynote Speakers

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## Prof. James Stephen Marron

**University of North Carolina**

Tuesday, July 15  
9:15 a.m. - 10:15 a.m.  
Location: GH: Meridian 1-2

### **Keynote Address:**

Data Integration Via Analysis of Subspaces



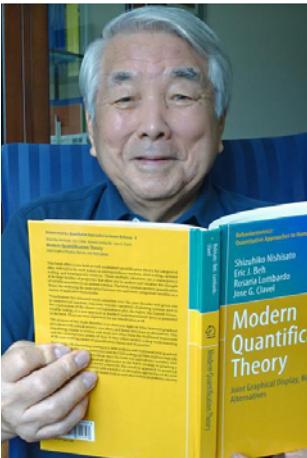
## Prof. Mark Himmelstein

**Georgia Institute of Technology**

Tuesday, July 15  
4:15 p.m. - 5:15 p.m.  
Location: GH: Meridian 1-2

### **2025 Dissertation Prize:**

Measuring Persuasion Without Measuring a Prior Belief: A New Application of Planned Missing Data Techniques



## Prof. Shizuhiko Nishisato

**University of Toronto**

Wednesday, July 16  
10:45 a.m. - 11:45 a.m.  
Location: GH: Meridian 1-2

### **Career Award for Lifetime Achievement:**

Reminiscing Controversies Over Joint Graphical Display in Quantification



## Prof. Carolyn J. Anderson

**University of Illinois Urbana-Champaign**

Thursday, July 17  
10:45 a.m. - 11:45 a.m.  
Location: GH: Meridian 1-2

### **Keynote Address:**

Association and Measurement Models for Categorical Data



## Prof. Maria Bolsinova

**Tilburg University**

Thursday, July 17  
4:45 p.m. - 5:45 p.m.  
Location: GH: Meridian 1-2

### **Early Career Award:**

Psychometrics for Adaptive Learning: Challenges and Solutions



## Prof. Denny Borsboom

**University of Amsterdam**

Friday, July 18  
2:30 p.m. - 3:30 p.m.  
Location: GH: Meridian 1-2

### **2025 Presidential Address:**

Psychometric Models and Psychological Theories

# IMPS 2025 Invited Speakers

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## Dr. Yueqin Hu & Dr. Hongyun Liu

**Beijing Normal University**

Tuesday, July 15

1:30 p.m. - 2:15 p.m.

Location: GH: Meridian 1-2

Exploring Intensive Longitudinal Data Analysis: Challenges and Advances in Measurement and Modeling



## Dr. Nidhi Kohli

**University of Minnesota**

Tuesday, July 15

1:30 p.m. - 2:15 p.m.

Location: GH: Meridian 3-4

Bayesian Longitudinal Mediation Models



## Dr. Matthew Madison

**University of Georgia**

Wednesday, July 16

4:45 p.m. - 5:30 p.m.

Location: GH: Meridian 1-2

Diagnostic Classification Models: Advancement Through Simplicity



## Dr. Jessica Flake

**University of British Columbia**

Wednesday, July 16

4:45 p.m. - 5:30 p.m.

Location: GH: Meridian 3-4

Methodological Research for the Open Science Era



## Dr. Aleksandar Tomašević

**University of Novi Sad, Serbia**

Friday, July 18

10:45 a.m. - 11:30 a.m.

Location: GH: Meridian 1-2

Capturing Emotional Dynamics: Integrating Transformer Models with Dynamic Exploratory Graph Analysis



## Dr. Keith A. Markus

**The City University of New York**

Friday, July 18

10:45 a.m. - 11:30 a.m.

Location: GH: Meridian 3-4

Four Takes on Construct Validity: From Logical Empiricism to Varieties of Scientific Realism

## Graduate Student Dinner Mixer

**Monday July 14 | 6:30 p.m. - 8:30 p.m.**

Location: [Topgolf Swing Suite](#)

(615 Washington Ave SE, Minneapolis, MN 55414)

We are delighted to host our annual exclusive graduate student dinner mixer at the Topgolf Swing Suite.

As a registered student, you are welcome to join this event for a complimentary dinner and have the opportunity to meet and connect with other students from around the world.

The graduate student dinner mixer will take place on Monday, July 14, from 6:30 p.m. to 8:30 p.m.



## IMPS 2025 Welcome Reception & Poster Session

**Tuesday, July 15 | 5:15 p.m. - 7:15 p.m.**

Location: [The Memorial Hall of the McNamara Center](#) (200 SE Oak St, Minneapolis, MN 55455)

We are thrilled to invite you to this year's welcome reception on Tuesday July 15, 2025 from 5:15 p.m. to 7:15 p.m. at The Memorial Hall of McNamara Center.

Join us for an evening of fun and networking. Don't miss the chance to meet UMN Goldy Gopher from 5:15 p.m. to 6:15 p.m. Light appetizers will be served and a cash bar will be available to attendees and their guests.

This year, the Welcome Reception will be held in conjunction with the Poster Session Reception, offering meeting attendees the opportunity to explore a diverse collection of psychometric research. Presenters will be standing by their posters from 5:45 p.m. – 7:15 p.m. in this relaxed and fun setting.

**A bonus this year,** the McNamara Alumni Center also has opened up their beautiful facility for attendees to not only enjoy the striking features of the well designed facility that reflects Minnesota's natural assets in the Memorial Hall event space, attendees can also visit the Heritage Gallery Museum during the Welcome Reception.

To learn more about the facility [click here](#) and about the Museum [click here](#).

[Click here](#) to view the IMPS 2025 list of poster titles and presenters.

Additional information for poster presenters can be found [here](#).

## Group Photo

**Thursday, July 17 | 4:15 p.m. - 4:30 p.m.**

Location: [The Memorial Hall of the McNamara Center](#) (200 SE Oak St, Minneapolis, MN 55455)

The [Group Photo](#) is a traditional moment of capturing the great time of IMPS conference for future memories. All attendees are welcome to join!

The group photo will be made available for download on the Society website after the conference. Mark your calendar, and more details will be shared with attendees onsite.

We look forward to capturing this memorable moment with all of you in the Twin Cities!



## IMPS 2025 Closing Banquet Reception

**Friday, July 18 | 6:00 p.m. - 9:00 p.m.**

Location: **Nicollet Island Pavilion** (40 Power Street, Minneapolis, MN 55401)

We are excited to host the IMPS Closing Conference Banquet Reception at the award-winning Nicollet Island Pavilion on Friday, July 18, from 6:00 p.m. to 9:00 p.m., following the final day of conference sessions.

Situated along the banks of the Mississippi River, Nicollet Island Pavilion offers breathtaking views of the Minneapolis skyline and the historic Merriam Street Bridge and Boom Island–Nicollet Island Bridge. The Mississippi River holds deep historical

significance for the state of Minnesota and the United States, playing a crucial role in trade, transportation, and cultural exchange. For approximately 12,000 years, American Indian tribes have inhabited the upper Mississippi Valley, shaping its rich heritage. Over time, the river has been instrumental in the growth of many U.S. cities along its course, including the Twin Cities of Minneapolis and St. Paul.

Conveniently located near campus, this historic and elegant venue provides the perfect backdrop for an evening of collegial connection and reflection as we conclude the 90th meeting of the Psychometric Society. You are welcome to bring a guest or guests

to the banquet for an additional fee. Please be sure to arrange this ahead of time to ensure tickets are reserved by selecting this option on the online registration form or the downloadable PDF registration form when registration opens.

We look forward to closing out our conference with this special event and creating unforgettable memories together in Minneapolis this summer.

The venue is easily accessible by rideshare services (e.g., Uber, Lyft) and public transportation, including the Metro Transit buses and light rail. [\*\*Kindly find the relevant transportation information here.\*\*](#)



# General Conference Information

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## Conference Venue

This year, IMPS will be held in the wonderful city of Minneapolis, MN. The conference is hosted by the University of Minnesota Twin Cities and the Psychometric Society.

For an interactive map, [click here](#).

Participants can find the IMPS headquarter hotel (Graduate Hotel, labeled by star) and McNamara Alumni Center (place for events and sessions, labeled by a flag). The interactive map also shows some restaurants close to the Graduate Hotel and a few other hotels nearby.

Attendees can find also an interactive map for the University of Minnesota-Twin Cities campus [here](#).

The opening, keynotes, and awards talks will take place in the Meridian Ballroom at the Graduate Hotel. The Presidential Address, members meeting and closing talks will take place at the McNamara Alumni Center in the Memorial Hall. The parallel sessions will take place in both the Graduate Hotel and McNamara Alumni Center which are connected buildings adjacent to each other that attendees can access via a tunnel or attendees can walk outside along the Scholars Walk way about 5-minutes long. From the 2nd floor of the hotel, look for signs to take the tunnel to McNamara. Once you're through the tunnel, you arrive in McNamara's fireplace lounge at the Information Desk where our signage will guide you to the IMPS session and events.

[Click here](#) for the walking route from the Graduate Hotel to McNamara. Refer to the map on pages 12 & 13 for a particular session room, the registration area, and/or the refreshment break area (Meridian Foyer). Check out all events [here](#).

## Special Accommodations

If you require special accommodations and/or have special dietary needs during the meeting, please visit the IMPS Registration Desk located at the Graduate Hotel on the 2nd floor - Top of the Escalators.

## Photography Disclosure

Portions of this event may be videotaped and photographed by the meeting and/or the media. By attending this meeting, you accept the possibility that you might be videotaped or photographed.

## IMPS Registration and Informational Desk

The IMPS Registration and Informational Desk is located at the Graduate Hotel on the 2nd floor - Top of the Escalators during the Annual Meeting, July 14 to July 18. A representative from The Rees Group (management company supporting the Society) is available to offer attendee assistance during the conference to answer questions, renew memberships, or assist those interested in joining the Psychometric Society. You can also join online [here](#).

## Registration Desk Hours of Operation:

Monday, July 14 | 8:00 a.m. - 11:00 a.m.  
and 1:30 p.m. - 5:30 p.m.

(*Short Course Workshops Day; however, the desk is available to all meeting attendees.*)

Tuesday, July 15 | 7:30 a.m. - 4:30 p.m.

Wednesday, July 16 | 7:30 a.m. - 5:00 p.m.

Thursday, July 17 | 7:30 a.m. - 4:30 p.m.

Friday, July 18 | 7:30 a.m. - 3:30 p.m.

## Name Badge Policy

Meeting name badges are required for entrance to all conference sessions and events. Please wear your badge at all times. Thank you!

## Thumb Drives containing the IMPS 2025 Abstract PDF and Meeting Materials

The Society has placed the IMPS 2025 abstract PDF and meeting materials on thumb drives for "temporary use" on site. These will be available at the IMPS Registration Desk to download to your personal computer if needed.

*The Society conference page and the conference app will also host the IMPS 2025 materials.*

## Conference Attire

Business casual attire is suggested for the meeting but is not mandatory. Please note that the meeting takes place during the summer.

In Minneapolis, the average temperature in July ranges from 63°F (17°C) to 83°F (28°C). July is generally considered one of the most inviting months for outdoor activities and to especially enjoy the city of Minneapolis and nearby areas in MN. We recommend dressing appropriately to the weather, but in layers as all venues are air conditioned.

## Meeting Breakfast, Refreshment Breaks, and Lunch Breaks

The IMPS meeting will provide a daily hosted light continental breakfast buffet (8:00 a.m. - 9:00 a.m.) and morning and afternoon beverage refreshments during the session breaks (refer to the SAAG for daily times). Lunch will not be provided by the Society; rather, attendees will be on their own for lunch.

To view nearby restaurant information, [click here](#). For a interactive map, [click here](#).

For an interactive campus map, [click here](#).

## IMPS 2025 Mobile App

The Psychometric Society has a mobile app for IMPS 2025. Please download the “**EX ORDO**” app using Apple App Store (iOS) or Google Play Store (Android). Once you open the app, click the Ex Ordo icon to create an account or log in. Then search under the Find Guides tab. Click on the “Have a Passphrase?” button and enter “**imps2025**.” Tap on the guide and then join to access the IMPS 2025 Mobile App.

Complimentary internet will be available at the Conference Venues, however, we suggest you download the app before you travel to the meeting site. Please also be aware of any additional data charges when using the mobile app. Attendees will be able to access the program, abstracts, and more on this year's app.

## Transportation

Transportation from MSP Airport to the Graduate Hotel and UMN Campus can be done via public transportation, rideshare or taxi. Conveniently located off Interstates 35W and 94, the MAC and Graduate Hotel are easy to get to and is less than 2 miles from downtown Minneapolis and 14 miles from the airport. The hotel is located on the green line of the light rail with service to Minneapolis' entertainment districts and to MSP International Airport (requires 1 transfer).

For additional transportation information, [click here](#).

## Psychometric Society Social Media

Don't forget to post this week: use **#IMPS2025** on any of the society's social media channels!

[Facebook](#)

X

[LinkedIn](#)

## Wi-Fi Access

### Graduate Hotel (GH):

There is a complimentary network in the Graduate Hotel for all attendees. Guests can simply connect to Graduate\_meetings and follow the prompts to accept the terms and conditions to be connected to the internet.

### McNamara (MAC):

The center has an open network. It's UofM - Guest. Guests will connect to the network, and then open a web browser where a splash page will pop-up to accept the terms and conditions and then be connected to the internet.

The Program Committee is responsible for the scientific program of International Meeting of the Psychometric Society. Its duties include inviting speakers, short-course presenters, chairs, and organizers of invited sessions; reviewing submitted abstracts and proposals for symposia; designing the program; and providing advice and feedback on the program and abstract books. According to the bylaws, the president is the chair of the Program Committee, and the members are the immediate past president, president-elect, secretary, four regular members, and any number of adjunct members. Two members of the Program Committee are appointed by the president every year to serve for two years. In addition, the president may appoint, for a term of up to one year each, any number of adjunct members.

## 2025 Society President & Organizing Committee Chair:

**Denny Borsboom, PhD**  
University of Amsterdam  
The Netherlands

## IMPS 2025 Local Committee

**Nidhi Kohli, PhD**  
Local Host Committee Chair  
Royal and Virginia Anderson Professor of Quantitative Methods  
Department of Educational Psychology  
University of Minnesota  
Minneapolis, MN

### **Wenchao Ma, Ph.D.**

John P. Yackel Professor in Educational Assessment and Measurement  
Department of Educational Psychology  
University of Minnesota  
Minneapolis, MN

### **Nana Kim, PhD**

Department of Educational Psychology  
University of Minnesota  
Minneapolis, MN

### **Haoran Li, PhD**

Department of Educational Psychology  
University of Minnesota  
Minneapolis, MN

### **IMPS 2025 Program Committee:**

- Nidhi Kohli (University of Minnesota)
- Sy-Miin Chow (Penn State University)
- Mark Wilson (UC Berkeley)
- Sylvia Bianconcini (University of Bologna)
- Minjeong Jeon (UCLA)
- Ed Merkle (University of Missouri)
- Laura Bringmann (University of Groningen)
- Peter Halpin (University of North Carolina at Chapel Hill)
- David Torres Irribarra (Pontificia Universidad Católica de Chile)
- Marie Wiberg (Umeå University)
- Gyeongcheol Cho (The Ohio State University)
- Hudson Golino (The University of Virginia)
- Katrijn van Deun (Tilburg University)
- Ji Hoon Ryoo (Yonsei University)
- Mijke Rhett (UC Davis)

### **THANK YOU**

A very extra special thank you to our local organizing committee members **Nidhi Kohli, Wenchao Ma, Nana Kim, and Haoran Li**.

Many thanks also go to all the local volunteers for all their hard work: Ziwei Zhang, Qian Zhao, Yue Zhao, Jichuan Wu, Scarlett Escudero Osorio, Yiming Chen, Varun Athilat, Sujit Maharjan, Cristaly Mercado, Kate Song, Shengyin (Sabrina) Sun, Ekom Eyo, Emily Chan, Jesus Delgado, Xinyu Liu, Anne Foegen, Rochelle Hammer, and Raj Wahlquist. Thanks to Anika Korobkov for her assistance in preparing the program.

Thank you to the conference host recommending the IMPS 2025 site this year: Department of Educational Psychology at the University of Minnesota, Minnesota, USA.

**We thank you all for joining us this year at IMPS 2025, and we sincerely hope you have a wonderful visit in Minneapolis, MN!**

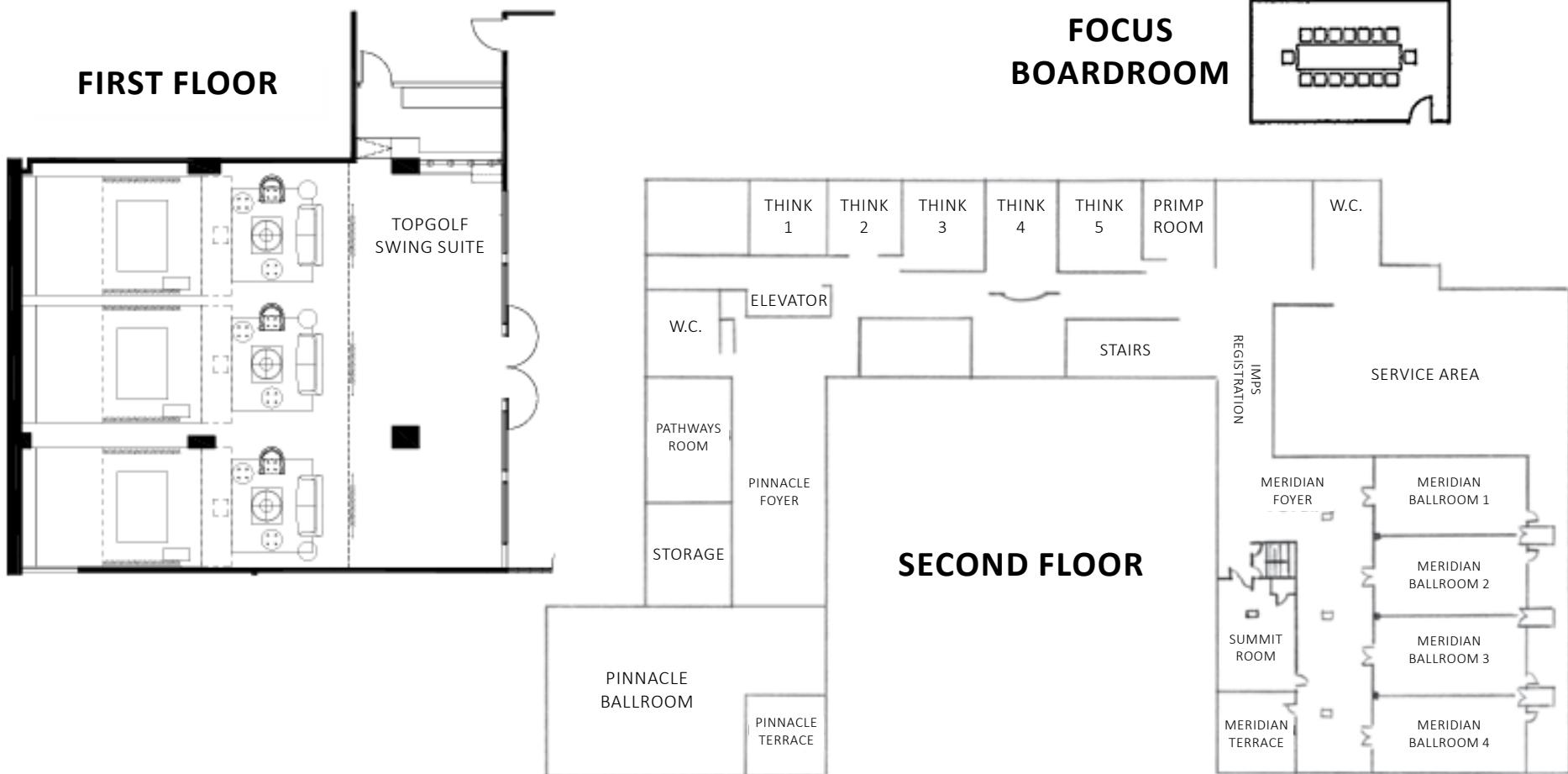
### **Psychometric Society**

For more information about the Psychometric Society or membership, contact the Psychometric Society Association Management Company:

4300 Duraform Lane, Suite A  
Windsor, WI 53598  
Telephone: 608-268-4712  
Email: [info@psychometricsociety.org](mailto:info@psychometricsociety.org)

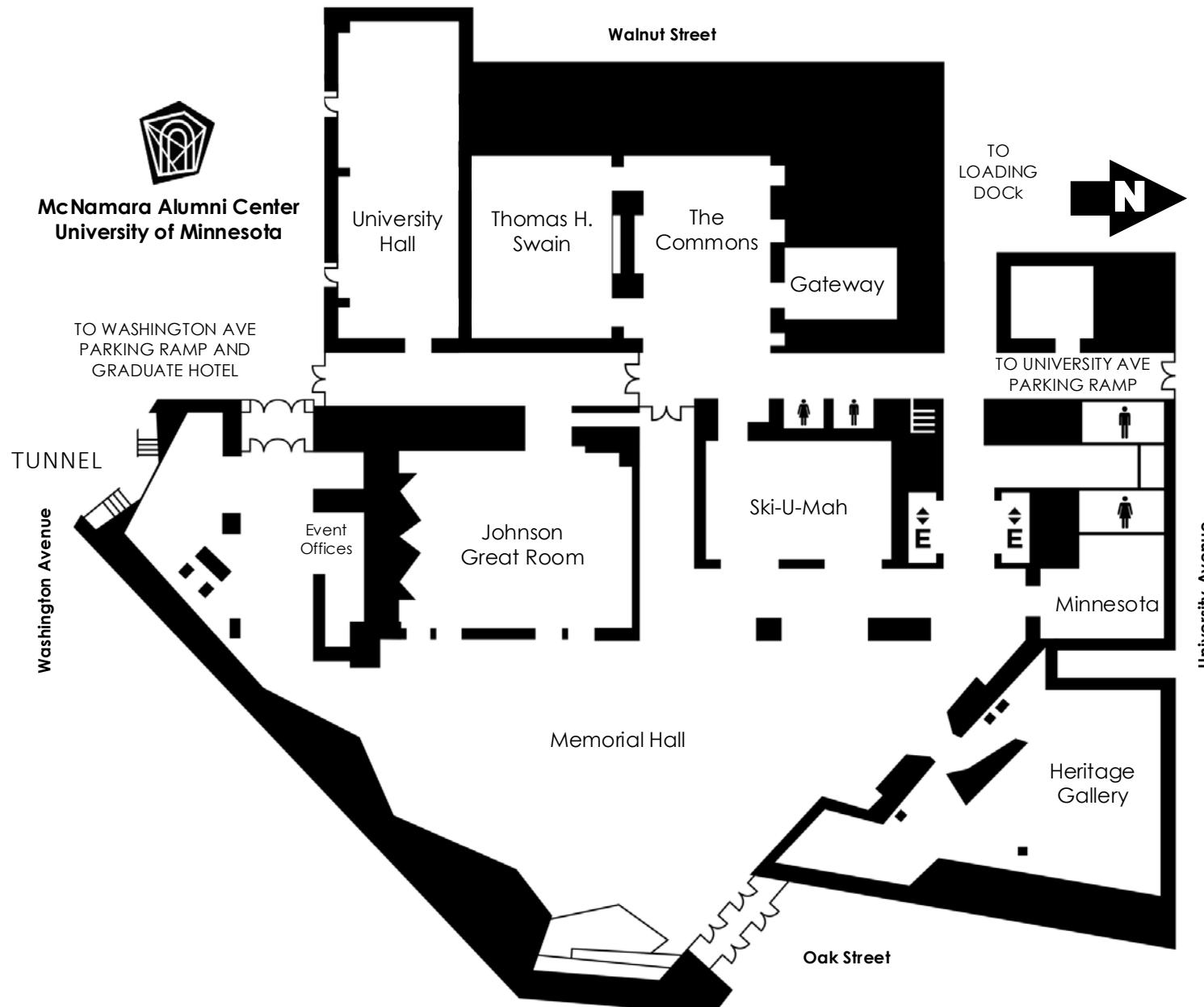
# Conference Maps • The Graduate Hotel

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# Conference Maps • McNamara Alumni Center

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## Graduate by Hilton Minneapolis

Top of the Escalators Foyer (Second Floor)  
615 Washington Ave SE, Minneapolis, MN 55414

### Monday, July 14

Registration Hours:  
8:00 a.m. - 11:00 a.m.  
and 1:30 p.m. - 5:30 p.m.

Cont. Breakfast Hours:  
8:00 a.m. - 9:00 a.m.

### Tuesday, July 15

Registration Hours:  
7:30 a.m. - 4:30 p.m.

Cont. Breakfast Hours:  
8:00 a.m. - 9:00 a.m.

### Wednesday, July 16

Registration Hours:  
7:30 a.m. - 5:00 p.m.

Cont. Breakfast Hours:  
8:00 a.m. - 9:00 a.m.

### Thursday, July 17

Registration Hours:  
7:30 a.m. - 4:30 p.m.

Cont. Breakfast Hours:  
8:00 a.m. - 9:00 a.m.

### Friday, July 18

Registration Hours:  
7:30 a.m. - 3:30 p.m.

Cont. Breakfast Hours:  
8:00 a.m. - 9:00 a.m.

All Times Listed in  
Central Time

## Monday • July 14

### GH: Think 4

9:00 a.m. - 5:00 p.m.  
Short Course #1:

**Bayesian Psychometric Modeling and Blavaan**  
Speakers: Prof. Ed Merkle

9:00 a.m. - 10:30 a.m. • Short Course  
10:30 a.m. - 10:45 a.m. • Refreshment Break  
10:50 a.m. - 12:00 p.m. • Short Course  
12:00 p.m. - 1:30 p.m. • Lunch Break (On Your Own)  
1:30 p.m. - 3:00 p.m. • Short Course  
3:00 p.m. - 3:15 p.m. • Refreshment Break  
3:15 p.m. - 4:45 p.m. • Short Course  
4:45 p.m. - 5:00 p.m. • Q&A

### GH: Think 5

9:00 a.m. - 5:00 p.m.  
Short Course #2:

**Cognitive Diagnosis Models: Theory and Applications in R**  
Speakers: Dr. Wenchao Ma, Prof. Jimmy de la Torre,  
and Dr. Sangbeak Ye

9:00 a.m. - 10:30 a.m. • Short Course  
10:30 a.m. - 10:50 a.m. • Refreshment Break  
10:50 a.m. - 12:10 p.m. • Short Course  
12:10 p.m. - 1:10 p.m. • Lunch Break (On Your Own)  
1:30 p.m. - 3:10 p.m. • Short Course  
3:10 p.m. - 3:30 p.m. • Refreshment Break  
3:30 p.m. - 4:50 p.m. • Short Course  
4:50 p.m. - 5:00 p.m. • Wrap-up

### GH: Think 3

9:30 a.m. - 12:30 p.m.  
Short Course #3:

**Modeling Item-Level Heterogeneous  
Treatment Effects: A Tutorial in R**  
Speakers: Dr. Joshua Gilbert

9:30 a.m. - 11:00 a.m. • Short Course  
11:00 a.m. - 11:15 a.m. • Refreshment Break  
11:15 a.m. - 12:30 p.m. • Short Course

### GH: Think 3

2:00 p.m. - 5:30 p.m.  
Short Course #4:

**Development of Interactive Shiny Modules for  
Psychometric Research Dissemination**  
Speakers: Dr. Patrícia Martinková & Dr. Jan Netik

2:00 p.m. - 3:30 p.m. • Short Course  
3:30 p.m. - 4:00 p.m. • Refreshment Break  
4:00 p.m. - 5:30 p.m. • Short Course

Topgolf Swing Suite (In The Graduate Hotel) | Address: 615 Washington Ave SE, Minneapolis, MN 55414

## Graduate Student Dinner Mixer

This event is exclusively for graduate students and will be hosted by the Psychometric Society.

6:30 p.m. -  
8:30 p.m.

9:00 a.m. -  
9:15 a.m.**GH: Meridian 1-2****Welcome Remarks:** Prof. Denny Borsboom, Prof. Nidhi Kohli,  
Prof. Michael Rodriguez, and Prof. Anne Foegen9:15 a.m. -  
10:15 a.m.**GH: Meridian 1-2****Keynote Address:** Prof. Steve Marron  
**Data Integration Via Analysis of Subspaces**  
Chair: Matthias von Davier10:15 a.m. -  
10:45 a.m.**GH: Meridian Ballroom Foyer****Refreshment Break****GH: Meridian 1-2****Session: Construct Validity, Past and Present:  
From Meehl and Minnesota to Beyond**  
Chair: Alan Love

Honoring the Minnesota legacy of Paul Meehl, this session features a panel discussion on construct validity with short opening remarks from participants (philosophers and psychometricians), followed by an open conversation with the audience.

Participants include Bennett McNulty, Jessica Flake, Susan Embretson, Noah van Dongen, Alan Love, and Denny Borsboom.

**GH: Meridian 3-4****Session: Artificial Intelligence I**  
Chair: He Ren**A critical evaluation of similarity indices for  
psychometric research**  
Mr. Josiah Hunsberger**Enhancing item parameters prediction with  
transfer learning**  
Mr. He Ren**Evaluating the capabilities of large language  
models in evidence synthesis**  
Ms. Yuchen Zhang**Item evaluation using LLM-respondents: A  
psychometric analysis with open-source data**  
Ms. Yunting Liu**MAC: Johnson****Session: Multilevel Modeling**  
Chair: Siyuan Chen**Careless responding in intensive longitudinal data:  
Effects on multilevel models**  
Ms. Alicia Gernand**The use of a multilevel multiple-indicators random-  
intercept cross-lagged panel model in college student  
goal pursuit**  
Dr. Hiroki Matsuo**What if sample size is the confound in multilevel  
models?**  
Mr. Michael Truong**Estimating reliability using unbiased variance  
components in a nested design with group-specific  
distributions**  
Dr. Siyuan Marco Chen**Multilevel model ICCs: Issues with reduced-model  
computation and full-model-based solutions**  
Ms. Yingchi Guo**MAC: Thomas Swain****Session: Methods for Aberrant Behaviors**  
Chair: Daniel Bolt**Evaluating rapid guessing as noninformative about  
respondent proficiency**  
Prof. Daniel Bolt**Integrating disengagement identification into  
response style modeling: Response times matter**  
Mr. Jieyuan Dong**Detecting aberrant responses using a general  
mixture model for cognitive diagnosis**  
Mr. Joemari Olea**A beta mixture model for careless respondent  
detection in visual analogue scale data**  
Ms. Lijin Zhang10:45 a.m. -  
12:00 p.m.**GH: Think 4****Session: Clustering Analysis**  
Chair: Paul Wesley Scott**Thresholding method for identifying anomalies in  
wellbeing time series data**  
Dr. Marie Turcicova**Clustering experience sampled time series with  
deterministic and stochastic trends**  
Dr. Paul Wesley Scott**Understanding psychological temporal patterns:  
Clustering time-series data and its challenges**  
Ms. Yuanyuan Ji**GH: Think 5****Session: Advances in Parameter Estimation**  
Chair: Matthias von Davier**Higher-order extended variational approximation to  
estimate latent variable models**  
Prof. Björn Andersson**Resolving computational challenges of SEMs with big  
data using a divide-and-conquer approach to Bayesian  
synthesis**  
Prof. Katerina Marcoulides**Likelihood ratio tests with marginal maximum likelihood  
using laplace approximations and adaptive quadrature**  
Ms. Lu Zhang**An improved Satterthwaite (1941, 1946) effective df  
Approximation**  
Prof. Matthias von Davier**Calibrated frequentist inference by stochastic  
approximation**  
Prof. Yang Liu**GH: Think 3****Session: Item Response Theory I**  
Chair: Nana Kim**Unexplained item-person interactions due to  
heterogeneous item discriminations across  
individuals**  
Dr. Nana Kim**Impact of item locations on parameter recovery  
with the GGUM**  
Ms. Nicole Bonge**Exposome burden scores to summarize  
environmental chemical mixtures: Creating a  
common scale for cross-study harmonization,  
report-back and precision environmental health**  
Dr. Shelley Liu**Integrating multidimensional scaling into the  
multidimensional generalized graded unfolding  
model**  
Ms. Zhaoyu Wang

TUESDAY  
CONTINUED  
12:00 p.m. -  
1:30 p.m.

## Lunch (On Your Own) | Recommended Restaurants

1:30 p.m. -  
2:15 p.m.

### GH: Meridian 1-2

**Invited Speaker: Prof. Hongyun Liu & Prof. Yueqin Hu**  
**Exploring Intensive Longitudinal Data Analysis: Challenges and Advances in Measurement and Modeling**  
Chair: Ying (Alison) Cheng

### GH: Meridian 3-4

**Invited Speaker: Prof. Nidhi Kohli**  
**Bayesian Longitudinal Mediation Models**  
Chair: Sophia Rabe-Hesketh

### GH: Meridian 1-2

**Session: Bayesian Methods and Their Applications**  
Chair: David Kaplan

**Estimating marginal effects with zero-inflated Poisson models**  
Mr. Chendong Li

**Probabilistic projections of country-level progress to the UN SDG indicator of minimum proficiency in reading and mathematics**  
Prof. David Kaplan

**Fast and efficient robust Bayesian meta-analysis with spike-and-slab priors**  
Mr. František Bartoš

**An innovative way of estimating subgroups mean estimates: SABDB**  
Dr. Sinan Yavuz

**Multilevel heterogeneous factor model with fixed covariates**  
Ms. Meijin Lin

### GH: Meridian 3-4

**Session: Applications of Cognitive Diagnostic Models**  
Chair: Wenchao Ma

**Analyzing teacher mathematics skills using cognitive diagnosis modeling**  
Mr. Nurym Shora

**An empirical comparison of cognitive diagnosis model and multidimensional IRT**  
Prof. Wenchao Ma

**The choice between cognitive diagnosis and item response theory: A case study from medical education**  
Prof. Youn Seon Lim

**Cognitive diagnostic models for measuring 21st century skills**  
Ms. Kristin Lansing

### MAC: Johnson

**Session: Process Data Analysis**  
Chair: Tracy Sweet

**Advancing behavioral pattern clustering with time-warped longest common subsequence method on process data**  
Dr. Qiwei He

**Understanding the evolution of individual response process: An exploratory approach**  
Ms. Ruiting Shen

**A Copula-based joint model for item responses and response times**  
Mr. Sunbeam Kwon

**Modeling process data using latent space models**  
Dr. Tracy Sweet

**A utility-maximization framework for joint modeling of time and accuracy**  
Dr. Weicong Lyu

### MAC: Thomas Swain

**Session: Differential Item Functioning and Measurement Invariance I**  
Chair: Qingzhou Shi

**Evaluation of partial measurement invariance under sparse ordinal indicators using induced Dirichlet threshold priors**  
Mr. Fatih Ozkan

**Statistical analysis of large-scale item response data under measurement non-invariance: A new alignment method and its application to PISA 2022**  
Dr. Jing Ouyang

**Machine learning methods for differential item functioning: A systematic review**  
Mr. Mubarak Mojoyinola

**Investigating CogAT 7: Intersectional measurement invariance using ASEIM**  
Dr. Qingzhou Shi

**Can measurement invariance be established in a non-ergodic situation?**  
Mr. YeongJin Jo

2:30 p.m. -  
3:45 p.m.

### GH: Think 4

**Session: Conceptual Issues in Measurement**  
Chair: Derek Briggs

**From interval scales to scales with intervals**  
Prof. Derek Briggs

**Tailoring educational assessments for varied student demographics: An initial exploration**  
Dr. Sandip Sinharay

**An update on Jaeger & Hendricks: Publishing in psychological measurement**  
Mrs. Victoria Quirk

### GH: Think 5

**Session: Dynamic Value Added Models**  
Chair: Ernesto San Martin

**Dynamic value-added in school effectiveness: A model-free approach**  
Dr. Sébastien Van Bellegem

**Temporally dynamic, cohort-varying value-added models**  
Dr. Ernesto San Martin

**Bayesian approach to modeling dynamic group membership in nonlinear random effects models**  
Prof. Nidhi Kohli

### GH: Think 3

**Session: What Can Parameter Moderation do for You?**  
Chair: Sanford Student

**Improving the evaluation of construct change over time: Comparing longitudinal moderated nonlinear factor analysis to the conventional first-order growth model**  
Dr. Siyuan Marco Chen

**Advancing a general framework of parameter moderation**  
Dr. Ethan McCormick

**Individual variability as a moderator of latent structural relations**  
Mr. Joshua R. Shulkin

**Generalizing the specification and estimation of item heterogeneity models with parameter moderation**  
Dr. Sanford Student



TUESDAY  
CONTINUED  
3:45 p.m. -  
4:15 p.m.

GH: Meridian Ballroom Foyer

## Refreshment Break

4:15 p.m. -  
5:00 p.m.

GH: Meridian 1-2

**Dissertation Award Speaker: Dr. Mark Himmelstein**  
**Measuring Persuasion Without Measuring a Prior Belief: A New Application of Planned Missing Data Techniques**  
Chair: David Kaplan

5:15 p.m. -  
7:15 p.m.

MAC: Memorial Hall

## Welcome Reception

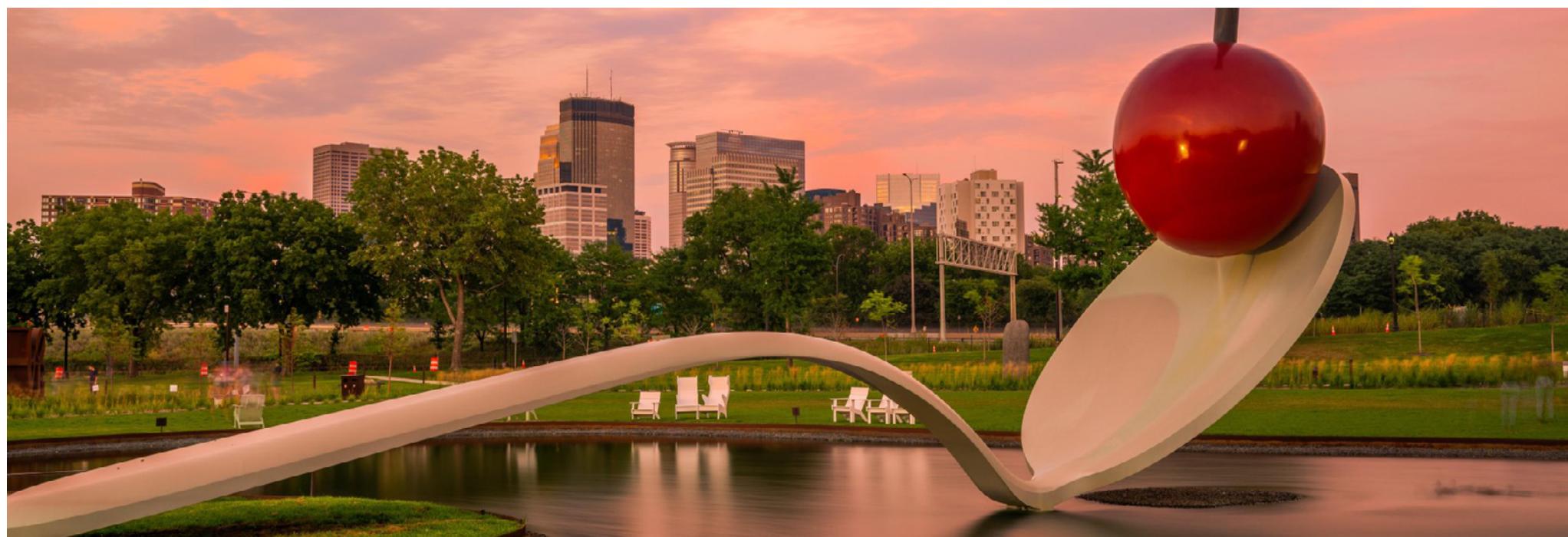
**5:15 p.m. - 7:15 p.m. • Welcome Reception**

**5:30 p.m. • Welcome Remarks**

*Prof. Nidhi Kohli, Prof. LeAnne Johnson, and Prof. Frank Symons*

**5:45 p.m. - 7:15 p.m. • Poster Session**

This year's Welcome Reception is in combination with the Poster Session. Enjoy light appetizers, a cash bar, an appearance by Goldy the Gopher - UMN Mascot, all while presenters will be at their posters for attendees to explore a diverse collection of psychometric research.



GH: Meridian 1-2	GH: Meridian 3-4	MAC: Johnson	MAC: Thomas Swain
<p><b>Session: Mediation Analysis</b> Chair: Qijin Chen</p> <p><b>On structural misspecifications in latent variable mediation analysis</b> Mr. Bing Cai Kok</p> <p><b>Advancing multiple-group mediation using Bayesian regularization</b> Ms. Emma Somer</p> <p><b>Nonlinear mediation model with Bayesian p-splines</b> Dr. Qijin Chen</p> <p><b>Investigating the impact of cross-loadings on model fit and mediation inferences in the latent mediator model</b> Ms. Qiulin Lu</p> <p><b>Longitudinal heterogeneous mediation analysis with latent mediators and a time-to-event outcome</b> Dr. Rongqian Sun</p>	<p><b>Session: Network Models I</b> Chair: Hao Luo</p> <p><b>Comparing symptom network structure across multiple psychiatric disorders</b> Dr. Hao Luo</p> <p><b>[Degree] distributions in psychological networks</b> Dr. Jonathan Park</p> <p><b>Neighborhood selection in cross-sectional network analysis for ordinal data</b> Mr. Kai Jannik Nehler</p> <p><b>The impact of measurement error in dynamic network models</b> Ms. Reeta Kankaanpää</p> <p><b>The invariance partial pruning approach to the network comparison in longitudinal data</b> Mr. Xinkai Du</p>	<p><b>Session: Generative Psychometrics: Advancing Psychological Scale Development Through Large Language Models</b> Chair: Hudson Golino</p> <p><b>AI-GENIE: A simulation study on the fully automatic scale development methodology</b> Ms. Lara Russell-Lasalandra</p> <p><b>Empirical validation of AI-GENIE</b> Dr. Alexander Christensen</p> <p><b>Optimizing LLM embeddings for automatic item development and validation</b> Dr. Hudson Golino</p>	<p><b>Session: Validity</b> Chair: Dr. Eduardo Alarcon-Bustamante</p> <p><b>Understanding the predictive capacity of admission test scores across the scale</b> Mr. Pablo Espinoza</p> <p><b>Decomposing the predictive capacity of a selection test</b> Dr. Eduardo Alarcón-Bustamante</p> <p><b>Psychometric measurement of forecasters using the wisdom of the crowd</b> Ms. Jessica Helmer</p>

9:00 a.m.  
- 10:15 a.m.

GH: Think 4	GH: Think 5	GH: Think 3
<p><b>Session: Cognitive Diagnostic Models I</b> Chair: Jonathan Templin</p> <p><b>Bayesian criterion-referenced diagnostic classification models</b> Dr. Jonathan Templin</p> <p><b>A Bayesian semi-parametric framework for cognitive diagnostic models</b> Mr. Michel Cordoba</p> <p><b>Model-based differential item functioning detection in cognitive diagnostic assessments</b> Ms. Song Zhili</p>	<p><b>Session: Computer Adaptive Testing I</b> Chair: Susan Embretson</p> <p><b>Variable-length fully Bayesian adaptive testing and its stopping criteria</b> Dr. Luping Niu</p> <p><b>A Two-Level Adaptive Testing with Polytomous Items</b> Prof. Seung Choi</p> <p><b>Item parameter estimates with non-ignorable missing data patterns in CATs</b> Dr. Steven Nydick</p> <p><b>Line-on-the-fly testing (LOFT): Which design to choose?</b> Prof. Susan Embretson</p> <p><b>Efficient online item parameter estimation in small-sample CAT using gradient descent methods</b> Dr. Zichu Liu</p>	<p><b>Session: IRT Estimation</b> Chair: Seock-Ho Kim</p> <p><b>Joint consistency of a multidimensional nonparametric continuous response model</b> Mr. Mauricio Castillo</p> <p><b>Generative adversarial networks for high-dimensional item factor analysis</b> Mr. Nanyu Luo</p> <p><b>Some standard errors of the polytomous item response theory models</b> Prof. Seock-Ho Kim</p> <p><b>Weighted likelihood estimator and its standard errors for sequential IRT models</b> Mr. Yikai Lu</p>

10:15 a.m.  
- 10:45 a.m.

## GH: Meridian Ballroom Foyer

### Refreshment Break

10:45 a.m. -  
11:45 a.m.

**GH: Meridian 1-2**  
**Career Lifetime Achievement Award: Prof. Shizuhiko Nishisato**  
**Reminiscing Controversies Over Joint Graphical Display in Quantification**  
Chair: Francis Tuerlinckx

11:45 a.m. -  
1:30 p.m.

**Lunch (On Your Own) | Recommended Restaurants**

**WEDNESDAY  
CONTINUED  
1:30 p.m. -  
2:45 p.m.**

### GH: Meridian 1-2

**Session: Artificial Intelligence II**  
Chair: Ting Wang

**Artificial neural networks excel in predicting missingness in psychometric data**  
Mr. Longfei Zhang

**Using knowledge graphs to better understand test construction**  
Dr. Magdalen Beiting-Parrish

**Enhancing model generalizability for understanding CPS behaviors across different tasks: A large language model-based approach**  
Prof. Mengxiao Zhu

**Enhancing citation accuracy: Leveraging the NCBI API to verify and correct AI-generated references**  
Dr. Ting Wang

### GH: Meridian 3-4

**Session: Structural Equation Modeling I**  
Chair: Francis Tuerlinckx

**Statistical curvature and algorithmic convergence in factor models**  
Dr. Francis Tuerlinckx

**A empirical Bayesian solution to the estimation of the covariance matrix of sample covariances in SEM**  
Dr. Hao Wu

**Robust estimation of structural equation models**  
Dr. Max Welz

**Bayesian item factor analysis when indicator variables have skewed marginal distributions**  
Dr. Noah Padgett

**Regularized exploratory structural equation modeling for multiblock data**  
Ms. Tra Le

### MAC: Johnson

**Session: Methods for Dynamic and Complex Data**  
Chair: Sy-Miin Chow

**The hidden journey of affect dynamics: Bridging physiological and behavioral states through Markovian processes**  
Dr. Francesca Borghesi

**Optimizing ESM prompt timing with mobile sensing: Predicting non-compliance using behavioral and contextual data**  
Dr. Koen Niemeijer

**Interpreting parameters of dynamic regression models**  
Dr. Sigert Ariens

**Accounting for interindividual differences in intensive longitudinal data from new samples using pre-learned embeddings in machine learning models**  
Dr. Sy-Miin Chow

### MAC: Thomas Swain

**Session: Item Response Theory II**  
Chair: Ken Fujimoto

**Comparing fit indices for predicting difficulty of automatically generated items**  
Mr. Haoyang Yu

**Optimal designs for Thurstonian IRT models based on linear paired comparisons**  
Prof. Heinz Holling

**Estimating the primary dimensional correlations of nested-dimensionality data structures**  
Dr. Ken Fujimoto

**Asymptotic standard errors for reliability coefficients in item response theory**  
Ms. Youjin Sung

### GH: Think 4

**Session: Longitudinal Data Analysis I**  
Chair: Satoshi Usami

**Using recency to improve scoring in longitudinal assessments**  
Mr. Aaron Myers

**Cost-effective ESM studies: Integrating budget constraints into sample size decisions**  
Mr. Jordan Revol

**Matrix decomposition SEM tree**  
Dr. Naoya Todo

**Condence interval-based determinations for optimal sample sizes and designs in a random intercept panel model**  
Dr. Satoshi Usami

**Examining item discrimination in growth measurement: A multilevel perspective**  
Prof. Xiangyi Liao

### GH: Think 5

**Session: Perspectives from the Inaugural Meeting of the Society for the Study of Measurement**  
Chair: Mark Wilson

**Mapping out the hexagon measurement framework in the human sciences**  
Prof. Mark Wilson

**How uncertainty allows measurement to produce useful results**  
Dr. Kent Staley

**Re-interpreting the Weber-Fechner law as a probabilistic measurement model**  
Dr. William Fisher

### GH: Think 3

**Session: Cognitive Diagnostic Models II**  
Chair: Jimmy de la Torre

**Evaluating the classification accuracy of an adaptive diagnostic test**  
Mr. Ahmed Bediwy

**A Hamiltonian-Gibbs sampler with monotonicity constraints for diagnostic classification models**  
Dr. Alfonso Martinez

**Consistency theory of general nonparametric classification methods in cognitive diagnosis**  
Mr. Chengyu Cui

**Increasing the flexibility of the MC-DINA model**  
Prof. Jimmy de la Torre

**Examining the occurrence of paradoxical scoring in cognitive diagnostic models**  
Mr. Tsuyoshi Kato

**2:45 p.m. -  
3:15 p.m.**

**GH: Meridian Ballroom Foyer**

## Refreshment Break



**WEDNESDAY  
CONTINUED**  
**3:15 p.m. -  
4:30 p.m.**

### **GH: Meridian 1-2**

**Session: Adaptive Assessment and Learning**  
Chair: Hyeon-Ah Kang

**Latent propensity modeling of hint-seeking behavior in intelligent tutoring systems**  
Dr. Hyeon-Ah Kang

**Bayesian adaptive learning assessment for efficient skill acquisition**  
Dr. Sangbeak Ye

**Personalized adaptive, dynamic, and formative assessment in statistics education**  
Dr. Wilco Emans

**Sequential rank aggregation: An optimal active estimation approach**  
Prof. Xiaou Li

### **GH: Meridian 3-4**

**Session: Machine Learning**  
Chair: Yuqi Gu

**Use factor-augmented regularized latent regression to analyze complex large-scale assessment**  
Mr. He Ren

**Personalized predictive modeling with Bayesian nonparametric ensemble learning**  
Ms. Mingya Huang

**A two-step imputation approach combining IRT and deep-learning methods in large-scale survey assessments**  
Dr. Usama Ali

**Generalized grade-of-membership estimation for high-dimensional locally dependent data**  
Dr. Yuqi Gu

### **MAC: Johnson**

**Session: Making Sense of High-Dimensional Data in the Psychological Sciences**  
Chair: Nathaniel Helwig

**Multiple linked tensor factorization**  
Prof. Eric Lock

**Classifying alcoholism from electroencephalography data using high-dimensional logistic regression**  
Mr. Jong Won Lee

**Capturing fluctuations in high-dimensional intensive longitudinal data**  
Prof. Katerina Marcoulides

**Predicting attention problems from brain connectivity using high-dimensional Poisson regression**  
Dr. Kelly Duffy

**High-dimensional regression and classification of psychological data**  
Prof. Nathaniel Helwig

### **MAC: Thomas Swain**

**Session: Practical Issues in Testing: Norming, Equating, ATA and fairness**  
Chair: Jorge Gonzalez

**Vectorizing test constraints for faster automated test assembly**  
Dr. Anthony Shiver

**Integrating latent variables into test equating methods**  
Ms. Inés Varas

**Analyzing identifiability in statistical models for test equating**  
Prof. Jorge Gonzalez

**Regression-based norming of tests with small sample sizes**  
Dr. Nicolas Sander

**Bayesian augmentation for real-time fairness monitoring in assessments**  
Mr. Shea Valentine

### **GH: Think 4**

**Session: Differential Item Functioning and Measurement Invariance II**  
Chair: Brandon LeBeau

**Machine learning approaches to item-level bias detection**  
Dr. Brandon LeBeau

**Detecting differential item functioning in forced-choice models with misspecification**  
Dr. Jacob Plantz

**A two-step method for detecting differential item functioning**  
Ms. Qing Zeng

**A neural network approach to small sample intersectional DIF detection**  
Mr. Yale Quan

**DIF detection in ordinal survey data without pre-specified groups or anchors**  
Dr. Gabriel Wallin

### **GH: Think 5**

**Session: Missing Data**  
Chair: Victoria Savalei

**DSEM with missing not at random intensive longitudinal data**  
Dr. Daniel McNeish

**Using factor scores estimated with missing data**  
Dr. Ehsri Ryu

**Methods for pooling K-means clustering results in multiply imputed data**  
Dr. Joost Van Ginkel

**Optimal approaches for treating item-level missing data in composite-level models**  
Dr. Victoria Savalei

**4:45 p.m. -  
5:30 p.m.**

### **GH: Meridian 1-2**

**Invited Speaker: Dr. Matthew Madison**  
**Diagnostic Classification Models: Advancement Through Simplicity**  
Chair: Daniel Bolt

### **GH: Meridian 3-4**

**Invited Speaker: Dr. Jessica Flake**  
**Methodological Research for the Open Science Era**  
Chair: Mijke Rhemtulla



## GH: Meridian 1-2

**Session: Revision of the 2014 Standards for Educational & Psychological Testing: Updates and Input**  
Chair: Michael Rodriguez

Members of the committee tasked with the revision of the Standards for Educational and Psychological Testing will provide an overview of the revision process, followed by an open conversation with the audience.

Participants include Michael Rodriguez, Kristen Huff, Fred Oswald, Andy De Los Reyes, Ye Tong, and other members of the committee.

## GH: Meridian 3-4

**Session: Automated Scoring**  
Chair: JiHoon Ryoo

**Comparison of rating accuracy and rationales between AI ratings and human ratings of AP Chinese essays**  
Mr. Haowei Hua

**Evaluating the accuracy, reliability, and applicability of multiple large language models in automated scoring for writing assessments**  
Mr. Henry S. Makinde

**Improving automated scoring in reading assessments: Compress first, score next**  
Dr. Ji Yoon Jung

**Investigation of NLP and ML-based algorithms for automated essay scoring**  
Prof. JiHoon Ryoo

**Rationale and patterns of misclassified text in automated scoring systems**  
Mr. Haowei Hua

## MAC: Johnson

**Session: Bayesian Methods and Their Applications**  
Chair: Sophia Rabe-Hesketh

**Evaluating strategies for handling label switching in Bayesian latent variable models**  
Dr. Lihan Chen

**Prior sensitivity in Bayesian structure learning of Gaussian graphical models**  
Mr. Marwin Carmo

**Infinitesimal Jackknife standard errors for Bayesian quantile regression and other misspecified models**  
Dr. Sophia Rabe-Hesketh

**Are Bayesian regularization methods a must for multilevel dynamic latent variables models?**  
Mr. Vivato Vahatriina Andriamiarana

**Bayesian graphical models for factorial correlation estimation**  
Ms. Yifan Zhang

## MAC: Thomas Swain

**Session: Causal Inference I**  
Chair: Wen Luo

**Between-case incidence rate ratio: A design comparable effect size for count outcomes in single case experimental designs**  
Dr. Wen Luo

**Between-case incidence rate ratio for count outcomes in single case experimental designs: A Monte Carlo simulation**  
Dr. Haoran Li

**Using regression discontinuity to evaluate language learner reclassification**  
Dr. Hirotaka Fukuhara

**Causal inference in high dimensional settings via sparse autoencoders for improved propensity scores estimation.**  
Mr. Roberto Faleh

**Causal decomposition analysis with synergistic interventions: A triply-robust machine learning approach to addressing multiple dimensions of social disparities**  
Ms. Su Yeon Kim

## GH: Think 4

**Session: Novel IRT Models**  
Chair: Leah Feuerstahler

**Defining asymmetric item response theory**  
Dr. Leah Feuerstahler

**Bayesian IRT for continuous measurement of student proficiency**  
Dr. Logan Rome

**Extending the Quasi-Poisson IRT model: On choosing latent structure**  
Dr. Nelis Potgieter

**Modeling dynamic test-taking behavior: a response time based HMM-IRT approach**  
Dr. Rehab AlHakmani

**The two-parameter Quasi-Poisson item response theory model**  
Dr. Xin Qiao

## GH: Think 5

**Session: Longitudinal Cognitive Diagnostic Models**  
Chair: Kazuhiro Yamaguchi

**Development and application of the random effect diagnostic classification multilevel growth curve model**  
Dr. Kazuhiro Yamaguchi

**Longitudinal designs for diagnostic models: Identification and estimation**  
Mr. Trung Le

**A statistical framework for dynamic cognitive diagnosis in digital environments**  
Ms. Yawen Ma

**Evaluation of the effectiveness of validation methods on Q-matrix misspecifications with longitudinal diagnostic classification models**  
Ms. Hyunjee Oh

## GH: Think 3

**Session: Computer Adaptive Testing II**  
Chair: Huahua Chang

**Leveraging computerized adaptive testing (CAT) to overcome teaching and learning challenges in gateway STEM courses at U.S. universities**  
Dr. Hua-Hua Chang

**You can't tuna fish, but can you tune a CAT?**  
Mr. Joseph DeWeese

**Incorporating omission behaviors into computerized adaptive testing: A psychometric evaluation using IRTree models**  
Ms. Lixin (Lizzy) Wu

**Post-hoc multiple comparison tests in adaptive measurement of change**  
Mr. Raj Wahlquist

9:00 a.m. -  
10:15 a.m.

10:15 a.m.  
- 10:45 a.m.

10:45 a.m. -  
11:45 a.m.

## GH: Meridian Ballroom Foyer

## Refreshment Break

## GH: Meridian 1-2

**Keynote Speaker: Prof. Carolyn Anderson**  
**Association and Measurement Models for Categorical Data**  
Chair: Sy-Miin Chow



## Lunch (On Your Own) | Recommended Restaurants

### GH: Meridian 1-2

**Session: Artificial Intelligence III**  
Chair: Xijuan Zhang

**Adapting transformers to wording-based item difficulty prediction**  
Mr. Jan Netik

**Automated cognitive feature generation: LLM applications in item difficulty modeling**  
Mr. Mubarak Mojoyinola

**Differential embedding dimension functioning in natural language processing for psychological assessment**  
Mr. Pengda Wang

**Using a psychometric approach to design AI agents with personality under different scale formats**  
Dr. Xijuan Zhang

**Enhancing systematic review efficiency: A generative AI-powered data extraction pipeline**  
Ms. Xiyu Wang

### GH: Meridian 3-4

**Session: Network Models II**  
Chair: Richard Feinberg

**Exploring link prediction in social networks**  
Ms. Apoorva Verma

**Psychological networks as scale-free and small-world networks: Insights from large-scale survey data**  
Dr. Guangyu Zhu

**Estimating causal effects on psychological networks using item response theory**  
Mr. Joshua Gilbert

**Item pool maintenance in computer adaptive tests: A network approach**  
Dr. Klint Kanopka

**Using social network analysis to detect and interpret network collusion**  
Dr. Richard Feinberg

### MAC: Johnson

**Session: Moderation and Mediation Analysis**  
Chair: Zuchao Shen

**Assumptions in latent moderation: The role of measurement (non)-invariance**  
Dr. Kaylee Litson

**MNLLFA with three or more latent dimensions**  
Dr. Noah Padgett

**Bayesian nonparametric nonlinear moderation model**  
Dr. Siyi Wang

**Cost-efficient sampling strategies for experiments detecting moderation and main effects**  
Dr. Zuchao Shen

### MAC: Thomas Swain

**Session: Model-Data Fit**  
Chair: Daniel McNeish

**Recent developments in dynamic fit index cutoffs for latent variable models**  
Dr. Daniel McNeish

**Cut-off for the deleted-one-covariance-residual case influence measure in the covariance structure analysis**  
Dr. Fathima Jaffari

**Robust methods for computing structural fit indices: A Monte Carlo investigation**  
Dr. Graham Rolenbach

**Can we rely on reliable parameter estimates?**  
Dr. Niels Vanhasbroeck

**A comparison of IRT model fit indices under different misfitting conditions**  
Mr. Xinyu Liu

### GH: Think 4

**Session: Computer Adaptive Testing III**  
Chair: Andries Van der Ark

**Adaptive tests and questionnaires using online survey tools**  
Dr. Andries Van der Ark

**Issues in calibrating post operational CAT data**  
Dr. Eric Loken

**Directionally-weighted loss functions for shaping multistage adaptive testing item modules**  
Dr. Matthew Naveiras

**Baseline scores and testing mode influence responder thresholds: A comparison of coefficients of repeatability between PROMIS computer adaptive tests and short forms**  
Dr. Minjji Lee

**Computer adaptive testing for ecological momentary assessment: Considerations and evaluations**  
Dr. Teague Henry

### GH: Think 5

**Session: Computational Modeling of Psychological Systems**  
Chair: Ria Hoekstra

**Toward a psychologist's guide to computational modeling: An interdisciplinary scoping review of modeling roadmaps**  
Ms. Jill de Ron

**Mapping the dynamics of idiographic network models to the network theory of psychopathology using stability landscapes**  
Dr. Ria Hoekstra

**Unraveling symptom dynamics: A mechanistic approach to feedback loops and causal discovery**  
Ms. Kyuri Park

**sdbuildR: Building system dynamics models in R**  
Ms. Kyra Evers

### GH: Think 3

**Session: Tools and Techniques for Quantitative methods and Psychometrics**  
Chair: Andres Christiansen

**Bayesian evaluation of latent variable models: A practical tutorial with the R package bveal**  
Ms. Xiaohui Luo

**ILSAmerge and ILSTATS: Two new R packages for international large-scale assessments**  
Dr. Andrés Christiansen

**ShinyFORC: A shiny app for Bayesian probabilistic forecasting**  
Ms. Kjorte Harra

**Rationale and patterns of misclassified text in automated scoring systems**  
Dr. Jiayu Yao

1:30 p.m. -  
2:45 p.m.



**THURSDAY**  
**CONTINUED**  
**3:00 p.m. -**  
**4:15 p.m.**

GH: Meridian 1-2	GH: Meridian 3-4	MAC: Johnson	MAC: Thomas Swain
<p><b>Session: Natural Language Processing</b> Chair: Jinsong Chen</p> <p><b>Uncovering cognitive strategies in tower of London using n-gram analysis</b> Dr. Alexandre Serpa</p> <p><b>Predicting reading passage grades: Text features vs. contextual embeddings</b> Dr. Ann Hu</p> <p><b>Documents are people and words are items: A psychometric approach to textual data with contextual embeddings</b> Prof. Jinsong Chen</p> <p><b>A joint factor-topic model for multimodal survey data analysis</b> Mr. Yuxiao Zhang</p>	<p><b>Session: Bridging Exploratory Graph Analysis and Complexity Science: Advancing the Understanding of Psychological Structures and Dynamics</b> Chair: Alexander Christensen</p> <p><b>Damped linear oscillators in emotion dynamics: Influence of fundamental parameters on dynamic EGA structures</b> Dr. Aleksandar Tomašević</p> <p><b>Taxonomic graph analysis</b> Dr. Alexander Christensen</p> <p><b>The ergodicity information index: Bridging dynamic exploratory graph analysis with complexity science</b> Dr. Hudson Golino</p>	<p><b>Session: Latent Class and Mixture Models</b> Chair: Jang Schiltz</p> <p><b>Finite mixture models for an underlying zero-one inflated Beta distribution</b> Prof. Jang Schiltz</p> <p><b>Measuring effort with a multi-level non-hierarchical Gaussian mixture model</b> Dr. Kirk Vanacore</p> <p><b>A mixture multidimensional nominal response model to account for different faking strategies</b> Mr. Timo Seitz</p> <p><b>Bayesian and frequentist model evaluation for growth mixture modeling</b> Ms. Xingyao Xiao</p>	<p><b>Session: Differential Item Functioning and Measurement Invariance III</b> Chair: Anne Thissen-Roe</p> <p><b>From the roots: Likelihood ratio DIF testing for IRTrees</b> Dr. Anne Thissen-Roe</p> <p><b>Testing and correcting for differential test functioning</b> Prof. Peter Halpin</p> <p><b>Detecting uniform differential item functioning with the permutation test</b> Mr. Walton Ferguson</p> <p><b>Guidelines for the interpretation of NCDIF as an effect size measure</b> Dr. Víctor H Cervantes</p>

**4:15 p.m. -**  
**4:30 p.m.**

GH: Think 4	GH: Think 5	GH: Think 3
<p><b>Session: Item Response Theory III</b> Chair: Brooke Magnus</p> <p><b>Rethinking discrimination: A marginal effects approach to IRT</b> Dr. Brooke Magnus</p> <p><b>Item response models for rating relational data</b> Dr. Chih-Han Leng</p> <p><b>A generalization of multidimensional item response theory parameters</b> Dr. Daniel Morillo</p> <p><b>An informative index for evaluating equiprecision in IRT-based assessments</b> Mr. Jesus Delgado</p> <p><b>Adapting fisher information-based difficulty and discrimination IRT measures to handle multimodality</b> Mr. Peter Johnson</p>	<p><b>Session: Reliability</b> Chair: Joshua Gilbert</p> <p><b>Item-level heterogeneity in value added models: Implications for reliability, cross-study comparability, and effect sizes</b> Mr. Joshua Gilbert</p> <p><b>Discretization error in psychological science</b> Dr. Mathias Berggren</p> <p><b>Reliability of unidimensional ordinal scores: Insights from two simulation studies</b> Prof. Sébastien Beland</p>	<p><b>Session: Advances in Experimental Design, Measurement, and Predictive Inference</b> Chair: Ken Kelley</p> <p><b>Best treatment from a set of options: An optimal sequential method for principled experimentation</b> Dr. Ken Kelley</p> <p><b>The psychometrics of uncertainty elicitation for real world forecasting problems</b> Dr. Mark Himmelstein</p> <p><b>Application of conformal prediction in language sample analysis</b> Mrs. Youmin Hong</p> <p><b>Optimal design and analysis strategies for equivalence testing</b> Dr. Zuchao Shen</p> <p><b>Don't let your likert scales grow up to be visual analog scales: Understanding the relationship between number of response categories and measurement error</b> Ms. Sicqi Sun</p>

**4:30 p.m. -**  
**4:45 p.m.**

### MAC: Memorial Hall

#### Group Photo

**4:45 p.m. -**  
**5:45 p.m.**

### GH: Meridian Ballroom Foyer

#### **Refreshment Break**

**GH: Meridian 1-2**  
**Early Career Award: Dr. Maria Bolsinova**  
**Psychometrics for Adaptive Learning: Challenges and Solutions**  
Chair: Andries van der Ark



## GH: Meridian 1-2

Session: Automated Item Generation  
Chair: Stella Kim

**Automatic item generation for figure reasoning tests using generative AI**  
Ms. Jing Huang

**Generating quantitatively grounded free-text using large language models**  
Ms. Lindley Slipetz

**Evaluating cut score consistency in standard setting procedures for automatic item generation testing**  
Dr. Stella Kim

**AI-driven item generation for PIRLS**  
Dr. Ummugul Bezirhan

## GH: Meridian 3-4

Session: Longitudinal Data Analysis II  
Chair: Evelien Schat

**Perfect timing: An algorithm for leveraging optimal temporal design to enhance statistical power**  
Ms. Anne-Charlotte Belloeil

**Person-specific updating of EWMA control limits in sparse in-control data scenarios**  
Dr. Evelien Schat

**Lowering participant burden in long-term ESM studies through variable sample size EWMA**  
Ms. Fien De Pauw

**Nonparametric estimation of latent growth parameters and heterogeneity**  
Mr. Graham Buhrman

**Estimating non-normal random effects in nonlinear random effects models**  
Ms. Yue Zhao

## MAC: Johnson

Session: Structural Equation Modeling II  
Chair: Carl Falk

**Confidence intervals based on scaled difference tests in SEM**  
Prof. Carl Falk

**Bayesian fit measures in detecting misspecified multilevel structural equation modeling**  
Dr. Chunhua Cao

**A priori distributions in Bayesian structural equation modeling: A scoping review protocol**  
Dr. Jorge Sinvil

**The influence of informative priors in the estimation of MIMIC model parameters with small sample sizes and outliers**  
Ms. Nancy Alila

**Advancing contingent paradigms evaluating model fit in structural equation modeling**  
Prof. Thomas Niemand

9:00 a.m. -  
10:15 a.m.

## MAC: Thomas Swain

Session: Cognitive Diagnostic Models III  
Chair: Xue Wang

**An approach that can validate both Q-Matrices and attribute hierarchies in cognitive diagnosis models**  
Dr. Lingling Wang

**The influence of Q matrix mis-specified on the classification of nonparametric cognitive diagnosis based on hamming distance**  
Dr. Sun Rui

**Bayesian estimation of the Q-matrix and attribute hierarchy in DINA model**  
Dr. Xue Wang

**A new reliability framework for cognitive diagnosis models**  
Prof. Youn Seon Lim

## GH: Think 4

Session: IRT Applications  
Chair: Qi (Helen) Huang

**Measuring forecasting proficiency: An item response theory approach**  
Mr. Fabio Setti

**Demographic influences on spatial ability: A 2PL and Rasch tree analysis**  
Mr. Justice Dadzie

**Desirability-matched Thurstonian IRT scale construction leveraging sentiment analysis**  
Dr. Kensuke Okada

**Resource usage and its influence on ability estimation – exploring different IRTree models in the context of PISA-LDW data**  
Dr. Leonard Tetzlaff

**Measuring print exposure using a bifactor unipolar IRT model**  
Prof. Qi (Helen) Huang

## GH: Think 5

Session: Advances in the Evaluation of Statistical Model Complexity  
Chair: Wes Bonifay

**Fitting propensity analysis in R**  
Dr. Sonja Winter

**The fitting propensity of 1-parameter item response theory models**  
Dr. Hyejin Shim

**The fitting propensity of multilevel models**  
Ms. Yun-Kyung Kim

**The fitting propensity of factor analysis models**  
Dr. Wes Bonifay

10:15 a.m. -  
10:45 a.m.

## GH: Meridian Ballroom Foyer

### Refreshment Break

10:45 a.m. -  
11:30 a.m.

## GH: Meridian 1-2

**Invited Speaker: Dr. Aleksandar Tomašević**  
**Capturing Emotional Dynamics: Integrating Transformer Models with Dynamic Exploratory Graph Analysis**  
Chair: Hudson Golino

## GH: Meridian 3-4

**Invited Speaker: Dr. Keith Markus**  
**Four Takes on Construct Validity: From Logical Empiricism to Varieties of Scientific Realism**  
Chair: Leah Feuerstahler

**FRIDAY**  
**CONTINUED**  
**11:45 a.m. -**  
**1:00 p.m.**

## GH: Meridian 1-2

**Session: Theory Construction Methodology**  
Chair: Jason Nak

**Characterisations of phenomena**  
Mr. Jason Nak

**The boundaries between assumptions and phenomena in formal modeling: A case study of a computational model of addiction**  
Mr. Jesse Boot

**How cause-effect reasoning impedes theory development: Why we should focus on mechanisms and functions instead**  
Dr. Noah van Dongen

**AI-assisted theory construction with theoraizer: Do LLMs and humans agree on causal relationships?**  
Ms. Meike Waaijers

## GH: Meridian 3-4

**Graduate Student Datathon Competition**  
Chair: Patricia Martinkova

In this session, the three finalist teams of the IMPS 2025 Student Datathon will present their work. The Datathon is a collaborative competition designed to engage participants in the analysis of an innovative dataset using state-of-the-art psychometric methods.

**Hierarchical IRT Modeling of Hearts and Flowers Cognitive Assessment: A Progressive Approach Towards Full Bayesian Inference**

Team IRToldscholars: Jingyi Guo, University of Notre Dame; Matheus de Melo Rodrigues, Mackenzie Presbyterian University

**Integrating IRT-Estimated Parameters to Machine Learning Models to Model Accuracy in the Hearts and Flowers Executive Functioning Task**

Team Item Responder: Zhaoyu Wang, Georgia Institute of Technology; Na Liu, Georgia Institute of Technology; Ruiting Shen, New York University

**A Two-Stage Framework Combining Bayesian Additive Regression Trees and Mixed-Effects Modeling for the Prediction of Cognitive Performance**

Team UVA Netlab: Siqi Sun; Lindley R. Slietz, Department of Psychology, University of Virginia

## MAC: Johnson

**Symposium: Remembering John Nesselroade**  
Chair: Hudson Golino

This session celebrates the life and career of John Nesselroade through a series of brief, personal reflections by former students, colleagues, and collaborators.

## MAC: Thomas Swain

**Session: Factor Analysis**  
Chair: Inhan Kang

**Factor score indeterminacy of sum score and common factor score**  
Mr. Hoang Nguyen

**Integration of latent space and confirmatory factor analysis to explain unexplained person-item interactions**  
Dr. Inhan Kang

**A GLLAMM approach for measuring child-teacher interaction quality**  
Dr. JoonHo Lee

**A new representation of factor score and its theoretical properties**  
Dr. Naoto Yamashita

**Development and validation of a renyuan measurement scale: Exploring social self-perception in Chinese cultural contexts**  
Ms. Ching Yi Chiang

## GH: Think 4

**Session: Multivariate Analysis**  
Chair: Jay Verkuilen

**Generalized structured component analysis accommodating convex components: A knowledge-based multivariate method with interpretable composite indexes**

Dr. Gyeongcheol Cho

**A multivariate generalization of the glass delta effect size**  
Prof. Jay Verkuilen

**Comparison of missing data techniques in generalized structured component analysis**  
Ms. Luqi He

**Evaluating assumption violations in latent APIM: Implications for effect estimation**  
Ms. Shiyao Wang

**Evaluating statistical power in generalized structured component analysis**  
Ms. Zhiyuan Shen

## GH: Think 5

**Session: Causal Inference II**  
Chair: Jee-seon Kim

**Examining heterogeneity in causal mediation effects**  
Prof. Hanna Kim

**A taxonomy of heterogeneity in causal effects**  
Prof. Jee-Seon Kim

**Item-level heterogeneous treatment effects in instrumental variables regression: Fixed- and random-item approaches**  
Dr. Sanford Student

**Estimation of individual treatment effect with transfer learning**  
Ms. Şeyda Aydin



**FRIDAY**  
**CONTINUED**  
1:00 p.m. -  
2:15 p.m.

Lunch (On Your Own) | Recommended Restaurants

2:15 p.m. -  
2:30 p.m.

**MAC: Memorial Hall**

**Happy 90<sup>th</sup> Anniversary**

Please join us for cake, coffee, and tea to celebrate a very  
Happy 90<sup>th</sup> Anniversary to the Psychometric Society!

2:30 p.m. -  
3:30 p.m.

**MAC: Memorial Hall**

**Presidential Address: Prof. Denny Borsboom**  
**Psychometric Models and Psychological Theories**

*Chair: David Kaplan*

3:30 p.m. -  
4:00 p.m.

**MAC: Memorial Hall**

**Members Meeting**

4:00 p.m. -  
4:45 p.m.

**MAC: Memorial Hall**

**Awards and Closing Ceremony**

6:00 p.m. -  
9:00 p.m.

Nicollet Island Pavilion | Address: 40 Power Street, Minneapolis, MN 55401

**Closing Banquet Reception**



## Special thank you to our IMPS 2025 Sponsors and Exhibitors this year!

The IMPS 2025 Exhibitors and Sponsors will be located in the at the Graduate Hotel in the Meridian Ballroom Foyer (2nd Floor).  
All IMPS refreshment breaks will be located in this area.

Please plan time to and visit with these companies and organizations during the week of IMPS 2025!

### EXHIBIT AREA HOURS

Tuesday, July 15 | 10:00 a.m. - 4:15 p.m.  
Wednesday, July 16 | 10:00 a.m. - 3:15 p.m.  
Thursday, July 17 | 10:00 a.m. - 4:45 p.m.  
Friday, July 18 | 10:00 a.m. - 12:00 p.m.

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