IMPS 2024

Prague, Czech Republic

July 16-19, 2024 • Short Courses July 15
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Dear Attendees and Guests,

We are pleased to welcome you to IMPS 2024, the 89th Annual Meeting of the Psychometric Society, held in the magnificent city of Prague, The Czech Republic. The conference is hosted by the Czech Academy of Sciences, the leading non-university public research institution in the Czech Republic, in partnership with the Charles University, one of the world’s oldest universities, the Prague University of Economics and Business, the largest public university in the field of economics and business in the Czech Republic, and the Psychometric Society. The conference takes place at the Prague University of Economics and Business (VŠE), located at nám. Winstona Churchilla 1938/4, 130 00 Praha 3-Žižkov, within 10-minute walk from the main train station (Hlavní nádraží) and only a 20-minute walk to Old Town.

The meeting starts with four parallel short courses on Monday, July 15. A Welcome Reception will be held on July 16th from 6:30 p.m. to 9:00 p.m. at the Carolinum, a national monument and the main seat of Charles University, dating back to the 14th century. On Wednesday, July 17, from 4:45 p.m. to 6:15 p.m., the Psychometric Society cordially invites all meeting attendees to delve into a wide array of psychometric research at our conference poster session event. Authors will be present by their posters to engage in insightful discussions about their research with peers in a relaxed and enjoyable setting that will be held in the Atrium of the RB building, VŠE. Immediately following the poster session, there will be a graduate student dinner mixer at the historic Pivnice Obecní dům (Pilsner Pub Municipal House), a beautiful Art Nouveau restaurant dating back to 1912. As a registered student, you are welcome to join this event for a complimentary dinner and drinks, plus have the opportunity to meet other students from around the world. On Thursday, July 18th, from 4:00 p.m. - 6:30 p.m., join us for a walking tour of Prague’s Old Town, which dates back to the 9th century AD. Finally, this year, we are excited to elevate our Closing Conference Banquet Reception with a cruise up and down the Vltava River, passing through the Smíchov lock twice with spectacular views of the most beautiful Prague monuments illuminated by night – Charles Bridge, National Theatre, Rudolfinum, and Prague Castle.

This year promises to be the largest meeting of IMPS on record, with more than 560 registrants, 400 oral and symposium presentations and nearly 120 posters given by attendees from over 40 countries! We have two distinguished keynote speakers, and six invited speakers, as well as the Dissertation Award presentation, the Early Career Award presentation, and the Career Lifetime Achievement Award presentation. We are looking forward to a vibrant scientific meeting filled with rich intellectual exchange. Best wishes for a very satisfying meeting and thank you for joining us.

David Kaplan
University of Wisconsin - Madison
President & Organizing Committee Chair

Patrícia Martinková
Czech Academy of Sciences & Charles University
Chair of Local Organizing Committee
Short Course #1:

**Structural Equation Models for Categorical Outcomes Using Lavaan**

Monday, July 15, 2024
9:00 a.m. - 5:00 p.m.
Location: RB 209

Speaker:
Dr. Terrence D. Jorgensen

Short Course #2:

**Tools of Machine Learning in Psychometrics**

Monday, July 15, 2024
9:00 a.m. - 5:00 p.m.
Location: RB 210

Speakers:
Dr. Rudolf Debelak & Dr. David Goretzko

Short Course #3:

**Planning and Conducting Simulation Studies in R (Part 1)**

Monday, July 15, 2024
9:30 a.m. – 12:30 p.m.
Location: RB 211

**Planning and Conducting Simulation Studies in R (Part 2)**

Monday, July 15, 2024
2:00 p.m. - 5:00 p.m.

Speakers (Part 1 and Part 2):
Prof. Carolin Strobl & Dr. Mirka Henninger

Short Course #4:

**Computerized adaptive testing and multistage testing with R**

Monday, July 15, 2024
9:30 a.m. - 12:30 p.m.
Location: RB 212

Speakers:
Dr. Duanli Yan & Dr. Alina A. von Davier
Prof. Adrian E. Raftery  
University of Washington  
Tuesday, July 16  
9:15 a.m. - 10:15 a.m.  
Location: Vencovského aula (New Building)  

**Keynote Address:**  
Statistical Inference with Model Uncertainty

Prof. David Thissen  
University of North Carolina at Chapel Hill  
Wednesday, July 17  
10:30 a.m. - 11:30 a.m.  
Location: Vencovského aula (New Building)  

**2024 Career Award for Lifetime Achievement:**  
A Selective Intellectual History of Differential Item Functioning Analysis in Item Response Theory and Factorial Invariance in Factor Analysis

Prof. David P. MacKinnon  
Arizona State University  
Thursday, July 18  
10:45 a.m. - 11:45 a.m.  
Location: Vencovského aula (New Building)  

**Keynote Speaker:**  
The Investigation of Mediating Processes as a Measurement Challenge

Prof. Gyeongcheol Cho  
The Ohio State University  
Tuesday, July 16  
4:15 p.m. - 5:15 p.m.  
Location: Vencovského aula (New Building)  

**2024 Dissertation Prize:**  
Constructs May or May Not Be Latent: Studies on Two Domains of Structural Equation Modeling

Prof. Maarten Marsman  
University of Amsterdam  
Wednesday, July 17  
3:45 p.m. - 4:45 p.m.  
Location: Vencovského aula (New Building)  

**2024 Early Career Award:**  
From Network Psychometrics to Bayesian Graphical Modeling

Prof. David Kaplan  
University of Wisconsin – Madison  
Friday, July 19  
2:00 p.m. - 3:00 p.m.  
Location: Vencovského aula (New Building)  

**Presidential Address:**  
Probabilistic Forecasting with International Large-Scale Assessments: Methods for Estimating the Pace of Progress to the UN Education Sustainable Development Targets

Prof. David P. MacKinnon  
Arizona State University  
Thursday, July 18  
10:45 a.m. - 11:45 a.m.  
Location: Vencovského aula (New Building)  

**Keynote Speaker:**  
The Investigation of Mediating Processes as a Measurement Challenge
Dr. Cécile Proust-Lima  
University of Bordeaux and Inserm  
Tuesday, July 16  
1:30 p.m. - 2:15 p.m.  
Location: Vencovského aula  
(New Building)

Continuous-time latent variable modeling of measurement scales in health studies: applications to the multiple-system atrophy progression

Dr. Patrícia Martinková  
Czech Academy of Sciences and Charles University  
Wednesday, July 17  
2:30 p.m. - 3:15 p.m.  
Location: Vencovského aula  
(New Building)

Computational aspects of psychometric methods and beyond

Dr. Maria Bolsinova  
Tilburg University  
Friday, July 19  
10:30 a.m. - 11:15 a.m.  
Location: Vencovského aula  
(New Building)

Rating systems for measurement in adaptive learning systems: challenges and solutions

Dr. Esther Ulitzsch  
University of Oslo  
Tuesday, July 16  
1:30 p.m. - 2:15 p.m.  
Location: RB 101 Auditorium  
(Rajska Building)

Confirmatory mixture models for investigating contextual correlates of response behavior in ecological momentary assessments

Prof. Eiko Fried  
Leiden University  
Wednesday, July 17  
2:30 p.m. - 3:15 p.m.  
Location: RB 101 Auditorium  
(Rajska Building)

Building bridges between psychometrics island and psychology mainland

Prof. Peter F. Halpin  
University of North Carolina at Chapel Hill  
Friday, July 19  
10:30 a.m. - 11:15 a.m.  
Location: RB 101 Auditorium  
(Rajska Building)

Using robust scaling to address DIF and DTF in latent variable models
**Group Photo**  
**Tuesday, July 16 | 3:45 p.m. - 4:15 p.m.**  
Location: Atrium of RB Building (nám. Winstona Churchill 1938/4, 130 00 Praha 3 – Žižkov)  

Immediately following the concurrent sessions, please meet in the Atrium RB (Rajska Building) for instructions from the IMPS staff and photographer to coordinate the annual group photo. All attendees are welcome to participate.

The group photo will be posted on the Society website for attendees to download after the conference.

**IMPS 2024 Welcome Reception**  
**Tuesday, July 16 | 6:30 p.m. - 9:00 p.m.**  
Location: [Carolinum](#) (Ovocný trh 560/5, 110 00 Praha 1 - Staré Město)  

We are thrilled to invite you to this year’s welcome reception, set in the heart of Prague’s Old Town at the oldest complex of Charles University buildings dating to the 14th century, the Carolinum.

Enjoy a delightful array of hors d’oeuvres and cocktails, served 6:30 p.m. - 9:00 p.m. located on the ground floor. Don’t miss the welcome remarks at 7:30 p.m. in the courtyard. Come to listen to organ and trumpets in the Great Hall on the first floor (6:45 p.m. - 7:10 p.m. and 8:15 p.m. - 8:40 p.m.).

**Poster Session**  
**Wednesday, July 17 | 4:45 p.m. - 6:15 p.m.**  
Location: Atrium of RB Building (nám. Winstona Churchill 1938/4, 130 00 Praha 3 – Žižkov)  

On Wednesday, July 17, from 4:45 p.m. to 6:15 p.m., the Psychometric Society cordially invites all meeting attendees to delve into a wide array of psychometric research at our conference poster session event.

Authors will be present by their posters to engage in insightful discussions about their research with peers in a relaxed and enjoyable setting that will be held in the Atrium of the RB building, Prague University of Economics and Business, immediately following the educational sessions.

Presenters will be standing by their posters from 5:00 p.m. - 6:15 p.m. in this casual and fun setting. Light snacks and beverages will be provided.

Click here to view the IMPS 2024 list of poster titles and presenters.

Additional information for poster presenters can be found here.

**Graduate Student Dinner Mixer**  
**Wednesday, July 17 | 7:00 p.m. - 10:00 p.m.**  
Location: Pivnice Obecní dům (Pilsner pub Municipal house) (náměstí Republiky 1090/ 5 111 21, Praha 1 – Staré Město)  

We are delighted to host our annual exclusive graduate student dinner mixer at the historic Pivnice Obecní dům (Pilsner Pub Municipal House).

Immerse yourself in the beauty of Art Nouveau decorations and the rich history of the Plzenska restaurant, which dates back to 1912. As a registered student, you are welcome to join this event for a complimentary dinner and drinks, plus have the opportunity to meet other students from around the world. (An RSVP was requested to attend.)

Student Dinner Mixer will take place immediately following the Poster Session event on Wednesday, July 17 from 7:00 p.m.-10:00 p.m.
### Program Events

**IMPS 2024 Walking Group Excursion**  
**Thursday, July 18 | 4:00 p.m. - 6:45 p.m.**  
Location: Atrium of RB Building (nám. Winstona Churchilla 1938/4, 130 00 Praha 3 – Žižkov)

Explore Prague by a Walking City Tour through Prague's Old Town - “Left, right – Prague’s on sight!”

Put on comfortable shoes, dress in layers, and dive deep into the charming cobbled maze of the Old Town of Prague. In the company of a seasoned English-speaking tour guide, you will discover not only the selection of the main UNESCO highlights but also peek inside the off-the-beaten-path passages and corners. Listen to stories about personalities and events shaping the City of a Hundred Spires since the 9th century AD.

Enjoy a 2 to 2.5-hour walking tour of the Old Town of Prague with an experienced English-speaking guide; headsets provided. Due to capacity reasons, the tour does not guarantee any visit to the interiors. An RSVP was required.

Plan to meet for the excursion starting in the Atrium RB near the IMPS Registration Desk at the conference site (VŠE).

**IMPS 2024 Closing Banquet Reception**  
**Boat Cruise on Vltava River**  
**Friday, July 19 | 6:00 p.m. - 10:00 p.m.**  
Location: [Dvořáková nábřeží](https://www.google.com/maps/place/10505+31.55+N/14°24′9.8″E)  
(110 00 Praha 1 - Josefov, Prague (50°05′31.5″N14°24′59.8″E))

This year, we are excited to elevate our Closing Conference Banquet Reception with a unique experience following the last day of educational sessions.

This event, a memorable three-hour boat cruise, is included in the attendee conference registration fee. These super-modern, glass-roofed boats offer undisturbed views of Prague’s monuments. You can look forward to a unique and unforgettable experience, featuring a stylish buffet dinner where you can choose according to your taste.

The cruise includes passing through the Smíchov lock twice and by the most beautiful Prague monuments illuminated by night – Charles Bridge, National Theatre, Rudolfinum, and Prague Castle.

The two boats will depart from Dvořáková nábřeží. Transportation to and from the boats is on your own.

Attendees should arrive at the boat landing between 5:45 p.m. - 6:00 p.m. The boats will start welcoming guests to board at 6:00 p.m.

**Important: The two boats will depart at 6:25 p.m. sharp!** Participants, please be sure not to be late, as there will be no late comers to join this event. If an attendee/guest misses the boat, no refunds will be granted.

**Reminder:** An RSVP was required, and this is a ticketed event. If an attendee/guest is on the waiting list, please check in with the IMPS Registration Desk at least 24 hours prior to this scheduled IMPS event to verify participation.
Conference Venue
This year, IMPS will be held in Prague, Czech Republic. The Educational sessions and the Poster Session will be located at the [Prague University of Economics and Business](https://www.vse.cz/english/about-vse/profile/campus/), located at nám. Winstona Churchilla 1938/4, 130 00 Praha 3-Žižkov

For more info about VŠE, visit: [vse.cz/english/about-vse/profile/campus/](https://www.vse.cz/english/about-vse/profile/campus/)

For an interactive 3D visit, visit: [vse.cz/english/about-vse/profile/campus/3d-visit/](https://www.vse.cz/english/about-vse/profile/campus/3d-visit/)

The opening, keynotes, awards, members meeting and closing talks will take place in the [New Building: Vencovského aula](https://www.vse.cz/english/about-vse/profile/campus/3d-visit/). The parallel sessions will take place in three different connected buildings refered to as: New Building (NB), Rajska Building (RB), and the Italska Building (IB).

Refer to the map on [page 12](#) for a particular session room, the registration area, the lunch (Menza) area, and/or the refreshment break area (Atrium). Check out an additional map of 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 in the Atrium (RB building) on the 1st floor.

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 in the Rajska Building (RB) at the VSE in the Atrium RB during the Annual Meeting, July 15 to July 19. 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](#).

**Hours of Operation:**
Monday, July 15 | 8:00 a.m. - 5:00 p.m.  
(Short Course Workshops Day; however, the desk is available to all meeting attendees.)

Tuesday, July 16 | 8:00 a.m. - 4:30 p.m.

Wednesday, July 17 | 8:00 a.m. - 5:00 p.m.

Thursday, July 18 | 8:00 a.m. - 4:00 p.m.

Friday, July 19 | 8:00 a.m. - 2:00 p.m.

**Name Badge Policy**
Meeting name badges are required for entrance to all conference sessions and events.

Public Transport Tickets
All attendees will be provided (1) public transport ticket at the time of picking up their attendee name badges. The tickets may be used from July 16 to July 19 on any bus/tram/subway - even some boats. Google Maps is a great resource to show all transportation schedules and where the trams/buses are located, as well any closures.

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

**Psychometric Society Social Media**
Don’t forget to post this week: use #IMPS2024 on any of the society’s social media channels!

**VŠE Building Internet (Wi-Fi Access)**
Wi-Fi is available onsite complimentary for attendee use in the VSE Building. All attendees will receive a username and passcode for their use during IMPS. Eduroam is also available.
Thumb Drives containing the IMPS 2024 Abstract PDF and Meeting Materials
The Society has placed the IMPS 2024 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 or the conference app will also host the IMPS 2024 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 Prague, Czech Republic. The weather in July is usually warm with an average temperature near 22°C (72-73°F).

This dry sunny weather makes for great sightseeing atmosphere to enjoy the amazing city! We recommend dressing appropriately to the weather, but in layers as the VŠE building is air conditioned.

Meeting Refreshment Breaks, and Attendee Lunch Breaks
Daily the IMPS meeting will provide hosted morning and afternoon refreshments (i.e., beverage service) during the session breaks. Lunch will not be provided by the Society; rather, attendees will be on their own for lunch. The VŠE Menza (Cafeteria) located in the Italska Building (IB) on the 1st and 2nd floors will be available to attendees over the lunch break and/or attendees may also venture off-site.

To view the Prague Restaurant listing and choose a map view, click here. Please refer to the Program Schedule for the timeline of daily refreshments, lunch break times, and hosted IMPS events.

IMPS 2024 Mobile APP
The Psychometric Society has a mobile app for IMPS 2024. 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 “imps2024.” Tap on the guide and then join to access the IMPS 2024 Mobile App.

Complimentary internet will be available at the Conference Venue: Prague University of Economics and Business; 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.
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.

2024 Society President & Organizing Committee Chair:
David Kaplan
University of Wisconsin–Madison
Madison, WI, United States

IMPS 2024 Local Committee
Patrícia Martinková
Local Host Committee Chair
Institute of Computer Science, Czech Academy of Sciences, Charles University, Prague, Czech Republic

Filip Habarta
Faculty of Informatics and Statistics, Prague University of Economics and Business

Adéla Hladká
Institute of Computer Science, Czech Academy of Sciences

Jarooslav Hlinka
Institute of Computer Science, Czech Academy of Sciences

Jiří Lukavský
Institute of Psychology, Czech Academy of Sciences
Charles University

Lubomír Štěpánek
Faculty of Informatics and Statistics, Prague University of Economics and Business

Tomáš Urbánek
Institute of Psychology, Czech Academy of Sciences

IMPS 2024 Program Committee:
- David Kaplan (University of Wisconsin)
- Patrícia Martinková (Czech Academy of Sciences and Charles University)
- Jorge Gonzalez (Pontificia Universidad Catolica de Chile)
- Qiwei Britt He (Georgetown University)
- Nana Kim (University of Minnesota)
- Irini Moustaki (London School of Economics)
- Steffi Pohl (Freie Universität, Berlin)
- Alexander Robitzsch (Leibniz Institute for Science and Mathematics Education)
- Fan Wallentin (University of Uppsala)
- Gabriel Wallin (Lancaster University)
- Chun Wang (University of Washington)

THANK YOU
A very extra special thank you to our local organizing committee members Patrícia Martinková, Filip Habarta, Adéla Hladká, Jarooslav Hlinka, Jiří Lukavský, Lubomír Štěpánek, Tomáš Urbánek. Many thanks also go to all the local volunteers for all their hard work: Jana Cibulková, Michaela Cichrová, Jana Dlouhá, Kaitlin Griffith, Zuzana Kubešová, David Lacko, Štěpánka Máčová, Filip Martinek, Šimon Martinek, Jan Netík, Iván Leonardo Pérez Cabrera, Lubomír Seif, Benjamin Šimsa, Marie Turčičová, Michaela Vařejková, Ondřej Vit, and Jun Wu.

Thank you to the conference host site this year: the Czech Academy of Sciences, the Prague University of Economics and Business, and the Charles University for their support of IMPS 2024!

We thank you all for joining us this year at IMPS 2024, and we sincerely hope you have a wonderful visit in Prague, Czech Republic!

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

2424 American Lane, Madison, WI 53704
Telephone: 608-268-4712
Fax: 608-333-0310
Email: info@psychometricsociety.org
Žižkov Campus Map

**NB** NEW BUILDING

*GROUND FLOOR:* 2 Vencovského Auditorium 4 Lecture Halls A, B, C, D

**RB** RAJSKA BUILDING

*FIRST FLOOR:* 5 RB 101 Auditorium and Lecture Halls RB A Registration B Atrium RB

*SECOND FLOOR:* • Classrooms RB - 209, 210, 211, 212

**IB** ITALSKA BUILDING

*FIRST AND SECOND FLOOR:* • Canteens C Menza ★ Main Entrance

**PT** PUBLIC TRANSPORT

D The Direction Towards the Main Train Station
Subway Stop (Hlavní Nádraží/Line C)
E Tram Stop (Viktoria Žižkov)
F Bus Stop (Náměstí Winstona Churchilla)
★ Entrance/exit to the VŠE Building from outside

**Conference Map**

Page 12
## Monday • July 15

| Room | Short Course #1: Structural equation models for categorical outcomes using lavaan | RB 209  
|------|---------------------------------------------------------------------------------|---
|      | 9:00 a.m. - 10:30 a.m. • Short Course                                           |      
|      | 10:30 a.m. - 10:50 a.m. • Refreshment Break                                     |      
|      | 10:50 a.m. - 12:00 a.m. • Short Course                                         |      
|      | 12:00 a.m. - 1:30 p.m. • Lunch Break                                           |      
|      | 1:30 p.m. - 3:00 p.m. • Short Course                                          |      
|      | 3:00 p.m. - 3:20 p.m. • Refreshment Break                                     |      
|      | 3:20 p.m. - 5:00 p.m. • Short Course                                          |      

| Room | Short Course #2: Tools of machine learning in psychometrics | RB 210  
|------|-------------------------------------------------------------|---
|      | 9:00 a.m. - 10:30 a.m. • Short Course                       |      
|      | 10:30 a.m. - 10:50 a.m. • Refreshment Break                |      
|      | 10:50 a.m. - 12:00 a.m. • Short Course                     |      
|      | 12:00 a.m. - 1:30 p.m. • Lunch Break                       |      
|      | 1:30 p.m. - 3:00 p.m. • Short Course                       |      
|      | 3:00 p.m. - 3:20 p.m. • Refreshment Break                  |      
|      | 3:20 p.m. - 5:00 p.m. • Short Course                       |      

| Room | Short Course #3: Planning and conducting simulation studies in R | RB 211  
|------|-----------------------------------------------------------------|---
|      | 9:30 a.m. - 11:00 a.m. • Short Course (Part 1)                 |      
|      | 11:00 a.m. - 11:20 a.m. • Refreshment Break                    |      
|      | 11:20 a.m. - 12:30 p.m. • Short Course (Part 1)               |      
|      | 12:30 p.m. - 2:00 p.m. • Lunch (on your own)                  |      
|      | 2:00 p.m. - 3:30 p.m. • Short Course (Part 2)                 |      
|      | 3:30 p.m. - 3:50 p.m. • Refreshment Break                     |      
|      | 3:50 p.m. - 5:00 p.m. • Short Course                          |      

| Room | Short Course #4: Computerized adaptive testing and multistage testing with R | RB 212  
|------|---------------------------------------------------------------------------------|---
|      | 9:30 a.m. - 10:45 a.m. • Short Course                                          |      
|      | 10:45 a.m. - 11:00 a.m. • Refreshment Break                                   |      
|      | 11:00 a.m. - 12:30 p.m. • Short Course                                        |      

### Monday, July 15:
- 8:00 a.m. - 5:00 p.m.

### Tuesday, July 16:
- 8:00 a.m. - 4:30 p.m.

### Wednesday, July 17:
- 8:00 a.m. - 5:00 p.m.

### Thursday, July 18:
- 8:00 a.m. - 4:00 p.m.

### Friday, July 19:
- 8:00 a.m. - 2:00 p.m.
**Tuesday • July 16**

**Vencovského aula**

Welcome: Prof. David Kaplan, Dr. Patrícia Martinová, Prof. Jakub Fischer, Dean of the Faculty of Informatics and Statistics, VŠE

Keynote Address: Prof. Adrian E. Raftery

Statistical inference with model uncertainty

Chair: Prof. David Kaplan

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**Invited Panel: Quality standards for simulation studies in psychometrics**

Chair: Prof. Steffi Pohl

- Short presentations by:
  - Richard Feinberg
  - Terence Jorgensen
  - Anna Lohmann
  - Björn Siepe
  - Anders Skrondal
  - Carolin Strobl

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**Session: Problems in mediation analysis**

Chair: Prof. Ying Yuan

- Bayesian latent class dynamic mediation model
  - Prof. Ying Yuan

- Relative importance analysis in multiple mediator models
  - Dr. Xin Gu

- Assessing heterogeneous treatment effects in Bayesian longitudinal mediation models
  - Ziwei Zhang

- Causal mediation analysis for binary outcomes with asymmetric link functions
  - Yuji Tsubota

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**Session: Topics in reliability**

Chair: Victoria Savalei

- Maximal reliability coefficients for bifactor models
  - Victoria Savalei

- On the estimation of reliability in knowledge space theory
  - Prof. Andrea Spoto

- Reliability in intensive longitudinal studies: a state-space vs. linear mixed model approach
  - Mr. Tzu-Yao Lin

- Estimating reliability for mixed-format tests
  - Ye Yuan

- Standard errors and null-hypothesis significance tests for reliability coefficients
  - Andreas van der Ark

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**Session: Advancements in structural equation modeling (SEM): model fit, parameter selection, and measurement invariance**

Chair: David Goreta

- Sensitivity of model fit indices in SEM to underfactoring
  - Dr. Melanie Visita Partsch

- Projection predictive variable selection for Bayesian regularized structural equation modeling
  - Dr. Sara van Erp

- Exploring measurement non-invariance with exploratory factor analysis trees and exploratory graph analysis trees
  - David Goreta

- Measurement invariance in within-person latent structure for dynamic factor models
  - Dr. Ai Ye

- A causal framework for the comparability of latent variables
  - Philipp Steiner

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**Session: Developments in IRT**

Chair: Prof. Mark Wilson

- A new measure and an old measure of person fit
  - Mr. Horacio Rocha

- Detection of local dependence within PCMs through recent L1-penalization approaches
  - Mr. Can Gürer

- Investigating the invariant ordering of clustered items using nonparametric IRT
  - Dr. Lotfy Koopman

- Integrating observations and test scores: a fixed-random item model
  - Prof. Mark Wilson

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**Session: Topics in latent variable estimation**

Chair: Dr. Björn Anderson

- Uncertainty quantification for latent variable selection in high dimensional exploratory factor analysis
  - Mr. Xinyi Liu

- Pairwise stochastic approximation for confirmatory factor analysis of categorical data
  - Fabio Setti

- Parsimonious item response theory modeling with different link functions
  - Dr. Wos Bonifay

- Unipolar IRT and vocabulary development
  - Prof. Daniel Bolt

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**Session: Topics in factor analysis**

Chair: Prof. Amanda Fairchild

- Hierarchical relation among minimum rank FA, PCA, and prevalent FA
  - Prof. Kohei Adachi

- The partially oblique rotation for exploratory factor analysis
  - Prof. Marcos Jiménez

- Overcoming Heywood cases in factor analysis: a maximum penalized likelihood approach
  - Mr. Philipp Starzinger

- Does choice of nonnormal data generation algorithm affect simulation results?
  - Prof. Amanda Fairchild
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>12:00 p.m.</td>
<td>Lunch (On Your Own)</td>
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<tr>
<td>1:30 p.m.</td>
<td>Invited Speaker: Dr. Cécile Proust-Lima</td>
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<tr>
<td></td>
<td>Continuous-time latent variable modeling of measurement scales in health studies: applications to the multiple-system atrophy progression</td>
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<td>Chair: Prof. Silvia Bianconcini</td>
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<tr>
<td>2:30 p.m.</td>
<td>Symposium: Beyond ignorability; advancing with partial identifiability in psychometrics</td>
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<td>Chair: Dr. Eduardo Alarcón-Bustamante</td>
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<tr>
<td>3:45 p.m.</td>
<td>A partial identifiability approach for analyzing regression functions with missing data in the outcome</td>
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<td>Dr. Jorge Gonzalez</td>
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<tr>
<td>3:15 p.m.</td>
<td>On the impact of missing outcomes in predictive capacity of selection tests studies</td>
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<td>Dr. Inés Varas</td>
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<tr>
<td>3:45 p.m.</td>
<td>Assessing the marginal effect under partial observability in a selection context</td>
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<td>Dr. Eduardo Alarcón-Bustamante</td>
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<tr>
<td>3:45 p.m.</td>
<td>Invited Speaker: Dr. Esther Ulitzsch</td>
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<td>Confirmatory mixture models for investigating contextual correlates of response behavior in ecological momentary assessments</td>
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<td>Chair: Prof. Carolin Strobl</td>
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<tr>
<td>3:45 p.m.</td>
<td>From exploratory to confirmatory network psychometrics: fit indices and cutoff values</td>
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<td>Mr. Xinkai Du</td>
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<tr>
<td>3:45 p.m.</td>
<td>Integration of bing model and computer adaptive testing: a simulation</td>
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<td>Mr. Yoo Kwikera</td>
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<td>3:45 p.m.</td>
<td>Testing for similarity between idiosyncratic networks: assessing the impact of ordinal and categorical variables</td>
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<td>Mr. Tatiana Kvetnaya</td>
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<tr>
<td>3:45 p.m.</td>
<td>Exploratory subgroup detection of psychological networks: assessing the impact of ordinal and categorical variables</td>
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<td>Mr. HeeJoo Park</td>
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<tr>
<td>3:45 p.m.</td>
<td>Challenges in sample size calculation for psychological networks with missing data</td>
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<td>Ms. Laura Maria Fetz</td>
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</tbody>
</table>

**Session: Topics in categorical data analysis**
Chair: Prof. Silvia Bianconcini

- **Symposium: Beyond ignorability:**
- **Invited Speaker:** Dr. Eduardo Alarcón-Bustamante
- **A partial identifiability approach for analyzing regression functions with missing data in the outcome**
  - Dr. Jorge Gonzalez
- **On the impact of missing outcomes in predictive capacity of selection tests studies**
  - Dr. Inés Varas
- **Assessing the marginal effect under partial observability in a selection context**
  - Dr. Eduardo Alarcón-Bustamante

---

**Session: Psychometric applications in psychology**
Chair: Dr. Jenn-Yun Tam

- **Decoding intelligence: investigating the structure of intelligence**
  - Ms. Laura Maria Fetz
- **An investigation the context effect in the multidimensional forced-choice personality measurement**
  - Dr. Kyunae Bunji
- **Dynamic and bidirectional associations between physical activity, smartphone addiction and state self-esteem**
  - Yang Cui
- **Predicting onset of child positive and negative affect and behavior**
  - Dr. Jenn-Yun Tam
- **Developing a framework for testing dyadic associations using psychodyads and permutations**
  - Chiara Carlier

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**Session: Differential item functioning**
Chair: Prof. Ronna Turner

- **Group-specific detection rates when using tree-based differential item functioning methods**
  - Prof. Ronna Turner
- **A comparison of various DIF detection methods under sparse matrices**
  - Ms. Haiju Lee
- **Using criterion validity to solve the scale indeterminacy in the context of DIF: an external variable approach**
  - Dr. Jesper Tijmsra
- **Calculating bias in equating and handling DIF anchor items**
  - Prof. Marie Wiberg

---

**Session: Topics in longitudinal data analysis**
Chair: Dr. Yan Wang

- **Developing cross-classified growth mixture models to account for student mobility**
  - Dr. Yan Wang
- **A new approach of integrating nonlinear growth modeling on accelerated longitudinal design**
  - Ms. Hou Joo Park
- **Validation of the intra-individual speed-ability relationship (ISAR) model**
  - Augustin Mutak
- **Joint modeling: dynamic latent variables, survival outcomes, and MNAR data**
  - Ms. Yvette Baurne

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  - Ms. Yvette Baurne
Welcome Reception
Prof. Milena Králičková, Rector of the Charles University; Prof. Antonín Jančařík, Dean of the Faculty of Education

6:30 p.m. - 9:00 p.m. • Enjoy delightful array of hors d’oeuvres and cocktails in the ground floor.
7:30 p.m. • Welcome remarks in the courtyard.
6:45 p.m. - 7:10 p.m. and 8:15 p.m. - 8:40 p.m. • Come to listen to organ and trumpets in the Great Hall located on the first floor.
### Symposia and Sessions

**Wednesday • July 17**

#### Vencovského aula

- **Invited Panel:** Foundational competencies in educational measurement: an NCME task force consensus  
  *Chair: Prof. Andrew Ho*
  - Andrew Ho (Chair/Presenter)  
  - Harvard University  
  - Ying (Alison) Chen (Presenter)  
  - University of Notre Dame  
  - David Thissen (Presenter)  
  - The University of North Carolina at Chapel Hill  
  - David Torres Irribarra (Presenter)  
  - Pontificia Universidad Católica de Chile  
  - Terry Ackerman (Discussant)  
  - University of Iowa

#### RB 101

- **Symposium:** Using process data to understand, assist, and enhance assessment  
  *Chair: Dr. Mengxiao Zhu*
  - Linking writing process data to writing quality  
    - Hong Jiao
  - Explaining performance gaps with problem-solving process data via LCMA  
    - Sunbom Kwon
  - Scoring of argumentative writing using keystroke logs and deep learning models  
    - Dr. Mengxiao Zhu
  - Selecting and analyzing eye movement features for the screening of reading disorders in children  
    - Ms. Mingming Hu

#### NB A

- **Symposium:** Latent variable models for complex data structures  
  *Chair: Maria giulia Matteucci*
  - Joint modelling of students’ academic performance and dropout  
    - Prof. Michela Battauz
  - Cheating detection based on response times in CAT  
    - Luca Bungaro
  - A new factor mixture model to detect aberrant respondents  
    - Niccolò Cao
  - Latent variable models for panel data: comparison of estimation methods  
    - Dr. Lucia Guastadisegni
  - Scalable M-estimation for GLVM  
    - Prof. Maria-Pia Victoria-Feser

#### RB 209

- **Symposium:** Quantitative methods for assessing the impact of physical activity on health  
  *Chair: Dr. Sjoerd Ebisch*
  - Predicting mental health through satellite images  
    - Dr. Simon Di Pinso
  - Assessing recovery after high-intensity anaerobic exercise: a comparison between physiological and psychological measures  
    - Dr. Luca Lazzia
  - Validation of the “restorativeness at work scale” (R@WS)  
    - Prof. Margherita Brondino

#### RB 210

- **Session:** Applications of IRT models for mathematics and ELA across grades 3-8  
  *Chair: Dr. Magdalena Belzak*
  - Comparing ERT models for mathematics and ELA across grades 3-8  
    - Dr. Magdalena Belzak-Famili
  - Using item response theory to investigate whether rater assessments measure rater quality: is there such a thing as a “correct” rating?  
    - Dr. William Belzak
  - Selection of eye tracking stimuli via item response theory  
    - Benjamin Graves
  - Modernizing high school assessments in Albania: exploring item response theory in state matura exams  
    - Prof. Eriska Gjika
  - Enhancing scoring procedures for the divergent association task: leveraging sequential scoring and IRT paradigm  
    - Dr. Daniel Dostal

#### RB 211

- **Session:** Bayesian issues in IRT  
  *Chair: Prof. Seock-Ho Kim*
  - A Bayesian approach for joint modeling of rankings and ratings  
    - Prof. Elena Erosheva
  - Bayesian nonparametric HETOP models for rating data  
    - Dr. Giuseppe Migmeni
  - Some posterior standard deviations of the graded response model  
    - Prof. Seock-Ho Kim
  - Estimation of IRT models using NUTS under non-normal distributions  
    - Dr. Rehab AlHakmani
  - A Bayesian model to represent ambiguity and atypical behaviour in item response theory  
    - Mario Angelelli

### Sessions

- **Symposium:** Advances in conducting observational intensive longitudinal studies  
  *Chair: Dr. Sigert Ariens*
  - Preprocessing ESM data: a framework, tutorial website, R package, and reporting templates  
    - Jordan Rehd
g  
  - Episode-contingent experience-sampling designs for accurate estimates of autoregressive dynamics  
    - Dr. Sigert Ariens
  - Consequences of missing data types of the multilevel AR(1) model  
    - Mr. Benjamin Simsa
  - Combining day-to-day dynamics with day-of-week effects and weekly dynamics using seasonal ARIMA models  
    - Mr. Mohammadhossein Manuel Haqiqatkhah
  - A practical guide to estimating the reliability of ambulatory assessment data  
    - Dr. IJsbrand Rehd
g

### Career Lifetime Achievement Award

**A selective intellectual history of differential item functioning analysis in item response theory and factorial invariance in factor analysis**  
*Chair: Prof. David Kaplan*

#### Vencovského aula

**Career Lifetime Achievement Award:** Prof. David Thissen

### Lunch (On Your Own)

#### VŠE Menza
2:30 p.m. - 3:15 p.m.

Vencovského aula

Invited Speaker: Dr. Patrícia Martinková

Computational aspects of psychometric methods and beyond

Chair: Prof. Irini Moustaki

RB 101

Atrium RB

Refreshment Break

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

NB A

Session: Topics in IRT 1

Chair: Dr. Gabriel Wallin

Individual salience weights in the multidimensional generalized graded unfolding model

Prof. James Roberts

Item response function variability: a strategy for model comparison research

Mr. Xing Chen

Refinement of the matching item response model: a shift to generative modeling

Mr. Kentaro Fukushima

An explanatory hyperbolic cosine model with categorical covariates

Dr. Jue Wang

A taxonomy of unfolding models

Prof. George Engelhard

NB B

Symposium: Formal theories of psychological phenomena

Chair: Mr. Jesse Boot

Improving treatments for mental disorders using computational models

Dr. Jonas Haslbeck

From budworms to behaviors: bridging the gap between individual psychology and social contexts in addiction

Mr. Jesse Boot

Towards a general modeling framework of resource competition in cognitive development

Ms. Jill de Ron

Integrating intraindividual and interindividual phenomena in psychological theories

Prof. Denny Borsboom

NB C

Session: Novel approaches to IRT

Chair: Prof. Francis Tuerlinckx

Geometry and psychometrics

Prof. Francis Tuerlinckx

Regularized Gaussian variational estimation for detecting intersectional differential item functioning

Mr. He Ren

Bayesian diagnostic classification using doubly bounded visual analogue scaling

Ms. Hsin Kao

Likelihood-free estimation of IRT models in small samples: A neural networks approach

Dr. Dmitry Belov

A differential equation framework for the derivation of item response functions

Prof. Yvonnick Noel

WBEDNESDAY CONTINUED

1:00 p.m. - 2:15 p.m.

Vencovského aula

Invited Panel:

Paths to the future: A panel discussion of the future of SEM

Chair: Prof. Steven Boker

Participants include:

Steven Boker, University of Virginia
Timothy Brick, Pennsylvania State University
Zachary Fisher, Pennsylvania State University
Michael Hunter, Pennsylvania State University
David Kaplan, University of Wisconsin - Madison
Alberto Maydeu-Olivares, University of South Carolina
Mike Neale, Virginia Commonwealth University
Yves Rosseel, University of Ghent
Timo von Oertzen, Thomas Bayes Institute, Berlin

NB D

Symposium: Quantifying replication success: correspondence measures for replication studies

Chair: Dr. Vivian Wong

Implementation of the correspondence test as an S-curve

Patrick Sheehan

How best to quantify replication success?

Prof. Don van Ravenzwaaij

A systematic comparison of correspondence measures for prospective replications

Dennis Kondzic

Assessing replication success over multiple replication study results

Dr. Vivian Wong

NB E

Session: Topics in clustering

Chair: Dr. Magdalen Beiting-Parrish

Ordinal cognitive diagnosis in nonparametric framework

Prof. Youn Seon Lim

Sparse convex optimal discriminant clustering

Ms. Mayu Hiraishi

Generalized Bayesian method for diagnostic classification models

Dr. Kazuhiro Yamaguchi

Modeling examinee heterogeneity within performance classification using generalized low rank models

Dr. Magdalen Beiting-Parrish

NB F

Session: Statistical topics

Chair: Dr. Katrin Jansen

Multivariate location-scale models for meta-analysis

Dr. Katrin Jansen

Bayesian modeling of data with ceiling or floor effects

Ms. Ruoxuan Li

Marginal and conditional posterior predictive p-values for ordinal models

Ms. Ellen Fitzsimmons

Use of external moment information via externally informed models

Mr. Martin Jann

The application of a metaheuristic algorithm when developing a test with a pre-defined value of the cut-off score

Lenka Firtova

NB G

Symposium: Formal theories of psychological phenomena

Chair: Mr. Jesse Boot

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Dr. Jonas Haslbeck

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Geometry and psychometrics

Prof. Francis Tuerlinckx

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Mr. He Ren

Bayesian diagnostic classification using doubly bounded visual analogue scaling

Ms. Hsin Kao

Likelihood-free estimation of IRT models in small samples: A neural networks approach

Dr. Dmitry Belov

A differential equation framework for the derivation of item response functions

Prof. Yvonnick Noel

NB I

Session: Topics in statistical/machine learning

Chair: Dr. Qiwei He

Estimating latent variance in variational autoencoders parameterization of Rasch models

Mr. Denis Federiaki

Unsupervised detection of random responding for Likert-type inventories with varying numbers of response categories

Mr. Michael John Ilagan

Predicting missing response with BERT model in process data

Dr. Qiwei He

Deep-learning methods for multiple imputation in large-scale survey assessments

Dr. Usama Ali

Exploring classic machine learning models and large language models in detecting ChatGPT generated essays in writing assessments

Mr. Haowei Hua

NB J

Session: Topics in clustering

Chair: Dr. Magdalen Beiting-Parrish

Ordinal cognitive diagnosis in nonparametric framework

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The application of a metaheuristic algorithm when developing a test with a pre-defined value of the cut-off score

Lenka Firtova
Graduate Student Dinner Mixer
This event is exclusively for graduate students and will be hosted by the Psychometric Society.

Wednesday Continued
3:45 p.m. - 4:45 p.m.
Atrium RB

Poster Session
Presenters will be available at posters from 5:00 p.m. - 6:15 p.m. Click here to view the poster list.

4:45 p.m. - 6:15 p.m.
Vencovského aula
Early Career Award: Prof. Maarten Marsman
From network psychometrics to Bayesian graphical modeling
Chair: Prof. Daniel Bolt

7:00 p.m. - 10:00 p.m.
Pivnice Obecní dům (Pilsner Pub Municipal House) | Address: náměstí Republiky 1090/5, 111 21, Praha 1 – Staré Město

Graduate Student Dinner Mixer
This event is exclusively for graduate students and will be hosted by the Psychometric Society.
Thursday • July 18

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

Vencovského aula

Symposium: Psychometric methods for analysis of wellbeing in the context of digital technologies
Chair: Dr. Patrice Martinekova
Discussant: Prof. Ilene Eisely
Dynamic systems modeling of human behaviors to improve proactive healthcare
Prof. Mika Pauk
The reliability of digital trace data in media exposure measures: a multiverse of measurements analysis
Dr. Ondrej Joser
Joint modeling for non-ignorable missingness in intensive longitudinal data
Young Won Choi
Utilizing dynamic structural equation modeling on intensive longitudinal data: the inspiration for digital media use effects research
Mr. David Lakso
Quantification, testing, treatment and interpretation of non-Gaussian dependences in intensive longitudinal data: lessons learned from complex dynamical systems
Dr. Jaroslav Hlinka

RB 101

Session: Longitudinal latent class and CDM models
Chair: Jonathan Templin
Discovery of attribute hierarchies in longitudinal cognitive diagnostic models
Dr. Yinghan Chen
Regularized variational Bayes for Q-matrix inference in cognitive diagnosis models
Ms. Yi Jin
A wrinkle in the IRT theta continuum: exploring DCM classification
Jonathan Templin
Stepwise estimation approaches of complex latent class models: best practices
Dr. Zsuza Bakk

NB A

Session: Novel statistical approaches to tackle challenges in intensive longitudinal data
Chair: Marieke Schreuder (Belgium) - KU Leuven
Improving the estimation of sample heterogeneity in multivariate dynamic processes through feature selection
Ms. Di Jody Zhou
Investigating emotional recovery using survival analyses of burst ESM data
Marieke Schreuder
Person-specific updating approach to deriving EWMA control limits in case of few in-control observations
Dr. Evelien Schat
Training window selection methods for passive sensing
Fridtjof Petersen

NB B

Session: Theoretical and applied issues in validity
Chair: Keith Markus
Notes toward a grammar of validity arguments
Keith Markus
Integrating IRT and GT via a four-building-block approach
Mr. Mingfeng Xue
Mitigating social desirability using item quadruplets and MIMIC
Dr. Felipe Valentini
Assessing teaching skills: overcoming psychometric hurdles in observational measures
Mr. Steffen Erickson

NB C

Session: Bayesian stacking, trees, and predictive modeling
Chair: Prof. Sierra Bainter
On the improvement of predictive modeling using Bayesian stacking and posterior predictive checking-an example of modeling gender inequality in reading using PISA 2018
Dr. Mariana Nold
Incorporating sparsity into Bayesian stacking procedures
Ms. Kjorte Harra
Bayesian posterior predictive checks to analyze flexible distributional models
Ms. Paulina Grekov
Bayesian treed regression for estimating heterogeneous trajectories of test scores in large-scale educational data
Mr. Mingya Huang
Variable selection with missing data using Bayesian additive regression trees
Prof. Sierra Bainter

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

Atrium RB

Refreshment Break

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

Vencovského aula

Session: Topics in missing data analysis
Chair: Dr. Joost Van Ginkel
How many plausible values?
Dr. Paul Jowsbury
Planned missing data designs for addressing measurement reactivity
Mark Himmelstein
Moderated factor analysis with missing data: a multiple imputation approach
Dr. Joost Van Ginkel
Izing network analysis with missing data
Dr. Siliang Zhang

Session: Topics in causal inference 1
Chair: Prof. Jee-Seon Kim
Validation of an SEM multiverse path test
Ronald Flores
Addressing clustered data structures in causal mediation analysis
Hanna Kim
An overarching framework for examining diverse forms of heterogeneous causal effects
Prof. Jee-Seon Kim
Evaluating RKHS mapping effects on functional structural equation models
Dr. Michio Yamamoto
Multilevel regression discontinuity analysis with measurement models
Youjinn Han

Session: Machine learning and deep learning
Chair: Dr. Benjamin Garzón
A deep learning approach for a more efficient estimation of rank preserving models
Mr. Roberto Faleh
Modelling computer-based formative assessment data with graph neural networks
Dr. Benjamin Garzón
Residual permutation tests for feature importance in machine learning
Dr. Po-Hsien Huang
Parameterized material recommendation with dual-goal adaptive learning system
Dr. Tongxin Zhang

Session: Bayesian factor analysis and SEM
Chair: Prof. Christian Allmanna
Bayesian dynamic mediation model
Mr. Chen Qin
Bayesian SEM fit indices: now for categorical indicators
Dr. Mauroco Garnier-Villame
Bayesian fit measures in approximate measurement invariance in cross-cultural research
Dr. Chuhua Cao
Bayesian confirmatory factor analysis with missing values
Prof. Christian Allmanna
Bayesian joint modal estimation for sparse item factor analysis
Dr. Kereanei Osada

Keynote Speaker: Prof. David MacKinnon
The investigation of mediating processes as a measurement challenge
Chair: Prof. David Kaplan
**Lunch (On Your Own)**

### Věcovského aula

**Symposium: Item response theory and health outcomes: novel applications and methods**

*Chair: Dr. Leah Feuerstahler*

- Latent variable modeling for unipolar constructs in health sciences
  *Dr. Edward Ip*

- The application of IRT to traumatic brain injury research: some promise and challenges
  *Dr. Brooke Magnus*

- Mixture item response theory to quantify cumulative environmental exposure burden
  *Dr. Shelley Liu*

- An explanatory IRT model for toxicity-weighted environmental exposure burden scores
  *Dr. Leah Feuerstahler*

### NB A

**Session: Topics in factor analysis**

*Chair: Dr. Alexis Georgeson*

- Covariate-adjusted generalized factor analysis with application to testing fairness
  *Jing Ouyang*

- A factor analytic analogue for summed score EAPs
  *Dr. Hwanggyu Lim*

- Comparing item selection in regularized factor analysis and network models
  *Ms. Jia Li*

- Multilevel mixture modeling: a simulation study
  *Dr. Rodrigo Schames Kreitchmann*

- Pseudo-factor analysis of embedding similarity matrices
  *Nigel Guenole*

### NB B

**Symposium: Recent advances in (non-)Bayesian informative hypothesis evaluation**

*Chair: Dr. Rebecca Kuiper*

- Applying the informative hypothesis approach to media effects
  *Ms. Nikol Kervinen*

- Theory-based hypothesis evaluation using information criteria
  *Dr. Rebecca Kuiper*

- Bayesian evaluation of N=1 studies
  *Prof. Herbert Hoijtink*

- Making nomological networks confirmatory using GORICA
  *Mr. Petr Palasek*

- Benchmarks and cut-off norms: necessary evils or questionable science inducers?
  *Luo de Venegil*

- Emotions under control? The relationship between emotionality and cognitive control reverse if event-unpleasantness is increased within individuals
  *Mr. Levente Rönnai*

### NB C

**Session: Topics in intensive longitudinal data analysis**

*Chair: Corin Lacey*

- Extending the time-varying temporal network to allow changing contemporaneous connections
  *Sennan Josiah*

- Individual versus group-level analysis techniques for intensive longitudinal data: a primer
  *Corin Lacey*

- Investigation of detrending methods for intensive longitudinal dyadic data analysis
  *Yue Xiao*

- Estimating actor and partner effects from intensive longitudinal dyadic data with large amounts of missing values: estimation performance of the longitudinal actor-partner interdependence model and possible alternatives
  *Yuan Yuan Ji*

### NB D

**Symposium: Using structural equation models to analyze round-robin data from social networks**

*Chair: Dr. Terrence Jorgensen*

- Multiple constructs multiple indicators social relations models with and without roles
  *Dr. Fridolf W. Nusseck*

- A correlated traits correlated (methods – 1) multitrait-multimethod model for augmented round-robin data
  *Dr. David Jendryczko*

- Toward a general multivariate framework for social network data: An overview of estimation methods for structural social-relations models
  *Dr. Terrence Jorgensen*

- Incorporating level-specific covariates in structural equation models of social-network data
  *Ms. Aditi Manoj Bhangale*

### RB 101

**Session: Problems in cognitive diagnostic modeling**

*Chair: Dr. Pablo Núñez*

- A psychometric analysis on associations between coding concepts and item difficulty
  *Chen Li*

- Evaluating methods for assessing model fit in diagnostic classification models
  *Jake Thompson*

- A general diagnostic modeling framework for forced-choice items
  *Dr. Pablo Núñez*

- Correcting validity coefficients with aggregated data in cognitive diagnosis models
  *Dr. Rodrigo Schames Kreitchmann*

- A generalized Q-matrix estimation method for nonparametric cognitive diagnosis
  *Ms. Jia Li*

### RB 209

**Session: Differential item functioning**

*Chair: Dr. Heining Cham*

- Detecting non-uniform differential item functioning in latent variable interaction framework
  *Dr. Heining Cham*

- Extending the cluster approach to differential item functioning in polytomous items
  *Dr. Martijn Schoenmakers*

- Advancing polytomous DIF detection with the residual DIF framework
  *Dr. Hwanggyu Lim*

- Assessing differential step functioning for polytomous items with scale purification
  *Dr. Ya-Hui Su*

### RB 210

**Symposium: Psychometric innovations for adaptive learning systems**

*Chair: Dr. Maria Bolonova*

- A dynamic k value approach for the Elo rating system
  *Hanke Vermeiren*

- Curious interactions between learners and Elo rating systems
  *Dr. Abi Hofman*

- Tracking changing abilities in adaptive learning system using response times
  *Bance Langely*

- Modeling individual differences in error-induced quitting
  *Ms. Annie Johansson*

### RB 211

**Session: Graduate Student Research Competition**

*Chair: Prof. Silvia Cagnone*

- Presentations by the following teams:
  
  - Integrating Generative AIs into Computerized Adaptive Testing
    *Diego F. Graña, Diego Iglesias, Marcos Jiménez and Nuria Real-Brioso, Faculty of Psychology, Universidad Autónoma de Madrid*
  
  - A Battle of Wits: Comparing the Capabilities of Generative AI and Humans in Scale Development
    *Meltem Ozcan, Winnie W.-Y. Tse, Gengrui Zhang, Department of Psychology, University of Southern California*
  
  - Expanding the Scope of Data Sources in Psychometric Research by Embedding Individual Records using Generative AI
    *Shihao Wu, Chengyu Cui, Bo Meng, Jing Ouyang, and Zhiwei Xu, Department of Statistics, University of Michigan*
**Vencovského aula**

- **Session: More on AI and machine learning**
  - Chair: Prof. Elise Dusseldorp
  - Dr. Cagla Alpayar: Examining the performance of hybrid and traditional multistage tests under different conditions

**Atrium RB**

**Refreshment Break**

**IMPS 2024 Group Excursion City Walking Tour**
Friday • July 19

**Vencovského aula**

**ETS Special Symposium: Psychometric innovations in large-scale survey assessments**
Chair: Dr. Duanli Yan

Variable selection techniques for imputation models
Dr. Peter van Rijn

Imputation models for special subpopulations
Dr. Usama Ali

Linking error in large-scale assessments
Dr. Paul Jewsbury

**RB 101**

Symposium: From traditional to modern methods for the analysis of multi-item measurements
Chair: Dr. Lubomír Štěpánek and Dr. Adéla Hladká
Discussant: Dr. Gabriel Walin

Robust inference for traditional item discrimination index
Dr. Lubomír Štěpánek

Innovative iterative algorithms for estimation of item functioning
Dr. Adéla Hladká

Three- and four-parameter IRT model in factor analysis framework
Jan Pavlech

Fine-tuning language models to predict item difficulty from wording
Jan Herl

On the identifiability and structural learning of R-RUM models
Ivan Péruc

**NB A**

Session: Topics in IRT 3
Chair: Dr. Ben Domingue

Combining item responses and paired comparisons in small sample contexts
Dr. Nathan Zoanetti

Modeling process data with explanatory item response models
Dr. Susanne Frick

A mixture-IRT model for careless responding with flexible assumptions
Inna Uglanova

The item response warehouse (IRW)
Dr. Ben Domingue

Standardized person-fit statistics for tests with polytomous items
Prof. Kyle Gormley

**NB B**

Session: Topics in adaptive testing
Chair: Dr. Aron Fink

Adaptively regulated interim theta bounds for optimizing CAT item selection
Dr. Sung-Hyuck Lee

Non-parametric item response theory for computerized adaptive tests
Laura Aspirito

Computerized adaptive testing with continuous items: Improving the efficiency of noncognitive assessments
Mr. Wei-Hung Yang

Addressing calibration error in multidimensional adaptive testing: A Bayesian approach
Dr. Aron Fink

Evaluating models for item cloning variation under multistage testing
Dr. Winn-Chan Lee

**NB C**

Session: Longitudinal designs and methods
Chair: Dr. Charles Driver

Continuous-time modeling of bivariate developmental trajectories in accelerated longitudinal designs
Ms. Nina Rea-Briosco

More on cross-legged effects -- (mis)specification in dynamic systems models
Dr. Charles Driver

SimDE app: simulating and visualizing formal theories using differential equations
Rohit Batra

Integral dimensionality reduction in models that include nonlinear random coefficients
Dr. Shelley Blozis

**NB D**

Session: New insights in longitudinal data and mediation analysis
Chair: Prof. Zhiyong Zhang

Modeling dynamic components in intensive longitudinal data analysis: a comparison of one- vs. two-step approaches
Dr. Peggy Wang

Quantile longitudinal data modeling with missing data
Dr. Xin Tong

Analysis of mediation direction change between manifest and latent variable modeling
Dr. Ke-Hai Yuan

Mediation analysis with text data
Prof. Zhiyong Zhang

A longitudinal study of the impact of living style on the health and mortality risk of the elderly
Prof. Yong Wen

**RB 209**

Session: Classification methods
Chair: Dr. Liqun Yin

Constructing language models to predict massive student sentiment toward universities
Tonghui Xu

Advancing enemy item detection using transformer-augmented NLP
Dr. Paulius Satkus

Improving context scale interpretation using latent class analysis for cut scores
Dr. Liqun Yin

Blueprinting the future: automatic item categorization using hierarchical zero-shot and few-shot classifiers
Dr. Ting Wang

**RB 210**

Session: Psychometric applications to education
Chair: Dr. Diego Carrasco

Multilevel synthesis of composite cross-classified event scores as a psychometric approach for EdTech
Dr. Dmitry Abbakumov

Latent logistic regression analysis of background characteristics on digital literacy
Dr. Qianru Liang

Accounting for ceiling effects on polytomous responses: An illustration with gender equality endorsement.
Dr. Diego Carrasco

Score-difference-at-risk (SDaR): using risk metrics to anticipate negative impact.
Dr. Sergio Araneda

**RB 211**

Session: Topics in machine learning
Chair: Youmi Suk

An interpretable cognitive diagnostic model based on XGBoost and shap
Ms. Chang Nie

Understanding of measurement invariance within a SEMtree framework
Mr. Yeong Jin Jo

Using conditional tabular generative adversarial networks for process data generation in Monte Carlo simulation studies
Dr. Youmi Suk

Unveiling competencies for efficient AI utilization: a psychometric perspective
Ms. Bhavana Srinagarn

**Vencovského aula**

Invited Speaker: Dr. Maria Bolsinova
Rating systems for measurement in adaptive learning systems: challenges and solutions
Chair: Prof. Maarten Marsman

**Atrium RB**

**Refreshment Break**
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<td>Evaluating multigroup structural equation modeling with exploratory measurement models Ms. Jennifer Dang Guay</td>
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<td>Using the multidimensional nominal response model to model faking: the importance of item desirability characteristics Mr. Timo Seitz</td>
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<td>Exploring the frontier of fairness: The significance of outliers in algorithmic bias and equity Dr. Secil Ugurlu</td>
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| 2:00 p.m.    | Vencovského aula          | Presidential Address: Prof. David Kaplan  
Probabilistic forecasting with international large-scale assessments: methods for estimating the pace of progress to the United Nations education sustainable development targets  
Chair: Prof. Denny Borsboom |
| 3:00 p.m.    | Vencovského aula          | Members Meeting                                                                                                                                                             |
| 3:30 p.m.    | Vencovského aula          | Awards and Closing Ceremony                                                                                                                                                 |
| 6:00 p.m.    | Prague Boats | Address: Dvořákovo nábř., 110 00 Praha 1 - Josefov, Prague |
|              |                           | Closing Banquet Reception & Boat Cruise                                                                                                                                    |

- Thank you to the Prague Convention Bureau for the images used in this document. -
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The IMPS 2024 Exhibitors and Sponsors will be located in the Atrium RB of the VŠE Building. 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 2024!

**EXHIBIT AREA HOURS**
Tuesday, July 16 | 10:00 a.m. - 4:15 p.m.
Wednesday, July 17 | 10:00 a.m. - 3:45 p.m.
Thursday, July 18 | 10:00 a.m. - 4:15 p.m.
Friday, July 19 | 8:30 a.m. - 10:30 a.m.

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