



PONTIFICIA
UNIVERSIDAD
CATÓLICA
DE CHILE

FINAL PROGRAM

SANTIAGO DE CHILE

July 15-19



**Psychometric
Society**

IMPS 2019

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Dear attendees and guests,

We cordially welcome you to IMPS 2019, which is the 84th Annual Meeting of the Psychometric Society, held at the Pontificia Universidad Católica de Chile in Santiago de Chile. This year's meeting is a very special one because for the very first time, IMPS is going to be held in the Latin American continent.

Overlooked by the mighty Andes Mountains and situated in a basin that has been populated for thousands of years, Santiago de Chile was founded in the 16th century and has grown into a vibrant metropole of 7 million people. The conference will take place in the Centro de Extensión, which is the university's central building. Near the conference center are two lively neighborhoods, Barrio Lastarria and Barrio Bellavista, both home to a wide variety of restaurants, pubs, and night clubs.

With its 30,000 students and 1,700 faculty members, the Pontificia Universidad Católica de Chile is one of the most renowned universities of Latin America. Psychometrics and applied statistics are at the focus of research and teaching in several faculties and schools (School of Psychology, Faculty of Mathematics, and the Faculty of Education). The generous support from various parts and levels of the university is what made IMPS 2019 possible.

The conference starts with four parallel short courses on Monday, July 15. The main conference runs from Tuesday, July 16, to Friday, July 19. The opening of the conference will take place on Tuesday at 8:45 a.m. in the Salón Fresno (at the Centro de Extensión). At 6:15 p.m., the Welcome Poster Session Reception will also take place in the Plaza Central.

We have arranged a variety of social events, which are listed in the program booklet and on the website. There are two events that we especially want to draw attention to. One is the Graduate Student Mixer on Monday, July 15, from 6:30 p.m. until 8:00 p.m. at the Crowne Plaza hotel. The second is the Meeting of Members held on Thursday from 11:35 a.m. to 12:15 p.m., where the members of the Psychometric Society have the opportunity to be informed about and participate in the policy and activities of the society.

During the Meeting of Members, the membership will have the opportunity to elect a new secretary (see [here](#) for more information).

As you can gather from the program booklet, we have a full program, featuring eminent keynote and invited speakers.

Besides the scientific aspect, Santiago and Chile have much more to offer. If you have the time, you may take the opportunity to visit other places in Chile and neighboring countries. Check out the [conference website](#) for suggestions.

We are convinced that we will have a fruitful exchange of scientific ideas and a wonderful time. We hope you enjoy the conference and your stay in Santiago de Chile!

Francis Tuerlinckx



President of the Psychometric Society 2018-2019

David Torres Iribarra

Veronica Santelices

Jorge González

Local organizing committee

The following full-day, pre-conference short courses will be offered on **Monday, July 15, 2019, from 9:30 a.m.-5:10 p.m.:**



Short course 1: Structural equation modeling with lavaan

Yves Rosseel, Ghent University, Belgium

Location: Auditorium 1



Short course 2: Bayesian Inference with JASP

Eric Jan-Wagenmakers, University of Amsterdam, Netherlands

Location: Auditorium 2



Short course 3: Applying Test Equating methods using R

Marie Wiberg, Umeå University, Sweden

Location: Auditorium 3



Short course 3: Applying Test Equating methods using R

Jorge González, Pontificia Universidad Católica de Chile, Chile

Location: Auditorium 3



Short course 4: Introducción al análisis de clases latentes y los modelos de mezclas

Jeroen Vermunt, Tilburg University, Netherlands

Location: Sala 1



Eric-Jan Wagenmakers, University of Amsterdam, Netherlands

Bayesian multi-model inference for practical and impractical problems

Tuesday, July 16, 2019, 9:00 a.m.-10:00 a.m.

Location: Salón Fresno



Merijn Mestdagh, University of Leuven, Belgium

Dissertation Prize

Prepaid parameter estimation without likelihoods

Tuesday, July 16, 2019, 5:45 p.m.-6:15 p.m.

Location: Salón Fresno



Burr Settles, Duolingo, USA

Improving language learning and assessment with data

Wednesday, July 17, 2019, 10:20 a.m.-11:20 a.m.

Location: Salón Fresno



Susan Embretson, Georgia Institute of Technology, Atlanta, Georgia, USA

Career Award for Lifetime Achievement

Modeling cognitive processes, skills, and strategies in item responses: implications for test and item design

Friday, July 19, 2019, 10:55 a.m.-11:55 a.m.

Location: Salón Fresno



Dylan Molenaar, University of Amsterdam, Netherlands

Early Career Award

Beyond Simple main effects: challenges to the substantive interpretation of higher-order statistical effects

Friday, July 19, 2019, 2:40 p.m.-3:25 p.m.

Location: Salón Fresno



Francis Tuerlinckx, University of Leuven, Belgium

Presidential Address

Things I have learnt so far

Friday, July 19, 2019, 3:50 p.m.-4:50 p.m.

Location: Salón Fresno

Invited Speakers

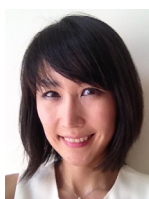


Dani Gamerman, Universidade Federal do Rio de Janeiro, Brazil

Dynamic generalized structural equation modeling, with application to the effect of pollution on health

Tuesday, July 16, 2019, 3:05 p.m.-3:50 p.m.

Location: Sal3n Fresno



Minjeong Jeon, University of California, Los Angeles, USA

A latent space modeling approach to unveiling respondents' and items' dependence structures in item response analysis

Thursday, July 18, 2019, 9:55 a.m.-10:40 a.m.

Location: Aula Magna



Gunter Maris, ACTNext by ACT, USA

The wiring of intelligence

Thursday, July 18, 2019, 9:55 a.m.-10:40 a.m.

Location: Sal3n Fresno



Ernesto San Martin, Pontificia Universidad Cat3lica de Chile, Chile

How to broker the evaluation of public policies? A proposal based on partial identification

Thursday, July 18, 2019, 1:30 p.m.-2:15 p.m.

Location: Sal3n Fresno

State of the Art Speaker



Kathleen Gates, University of North Carolina at Chapel Hill, USA

Assessing individual differences in non-traditional data structures

Tuesday, July 16, 2019, 3:05 p.m.-3:50 p.m.

Location: Aula Magna



Marjolein Fokkema, Leiden University, Netherlands
Prediction rule ensembles: Balancing interpretability and accuracy in statistical prediction
Thursday, July 18, 2019, 11:00 a.m.-11:30 a.m.
Location: Salón Fresno



Thorsten Meiser, University of Mannheim, Germany
IRTree mixture models for decomposing trait-based responses and response styles
Thursday, July 18, 2019, 11:00 a.m.-11:30 a.m.
Location: Aula Magna



Leah Feuerstahler, Fordham University, NY, USA
Characterizing uncertainty in item response model metrics
Thursday, July 18, 2019, 1:30 p.m.-2:05 p.m.
Location: Aula Magna



Hyeon-Ah Kang, University of Texas, Austin, TX, USA
Detecting item parameter drift online using response and response times
Friday, July 19, 2019, 10:20 a.m.-10:50 a.m.
Location: Salón Fresno



Adrian Quintero, ICFES-Colombian Institute for Educational Evaluation, Colombia
Selecting the number of factors in Bayesian factor analysis
Friday, July 19, 2019, 10:20 a.m.-10:50 a.m.
Location: Aula Magna

Panel Discussion: How testing organizations have shaped the psychometric research and employment opportunities for psychometricians

Chair: Alina von Davier

Tuesday, July 16, 2019, 4:10 p.m.-5:40 p.m.

Location: Salón Fresno

Panel Discussion: Stories of successful careers in psychometrics and what we can learn from them

Chair: Alina von Davier

Wednesday, July 17, 2019, 8:30 a.m.-10:00 a.m.

Location: Salón Fresno

Agencia de Calidad de la Educación Symposium: Addressing psychometric challenges for implementing accountability policies

Chair: Maria de la Luz Gonzalez

Wednesday, July 17, 2019, 8:30 a.m.-10:00 a.m.

Location: Aula Magna

DEMRE Symposium: A major change of the national college admission system in Chile: opportunities to improve

Chair: Daniela Jiménez

Thursday, July 18, 2019, 2:20 p.m.-3:50 p.m.

Location: Aula Magna

Invited Symposium: Recent advances in assessing small group collaborations

Chair: Peter Halpin

Friday, July 19, 2019, 1:10 p.m.-2:40 p.m.

Location: Aula Magna

Graduate Student Mixer

Monday, July 15: 6:30 p.m.-8:00 p.m.

[Crowne Plaza Santiago Hotel](#)

Av. Libertador Bernardo O'Higgins 136

Meeting Room: Atacama

This event is exclusively for graduate students and will be hosted by the Psychometric Society. As a registered student, you are welcome to join this event for complimentary appetizers and beverages, plus have the opportunity to meet other students from around the world in a unique and fun atmosphere.

Note: Attendee transportation is on your own.

Group Photo

Tuesday, July 16: 10:05 a.m.-10:25 a.m.

Location: Plaza Central

Following the Opening Keynote Session, please meet promptly by 10:05 a.m. in the Plaza Central.

At 10:15 a.m., a conference group photo will be taken.

After the group photo, attendees can network during a refreshment break from 10:25 a.m.-10:45 a.m. in the Plaza Central.

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

Welcome to Santiago Poster Session and Reception

Tuesday, July 16: 6:15 p.m.-8:15 p.m.

Location: Plaza Central at the Centro de Extensión (UC Extension Center)

Please join the Society for a wonderful evening to welcome meeting attendees and explore a diverse collection of psychometric research at the conference poster session. Discuss research with your peers in a casual, fun, and beautiful setting.

The poster session event includes an hors d'oeuvres cocktail reception. Authors will be standing by their posters between 6:15 p.m. and 8:15 p.m. This event is also open to meeting attendee guests at no additional charge.

Poster Session

Poster presenters may put up their posters on Tuesday, July 16, from 4:00 p.m.-6:00 p.m., and authors must stand with their poster from 6:15 p.m.-8:15 p.m. Authors should remove their posters by 8:45 p.m. Any posters not removed after the session will be kept at the conference Registration Desk (Plaza Central) until Friday, July 19, at 12:00 noon and then will be recycled by the University.



Photo courtesy of Sfs90-Wikipedia-CC-BY-SA4.0

Excursion: Santiago City Walking Tour

Wednesday, July 17: 1:00 p.m.-8:00 p.m.

Join the Society and fellow conference goers on a half-day walking tour to see some of Santiago's best tourist points. Transportation will depart from the Centro de Extensión on Wednesday, July 17, at 1:00 p.m. sharp. Meet in the **Plaza Central** to load buses anytime between 12:15 p.m.-12:45 p.m.

Attendees will travel by bus to various tourist points around the city and then will go on a walking tour to learn about local history. A professional tour guide will lead the walking tour.

Following the walking tour, attendees will be bused to the Sky Costanera 360-degree viewpoint building located in downtown Santiago. Attendees will receive an entrance ticket to explore the Sky Costanera Center and enjoy the spectacular views.

Attendees are welcome to exit the Sky Costanera and use the transportation back to the Crowne Plaza Hotel that will be available until 7:00 p.m., or explore the downtown area and arrange transportation on their own back to the hotel.

Note: This is a walking tour estimating around 2.5-3 hours total. To make the excursion most enjoyable, please bring good walking shoes, dress in layers, and bring an umbrella.

Conference Banquet Reception

Friday, July 19: 7:00 p.m.-8:30 p.m.

Location: Club de la Unión, Santiago
Av. Libertador Bernardo O'Higgins 1091

Join us at 7:00 p.m. for an appetizer and dessert reception, while networking with fellow attendees.

Your guest is also welcome to attend the reception for an additional fee. Stop at the Society Registration Desk to inquire at least 24 hours prior to the event.

Optional transportation located at the Santiago Crowne Plaza Hotel to and from the club will be available starting at 6:30 p.m. until 9:00 p.m. After 9:00 p.m., transportation is on your own.



Photo courtesy of Freddy Tolmo-Wikipedia-CC-BY-SA4.0

Conference Venue

The [Centro de Extensión](#) (UC Extension Center) of the Pontificia Universidad Católica de Chile is located at Av. Libertador Bernardo O'Higgins 390 in downtown Santiago and is easily accessible by public transportation.

The Centro de Extensión is one block from Universidad Católica metro station, in front of Gabriela Mistral Cultural Center, and steps from the Lastarria neighborhood, a tourist area with a wide variety of restaurants, coffee shops, bookstores, boutiques, museums, and art galleries.

A few minutes away is the civic center of the city of Santiago, where you can visit the National Library, Plaza de Armas, the Cathedral of Santiago, and La Moneda Palace, among other sites of cultural and heritage interest.

Local Area Emergency Information

Pharmacy

A pharmacy (Farmacia) can be found next to the University Hospital (Farmacia Cruz Verde, address: Lira 49).

If you need a pharmacy outside of business hours, you can find designated open

pharmacies (farmacias de turno) nearby using this website: <https://farmanet.minsal.cl/maps/#>

Hospital

The University hospital and emergency room is located in the same block as the conference venue. The emergency room is open at all times (address: Marcoleta 347).

Dental Care

Emergency dental care can be found 24/7 at Clinica Santa Maria (address: Av. Bellavista 0415), which is about a 20-minute walk or less than 10 minutes by car from the Crowne Plaza Hotel.

Conference Attire

Business casual attire is suggested for the conference but is not mandatory. Please note that the conference takes place during winter. Although winters in Santiago are relatively mild (on average 9°C or 48°F), it may rain during some days. We recommend dressing appropriately. Besides the obvious outside activities (e.g., excursion), all events take place in a single building (Centro de Extensión).

Name Badge Policy

Conference name badges are required for entrance to all conference session and events.

Registration and Information Desk

Conference Registration and information desk will be available in the Plaza Central at the Centro de Extensión throughout the Annual Meeting, July 15 to July 19. A representative from The Rees Group (management company supporting the Society) is available during the conference to answer questions, renew memberships, or assist those interested in joining the Psychometric Society. You can join online [here](#).

Hours of Operation:

Monday, July 15
8:30 a.m.-2:30 p.m.
(Short Course Workshops)

Tuesday, July 16
8:00 a.m.-6:30 p.m.

Wednesday, July 17
8:00 a.m.-11:30 a.m.

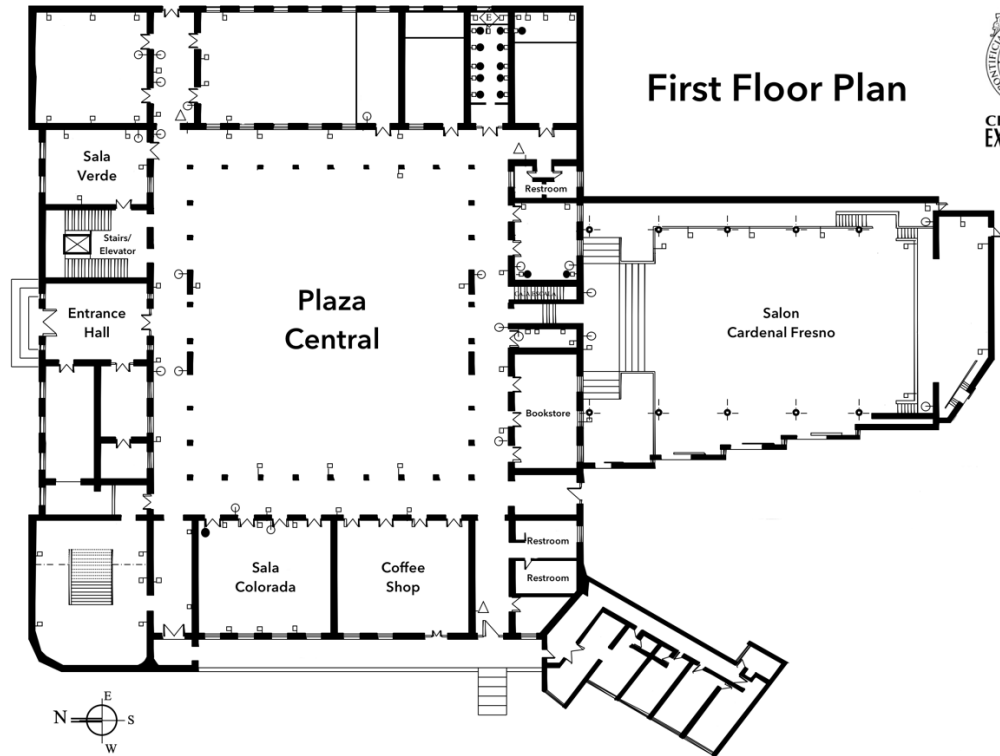
Thursday, July 18
8:00 a.m.-4:30 p.m.

Friday, July 19
8:00 a.m.-4:00 p.m.

Conference Venue and Room Maps

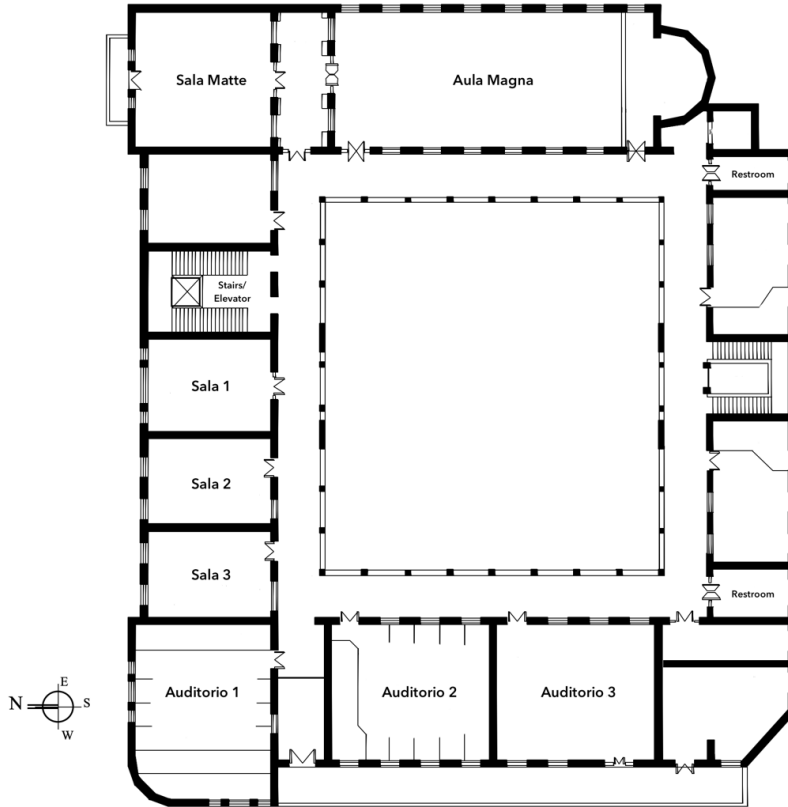
The conference program will take place at the Centro de Extensión of the Pontificia Universidad Católica de Chile (Av. Libertador Bernardo O'Higgins 390, Santiago de Chile), located in downtown Santiago. It is easily accessible by public transportation. The Metro Network Map is provided in a later section.

Refer to maps for the location of rooms at the conference venue.



First Floor Plan





**Second
Floor Plan**

Thumb Drives Containing the IMPS 2019 Program and Abstract Book

The Society has placed the IMPS 2019 program book and abstract book on a couple thumb drives for temporary use on site. These will be located at the IMPS Registration Desk to download to your personal computer.

Information for Presenters: Copies

If you plan to hand out paper copies during your presentation, you are responsible for copying and providing them at the conference. There are NO conference-sponsored copy machines for your use.

Session Rooms

All session rooms will be equipped with an LCD video projector, PC computer, USB hub, Internet connection, audio for the computer, a projection screen, podium microphone, slide advancer, and a laser pointer. Presenters are also welcome to bring their own laptop (and their own connection cords) to connect with the session room LCD video projector.

IMPS 2019 Mobile App

The Psychometric Society has a conference mobile app for the IMPS 2019 Annual Meeting.

Please download the “Attendify” app using iTunes (AppStore) or Google Play. Once you open the app, search for the event by entering “IMPS 2019.” Tap on the event and then “Join” to access the app.

Complimentary Internet will be available at the Centro de Extensión, 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. Don’t forget to register under the Activity Stream and share your conference pictures during the week.

Conference Meals and Receptions

The conference will provide morning and afternoon refreshments (i.e., beverage service) during the session breaks. Lunch from Tuesday to Friday will be available in the Plaza Central during the lunch break. Please see the Program Schedule for the exact schedule.

Photography Disclosure

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

Special Accommodations

If you require special accommodations and/or have special dietary needs during the conference, please visit the staff located at the Registration Desk. The Centro de Extensión is accessible through a ramp at the Alameda 324 entrance (an alternative entrance to the university located in the same block as the main entrance). Once inside the Centro de Extensión, the two floors have an elevator in addition to stairs. Please contact the conference staff before or during the conference if you need any assistance.

Explore Santiago

On Wednesday, July 17, IMPS sessions will end at 11:20 a.m. (followed by a boxed lunch at the Plaza Central) to allow for a beautiful tour around Santiago and its historic landmarks.

For additional tourism ideas, city maps, restaurants, tours, and more, please visit the Santiago main webpage:

<http://www.visitsantiago.org/turismo/>

Dining and Shopping

There are many areas in and around Santiago for shopping and dining, but directly across from the conference venue are two great options for fine dining and souvenir shopping: the Lastarria and Bellas Artes neighborhoods.

Both areas have numerous restaurants, coffee shops, galleries, and stores, and are also just a few minutes away from the conference hotel and the Centro de Extensión.



Santiago's Lastarria and Bellas Artes Neighborhoods

Automated Teller Machines (ATMs)

Two ATMs are available inside the Pontificia Universidad Católica Campus. The locations are shown in the map below. Multiple ATMs are also available at the Universidad Católica Metro station.



PONTIFICIA UNIVERSIDAD CATOLICA DE CHILE
DIRECCIÓN DE INFRAESTRUCTURA

ATMs (Red Markers) inside the Pontificia Universidad Católica Campus

Currency

The currency in Chile is the Chilean peso (most used symbol: \$). On June 20, 2019, the exchange rates for USD and Euro were approximately:

- 1 USD ~ 700 Chilean peso
- 1 Euro ~ 790 Chilean peso

Santiago Metro Stations

The Metro of Santiago runs daily from 5:40 a.m. to 11:00 p.m. Note that although you can enter the Metro until 11:00 p.m., not all connections will be available at that time.

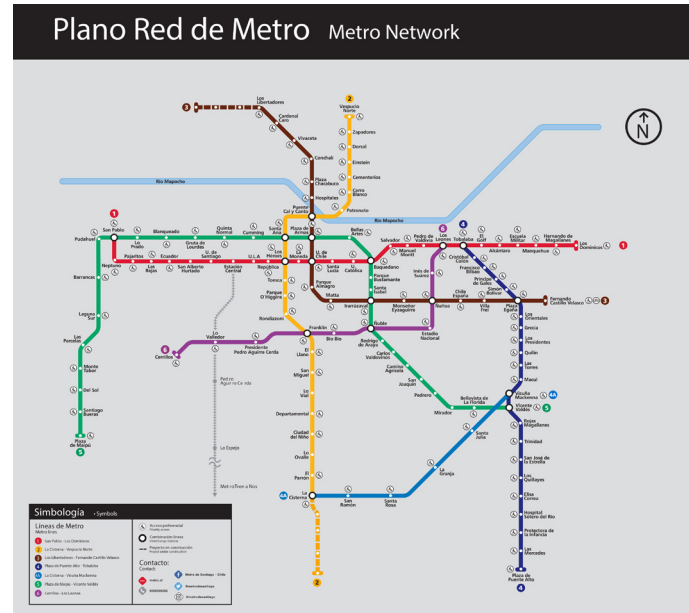
The fare to ride the Metro fluctuates depending on the time of day, so for worry-free travel we recommend you estimate cost using the most expensive fare (\$800 Chilean pesos – approximately \$1.20 USD) for each ride.

To use either the Metro or the bus system (RED/Transantiago) you must purchase a fare card, known as a “Bip!”. The initial purchase of the card costs around \$1,550 Chilean pesos, and additional money must be loaded onto the card to ride.

For each ride on a bus or Metro, you may use the other service either for a small additional charge or for free within the following hour and a half, but you must always swipe your Bip! card.

The Metro system has six different lines, each with their own number and color. After paying the fare you may go in either direction on the line, and are free to ride, connect, and change directions as much as you wish so long as you don't exit the Metro. Each Metro station will also have a map to help you reach your destination. You may also change directions at every station, so there is no need to worry about extra cost if you take the wrong train or the wrong direction.

Line 1 (red) moves across Santiago from East to West, so depending on the side of the city where you are located, to reach the conference site you ultimately will have to take Line 1 in the direction of the San Pablo station



(to the West) or the Los Dominicos station (to the East). Note that the conference site is near the Universidad Católica station, which is located on Line 1.

Lastly, if you are lost while taking the Metro, feel free to ask Metro employees for assistance to find your way.

For more information, please visit the Metro's main website at <https://metro.cl>.

The Program Committee is responsible for the scientific program of the annual 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 regular 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.

Chair and 2019 Society President

Francis Tuerlinckx, University of Leuven, Leuven, Belgium

Members

Immediate Past President

Cees Glas, University of Twente, The Netherlands

President-Elect

Daniel Bolt, University of Wisconsin, Madison, WI, USA

Secretary

Carolyn Anderson, University of Illinois at Urbana-Champaign, IL, USA

Regular Members (2018-2019)

Ed Merkle, University of Missouri, Columbia, MO, USA

Patrick Groenen, Erasmus University, Rotterdam, The Netherlands

Regular Members (2019-2020)

Han van der Maas, University of Amsterdam, Amsterdam, The Netherlands

Carolin Strobl, University of Zurich, Switzerland

Adjunct Members (2019)

Paul De Boeck, The Ohio State University, Columbus, OH, USA

Jorge Gonzalez, Pontificia Universidad Católica de Chile, Santiago, Chile

David Torres Iribarra, Pontificia Universidad Católica de Chile, Santiago, Chile

Jee-Seon Kim, University of Wisconsin, Madison, WI, USA

Jingchen Liu, Columbia University, New York, NY, USA

Irini Moustaki, London School of Economics and Political Science, London, UK

Victoria Savalei, University of British Columbia, Vancouver, Canada

David Thissen, University of North Carolina at Chapel Hill, USA

We sincerely hope you have a wonderful visit to Santiago de Chile. Thank you for joining us at IMPS 2019!

IMPS 2019 Local Organizing Committee

Verónica Santelices, Faculty of Education,
Pontificia Universidad Católica de Chile, Chile

Jorge Gonzalez, Faculty of Mathematics,
Pontificia Universidad Católica de Chile, Chile

David Torres Iribarra, School of Psychology,
Pontificia Universidad Católica de Chile, Chile

A very special thank you to our local organizing committee members and the Faculty of Education, Department of Statistics, and School of Psychology at the Pontificia Universidad Católica de Chile for all their hard work this year!

Also, Special Thanks to our IMPS 2019 Conference Committee

Dan Bolt

Steven Culpepper

Nana Kim

Merijn Mestdagh

Ed Merkle

Sophia Rabe-Hesketh

Youmi Suk

Tammy Trierweiler

Francis Tuerlinckx

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

The Rees Group, Inc.

2424 American Lane

Madison, WI 53704

Telephone: 608-268-4712

Fax: 608-443-2474

Email: info@psychometricsociety.org



IMPS Registration & Information Desk Hours of Operation Located at Plaza Central

Day	Time
Monday, July 15, 2019	8:30 a.m. to 2:30 p.m.
Tuesday, July 16, 2019	8:00 a.m. to 6:30 p.m.
Wednesday, July 17, 2019	8:00 a.m. to 11:30 a.m.
Thursday, July 18, 2019	8:00 a.m. to 4:30 p.m.
Friday, July 19, 2019	8:00 a.m. to 4:00 p.m.

Monday, July 15

Time	Auditorium 1	Auditorium 2	Auditorium 3	Sala 1
9:30 a.m. to 5:10 p.m.	<p>SHORT COURSE 1: Structural equation modeling with lavaan Yves Rosseel</p>	<p>SHORT COURSE 2: Bayesian Inference with JASP Eric-Jan Wagenmakers</p>	<p>SHORT COURSE 3: Applying Test Equating methods using R Marie Wiberg & Jorge Gonzalez</p>	<p>SHORT COURSE 4: Introducción al análisis de clases latentes y los modelos de mezclas Jeroen Vermunt</p>
11:00 a.m. to 11:20 a.m.	Short Course: Refreshment Break – Plaza Central			
12:50 p.m. to 2:20 p.m.	Lunch on your own			
3:50 p.m. to 4:10 p.m.	Short Course: Refreshment Break – Plaza Central			
6:30 p.m. to 8:00 p.m.	<p>Graduate Student Mixer Crowne Plaza Hotel (Meeting Room: Atacama)</p>			

Tuesday, July 16 – Morning

Time	Salón Fresno
8:45 a.m. to 9:00 a.m.	Welcome Francis Tuerlinckx, David Torres Iribarra, Veronica Santelices, and Jorge Gonzalez
9:00 a.m. to 10:00 a.m.	Keynote Speaker Eric-Jan Wagenmakers Bayesian multi-model inference for practical and impractical problems Chair: David Kaplan
10:05 a.m. to 10:25 a.m.	Group Photo – Plaza Central
10:25 a.m. to 10:45 a.m.	Refreshment Break – Plaza Central

Tuesday, July 16 – Morning – Parallel Sessions

Time	Salón Fresno	Aula Magna	Sala Colorada	Sala Matte
10:45 a.m. to 12:15 p.m.	<p>Symposium: <i>Model what you can see, not what you imagine</i> Chair: Gunter Maris</p>	<p>Symposium: <i>Advanced topics in linking and equating methods</i> Chair: Inés Varas</p>	<p>Symposium: <i>Methodological contributions to improve policy evaluation in highly uncertain contexts</i> Chair: Trinidad González-Larrondo</p>	<p>E-learning Chair: Patrick Kyllonen</p>
	<p>Benjamin Deonovic Modeling marginal networks</p>	<p>Gabriel Wallin Presmoothing method and model selection for kernel equating</p>	<p>Trinidad González-Larrondo Partial Identification to improve public policy evaluations</p>	<p>Dmitry Abbakumov Measuring student's activity in MOOCs using extensions of the Rasch model</p>
	<p>Jean-Paul Fox Bayesian covariance structure modeling of structured response data</p>	<p>Inés M. Varas Discrete equated scores: a Bayesian nonparametric approach</p>	<p>Diego Carrasco Students as raters: a multilevel PCM model to compare classrooms</p>	<p>Hongwook Suh Psychometric properties of MOCA: Digital assessment tool for learning analytics</p>
	<p>Timo Bechger Towards a neo-classical test theory</p>	<p>Matthew Johnson Bayesian linking and equating methods</p>	<p>Verónica Santelices Improving weak impact evaluation designs</p>	<p>Anton Béguin On test length in mastery tests based on learning objectives</p>
	<p>Joris Mulder Bayes factor testing of multiple intra-class correlations</p>	<p>Jorge González Sharp bounds on the score distributions in test score equating</p>	<p>Francisca Calderón IRTrees approach in personality data with multi-format response scale</p>	<p>Sangbeak Ye Item selection methods for e- learning assessments under cognitive diagnosis models</p>

Tuesday, July 16 – Morning – Parallel Sessions – continued

Time	Auditorium 2	Auditorium 3	Auditorium 1
	Measurement invariance and DIF I Chair: Jonathan Weeks	Multilevel and longitudinal data analysis Chair: Steve Boker	Nonparametric modeling Chair: Renske Kuijpers
	Felipe Valentini Multiple cause multiple indicators model for unbalanced group designs	Irini Moustaki Multivariate longitudinal data with zero inflation: a study of intergenerational exchanges	Rudolf Debelak Two new nonparametric local independence tests for the Rasch model
	Lijin Zhang How to select prior variance in Bayesian approximate measurement invariance?	Yadira Peralta Bayesian modeling of bivariate associations using piecewise linear mixed-effects models	Heidelinde Dehaene Extending the Wilcoxon-Mann-Whitney test for latent variables
10:45 a.m. to 12:15 p.m.	Thorben Huelmann The effect of different ratios of group sizes in multi-group DIF detection	Debby ten Hove Interrater reliability for multilevel data: A generalizability theory approach	Adéla Drabinová Nonparametric comparison of regression curves for DIF detection
	Kim De Roover Multigroup factor rotation for unraveling factor loading non-invariance	Bartosz Witkowski Quality education and economic growth: Causality or co-existence?	Hulya Duygu Yigit A nonparametric method for learning in cognitive diagnosis
	Jingdan Zhu Cross-level metric invariance violation explaining for multi-group scalar invariance violation	Kristine O'Laughlin Multilevel and dynamical systems approaches to multiple time-scale analysis	
12:15 p.m. to 1:30 p.m.	Boxed lunch provided – Plaza Central		

Tuesday, July 16 – Afternoon – Parallel Sessions 1

Time	Salón Fresno	Aula Magna	Sala Colorada	Sala Matte
	<p><i>Symposium:</i> Process data in international large-scale assessments: Methods and applications Chair: Lu Ou</p>	<p><i>Symposium:</i> Advanced topics in admission university tests Chair: Eduardo Alarcón Bustamante</p>	<p>Networks I Chair: Denny Borsboom</p>	<p>Response styles Chair: Terry Ackerman</p>
	<p>Denise Reis Costa Application of Kaplan-Meier curves for analysis of process data</p>	<p>Leonor Varas Who is called to produce changes to the admission system?</p>	<p>Ginette Lafit An approach for controlling the false discovery rate in sparse networks</p>	<p>Zechu Feng Modeling random responding behavior and extreme response style in surveys</p>
1:30 p.m. to 3:00 p.m.	<p>Paul De Boeck Residual dependencies as a window on process data</p>	<p>Paulina Perez Mejias College admission test scoring gaps: a multilevel analysis</p>	<p>Teague Henry The impact of endogeneity on network psychometric models</p>	<p>Nana Kim Evaluating competing multiprocess IRT tree models in studies of response style</p>
	<p>Ulf Kroehne Investigating response processes using log files and finite state machines</p>	<p>Eduardo Alarcón-Bustamante Partial identification in predictive validity of selection tests</p>	<p>Shirin Rezvanifar Sex differences in subscales of coping schema with network analysis</p>	<p>Mirka Henninger An integration of approaches to modeling response styles in the Divide-by-Total framework</p>
	<p>Dylan Molenaar Nonlinear response-level moderation models for product and process data</p>	<p>Claudia Ovalle-Ramírez A Bayesian graphical and probabilistic proposal for bias analysis</p>	<p>Anna Wysocki Comparison of pairwise and partial correlation networks</p>	<p>Allison Ames Modeling changes in response style with longitudinal IRTree models</p>
	<p>Hong Jiao Analyzing log files from multiple items using data mining methods</p>			<p>Aaron Myers Multilevel item response tree for examining heterogeneity in response styles</p>

Tuesday, July 16 – Afternoon – Parallel Sessions 1 – continued

Time	Auditorium 2	Auditorium 3	Auditorium 1
	Scoring and estimation I Chair: Daniela Jiménez	Assessment Chair: Veronica Santelices	Applications I Chair: Holger Brandt
	David Thissen Factor score estimation from the perspective of item response theory	Jonathan Weeks More bang for your buck: Matrix sampling background questionnaire items	Lorrie Schmid Investigating a new measure for children with autism spectrum disorder
	Alex Brodersen Penalized estimation of IRT models with multiple location parameters	Jimmy de la Torre A cognitive diagnosis model analysis of a digital literacy assessment	Maggie Yue Zhao Effects of anchoring vignettes on the validity of student self-assessment
1:30 p.m. to 3:00 p.m.	Kazuhiro Yamaguchi Variational Bayes inference for the cognitive diagnostic models	Youn Seon Lim The Mantel-Haenszel statistic for detecting testlet effects in cognitively diagnostic tests	Jessica Cornick A virtually new version of the simulator sickness questionnaire
	Tim Fabian Schaffland EM-estimation of multilevel item response theory models with nonlinear effects	Stefano Noventa A graphical taxonomy of assessment models	Jouni Kuha Latent variable models for intergenerational exchanges of family support
		Dongfang Zhao The response order effect of likert scales and its influencing factors	Liu Yue The relationship of inquiry-based teaching and science achievement in China

Tuesday, July 16 – Afternoon

Time	Salón Fresno	Aula Magna
<p data-bbox="73 425 194 484">3:05 p.m. to 3:50 p.m.</p>	<p data-bbox="690 356 868 388">Invited Speaker</p> <p data-bbox="560 399 868 441">Dani Gamerman</p> <p data-bbox="292 452 868 521">Dynamic generalized structural equation modeling, with application to the effect of pollution on health</p> <p data-bbox="625 526 868 558">Chair: Jean-Paul Fox</p>	<p data-bbox="1266 367 1550 399">State-of-the-Art Speaker</p> <p data-bbox="1258 409 1550 452">Kathleen Gates</p> <p data-bbox="1169 462 1550 532">Assessing individual differences in non-traditional data structures</p> <p data-bbox="1364 537 1550 569">Chair: Siwei Liu</p>
<p data-bbox="73 734 194 792">3:50 p.m. to 4:10 p.m.</p>	<p data-bbox="657 750 1104 782">Refreshment Break – Plaza Central</p>	

Tuesday, July 16 – Afternoon – Parallel Sessions 2

Time	Salón Fresno	Aula Magna	Sala Colorada	Sala Matte
4:10 p.m. to 5:40 p.m.	<p><i>Panel discussion:</i> <i>How testing organizations have shaped the psychometric research and employment opportunities for psychometricians</i> Chair: Alina von Davier</p>	<p><i>Symposium:</i> <i>Non-linear methods and complexity analysis: SEM, network psychometrics and time series analysis</i> Chair: Hudson Golino</p>	<p><i>Bayesian statistical inference</i> Chair: Ed Merkle</p>	<p><i>Process data</i> Chair: Jingchen Liu</p>
	Alina von Davier Jorge Manzi Matthias von Davier Duanli Yan Marilyn Stevenson Anton Béguin	Hudson Golino Entropy fit index: a new fit measure for dimensionality assessment	Yi-Fang Wu Estimating testing time through Bayesian stochastic modeling with PyMC	Yawei Shen Investigating students' testing behaviors using mixed types of process data
		Steven Boker Decomposing expected moments of products of variables for structural equation modeling	Mauricio Garnier-Villarreal Bayesian Multidimensional IRT: How far can it go?	Ya Zhang Data mining classification of math self-efficacy on large-scale assessment
		Alexander Christensen Investigating the stability and generalizability of dimensionality via bootstrap exploratory graph analysis	Joon-Ho Lee Sensitivity of Bayesian quantile regression to the choice of scale parameter	Susu Zhang Understanding respondent characteristics through log data and interevent times
		Robert Moulder Tangle: a computationally efficient measure of time series complexity	Sierra Bainter Evaluating stochastic search variable selection for applications in psychology	Zhi Wang Prediction of actions in process data via recurrent neural network
			Florian Böing-Messing Bayes factors for testing order constraints on variance components	Xueying Tang Cross-item response process prediction by transformer

Tuesday, July 16 – Afternoon – Parallel Sessions 2 – continued

Time	Auditorium 2	Auditorium 3
4:10 p.m. to 5:40 p.m.	<p style="text-align: center;"><i>Equating</i> Chair: Marie Wiberg</p>	<p style="text-align: center;"><i>Cognitive diagnosis models I</i> Chair: Zhiliang Ying</p>
	<p style="text-align: center;">Ian Campbell</p> <p>Optimal confidence intervals for equivalence testing of test equating invariance</p>	<p style="text-align: center;">Jing Lu</p> <p>A sequential exploratory approach to learning attribute hierarchies from data</p>
	<p style="text-align: center;">Jaime Malatesta</p> <p>Accuracy of IRT scale linking methods under two competing paradigms</p>	<p style="text-align: center;">Hueying Tzou</p> <p>The impact of Q-matrix structure in multiple-strategy DINA model</p>
	<p style="text-align: center;">Xiao Li</p> <p>Optimal equating method for test equating in different test cycles</p>	<p style="text-align: center;">Auburn Jimenez</p> <p>An exploratory unified model for conjunctive processes</p>
	<p style="text-align: center;">Somayeh Bahmanabadi</p> <p>Comparing the accuracy of different equating methods in multidimensional tests equating</p>	<p style="text-align: center;">Yinghan Chen</p> <p>Estimation of Q-matrix with unknown number of attributes</p>

Tuesday, July 16 – Evening

Time

Salón Fresno

**5:45 p.m. to
6:15 p.m.**

Dissertation Prize

Merijn Mestdagh

Prepaid parameter estimation without likelihoods

Chair: Carolyn Anderson

**6:15 p.m. to
8:15 p.m.**

Poster and Welcome Reception – Plaza Central

Wednesday, July 17 – Morning – Parallel Sessions

Time	Salón Fresno	Aula Magna	Sala Colorada	Sala Matte
8:30 a.m. to 10:00 a.m.	<p><i>Panel discussion:</i> <i>Stories of successful careers in psychometrics and what we can learn from them</i> Chair: Alina von Davier</p>	<p><i>Agencia de Calidad de la Educación Symposium: Addressing psychometric challenges for implementing accountability policies</i> Chair: Maria de la Luz Gonzalez</p>	<p><i>Prediction and causal inference</i> Chair: Merijn Mestdagh</p>	<p><i>Response times I</i> Chair: Chun Wang</p>
	<p>Duanli Yan Marie Wiberg Carolyn Anderson Iriní Moustaki Susan Embretson Jaqueline Meulman</p>	<p>Myriam Lara Bridge studies, the Chilean case</p>	<p>Youmi Suk Machine learning algorithms for causal inference with cluster-structured observational data</p>	<p>Renske Kuijpers Detecting person misfit using the diffusion modeling approach</p>
	<p>Maria de la Luz Gonzalez Addressing psychometric challenges for implementing accountability policies</p>	<p>Bunga Pratiwi Improving the predictive validity of psychological tests using a statistical learning perspective</p>	<p>Esther Ulitzsch A hierarchical latent response model for inferences about examinee engagement</p>	
	<p>Maximiliano Romero Facing methodological challenges for a multipurpose policy of non-academic assessment</p>	<p>Ewa Witkowska Money is not everything: The determinants of the education quality</p>	<p>Yang Du The four-parameter normal ogive model with response time</p>	
	<p>Gabriela Cares Personal and social development indicators: educational quality new definition</p>	<p>Weimeng Wang Predictive inferences of bifactor models and simple structure models</p>	<p>Huijuan Meng Impact of test design change on test speededness</p>	
	<p>Marilyn Stevenson SIMCE psychometric history and its challenges</p>	<p>Jeroen Janssen A SEM-based prediction rule to assess predictive and incremental validity</p>		

Wednesday, July 17 – Morning – Parallel Sessions – continued

Time	Auditorium 2	Auditorium 3
8:30 a.m. to 10:00 a.m.	<i>Patient-reported outcomes</i> Chair: David Thissen	<i>Multivariate analysis</i> Chair: Joost van Ginkel
	Oscar Gonzalez Evaluating the impact of measurement bias on diagnostic clinical assessments	Sunmee Kim Extended redundancy analysis via generalized estimating equations
	Jan van Bebber The incremental value of LCA-based mixture CAT for PROMIS depression	Naoto Yamashita Procrustes penalty function for matching matrices to targets with its applications
	Matthew Kerry Patient identity: Test design and empirical measurement-equivalence findings	Gyeongcheol Cho A cross validation index for generalized structured component analysis
	Melanie Wall Developing a mental-health screening tool in Mozambique using Lasso regression	Akinori Okada Analyzing cognitive similarities among occupational categories by distance-radius asymmetric MDS
	Brooke Magnus A multidimensional zero-inflated graded response model for ordinal symptom data	Qimin Liu Time profile similarity indices with synchronization in nearest neighbor classification
10:00 a.m. to 10:20 a.m.	Refreshment Break – Plaza Central	

Wednesday, July 17 – Morning

Time

Salón Fresno

**10:20 a.m. to
11:20 a.m.**

Keynote Speaker

Burr Settles

Improving language learning and assessment with data

Chair: Alina von Davier

**11:45 a.m. to
12:45 p.m.**

Boxed lunch provided – Plaza Central

**1:00 p.m. to
8:00 p.m.**

IMPS 2019 Excursion: Santiago City Tour

Thursday, July 18 – Morning – Parallel Sessions

Time	Salón Fresno	Aula Magna	Sala Colorada	Sala Matte
8:20 a.m. to 9:50 a.m.	<p><i>Symposium:</i></p> <p>The lavaan ecosystem: Past, present, and future</p> <p>Chair: Terrence D. Jorgensen</p>	<p><i>Symposium:</i></p> <p>Theory and assumptions underlying psychometric practice</p> <p>Chair: Riet van Bork</p>	<p>Causal Inference and Mediation I</p> <p>Chair: Melanie Wall</p>	<p>Item response theory I</p> <p>Chair: Dylan Molenaar</p>
	<p>Ge Jiang</p> <p>equaltestMI: Equivalence testing for measurement invariance</p>	<p>Keith Markus</p> <p>Psychometrics' inherited ontologies: nomological networks, causal structures, and measurement</p>	<p>Heather Harris</p> <p>The effect of differential measurement error on treatment effect estimation</p>	<p>George Engelhard</p> <p>Developing a concept map for Rasch measurement theory</p>
	<p>Irini Moustaki</p> <p>Pairwise likelihood estimation for structural equation modelling in lavaan</p>	<p>Riet van Bork</p> <p>Turning models upside down: a causal theory of error scores</p>	<p>Jenn-Yun Tein</p> <p>Application of complier-average causal effect (CACE) model and issues</p>	<p>Sung-Hyuck Lee</p> <p>Fixed common item parameter calibration with fixed guessing 3PLM</p>
	<p>Zachary Fisher</p> <p>Model-implied instrumental variable estimation with MIIVsem</p>	<p>Klaas Sijtsma</p> <p>The continuing story of coefficient alpha and the need for closure</p>	<p>Jairo Navarrete</p> <p>Assessing change of knowledge in a pretest-posttest educational design</p>	<p>Daniel Bolt</p> <p>Validation of an IRT model accommodating item complexity</p>
	<p>Ed Merkle</p> <p>blavaan: Merging lavaan with JAGS and Stan</p>	<p>Joost Kruis</p> <p>A general framework for response dynamics with auxiliary information</p>	<p>Jiayi Yang</p> <p>Small sample criterion for covariate balance in rerandomization</p>	<p>Weldon Smith</p> <p>An application of the continuous response model for subtest data</p>
	<p>Stephanie Lane</p> <p>Automated selection of robust individual-level models using gimme</p>			<p>Wes Bonifay</p> <p>The direction of measurement in multidimensional IRT models</p>

Thursday, July 18 – Morning – Parallel Sessions – continued

Time	Auditorium 2	Auditorium 3	Auditorium 1
8:20 a.m. to 9:50 a.m.	<p>Measurement invariance and DIF II</p> <p>Chair: Kim De Roover</p>	<p>Mathematical modeling</p> <p>Chair: Leah Feuerstahler</p>	<p>Applications II</p> <p>Chair: Edgar Valencia</p>
	<p>Henghsiu Tsai</p> <p>Applying bootstrap to the odds ratios methods for DIF detection</p>	<p>Nienke Dijkstra</p> <p>Modeling risk behavior by the censored generalized finite mixture model</p>	<p>Pablo Pérez-Díaz</p> <p>A comparison of hierarchical and bi-factor approaches in a short trait-emotional-intelligence measure</p>
	<p>Luc Le</p> <p>Evaluation of missing and country effects on gender DIF</p>	<p>Kristof Kovacs</p> <p>POT-MIRT: Psychometric modelling of a cognitive theory of intelligence</p>	<p>Ana Gomes</p> <p>Multilevel analysis of perceived cybercrime risk in European Union</p>
	<p>Yi Dai</p> <p>Comparing methods for detecting mode effect between PBA and CBA</p>	<p>Stijn Verdonck</p> <p>The leaky integrating threshold and its impact on evidence accumulation models</p>	<p>Paula Fariña</p> <p>Propensity to guess, self-confidence and risk-aversion of student in a test</p>
	<p>Van Nguyen</p> <p>Stability of Rasch item difficulty by test delivery modes</p>	<p>Victor Koleszar</p> <p>A novel approach to estimate the approximate number system</p>	<p>Danhui Zhang</p> <p>An exploration on the development of composite and domain scores</p>
			<p>Juan Ignacio Venegas-Muggli</p> <p>Reliability and structure validity of a teacher pedagogical competencies scale</p>

Thursday, July 18 – Morning

Time	Salón Fresno	Aula Magna
9:55 a.m. to 10:40 a.m.	<p>Invited Speaker</p> <p>Gunter Maris</p> <p>The wiring of intelligence</p> <p>Chair: Jorge Gonzalez</p>	<p>Invited Speaker</p> <p>Minjeong Jeon</p> <p>A latent space modeling approach to unveiling respondents' and items' dependence structures in item response analysis</p> <p>Chair: Mark Wilson</p>
10:40 a.m. to 11:00 a.m.	Refreshment Break – Plaza Central	
Time	Salón Fresno	Aula Magna
11:00 a.m. to 11:30 a.m.	<p>Spotlight Speaker</p> <p>Marjolein Fokkema</p> <p>Prediction rule ensembles: Balancing interpretability and accuracy in statistical prediction</p> <p>Chair: Jimmy de la Torre</p>	<p>Spotlight Speaker</p> <p>Thorsten Meiser</p> <p>IRTree mixture models for decomposing trait-based responses and response styles</p> <p>Chair: Matthias von Davier</p>
11:35 a.m. to 12:15 p.m.	Meeting of Members – Salón Fresno	
12:15 p.m. to 1:30 p.m.	Boxed lunch provided – Plaza Central	

Thursday, July 18 – Afternoon

Time	Salón Fresno	Aula Magna
1:30 p.m. to 2:15 p.m.	<p style="text-align: center;">Invited Speaker</p> <p style="text-align: center;">Ernesto San Martin</p> <p style="text-align: center;">How to broker the evaluation of public policies? A proposal based on partial identification</p> <p style="text-align: center;">Chair: David Torres Irribarra</p>	<p style="text-align: center;">Spotlight Speaker</p> <p style="text-align: center;">Leah Feuerstahler</p> <p style="text-align: center;">Characterizing uncertainty in item response model metrics</p> <p style="text-align: center;">Chair: Paul De Boeck (1:30 p.m. to 2:05 p.m.)</p>

Thursday, July 18 – Afternoon – Parallel Sessions 1

Time	Salón Fresno	Aula Magna	Sala Colorada	Sala Matte
	<p><i>Symposium:</i> Advances in process data analysis Chair: Jingchen Liu</p>	<p><i>DEMRE Symposium:</i> A major change of the national college admission system in Chile: opportunities to improve Chair: Daniela Jiménez</p>	<p>Model uncertainty and robustness Chair: Yves Rosseel</p>	<p>Cognitive diagnosis models II Chair: Hong Jiao</p>
	<p>Yunxiao Chen Measurement of complex problem-solving ability – a lesson from classical psychometric theories</p>	<p>Mónica Silva Assessing the predictive validity of an admission test using item level information</p>	<p>David Kaplan An approach to addressing multiple imputation model uncertainty using Bayesian model averaging</p>	<p>Steven Culpepper An exploratory diagnostic model for ordinal responses</p>
2:20 p.m. to 3:50 p.m.	<p>Alina von Davier Learning & measurement of teamwork</p>	<p>Valentina Giaconi Rurality gaps in the access to higher education: initial estimations</p>	<p>Hsiu-Ting Yu Analyzing extremely unbalanced and correlated data with hierarchical linear models</p>	<p>Xue-Lan Qiu An empirical Q-matrix validation method for the polytomous G-DINA model</p>
	<p>Qiwei He Exploring action sequence-based approaches in process data analysis</p>	<p>María Inés Godoy The complexity of linking over time in college admission</p>	<p>Tong-Rong Yang Comparison of methods for quantifying model misspecification in SEM simulations</p>	<p>Jianmin Zhuo General CDM joint attribute model formulation and selection</p>
	<p>Jingchen Liu An exploration of process data in computer-based assessment</p>	<p>Daniela Jiménez The development of core content instruments for college admission</p>	<p>Ken Bollen When good loadings go bad: Robustness in factor analysis</p>	<p>Miguel A. Sorrel An optimal implementation of the GDI Q-matrix validation method</p>
	<p>Alina von Davier Discussion</p>			

Thursday, July 18 – Afternoon – Parallel Sessions 1 – continued

Time	Auditorium 2	Auditorium 3
	Computer-based testing I Chair: Duani Yan	Statistical methods Chair: Cees Glas
	Angela Verschoor Robust automated test assembly	Raul Ferraz Model-based bootstrapping of the chi-square test in structural equation models
	Ya-Hui Su The constraint-weighted procedure with the continuous a-stratification Index in CAT	Tim Loossens Synergized bootstrapping: the whole is faster than the sum of its parts
2:20 p.m. to 3:50 p.m..	K. Chris Han Developing multistage tests using D-scoring method	Mariana Curi Machine learning for estimation in IRT models
	Paul Jewsbury Modeling multistage and targeted testing data with item response theory	Joost van Ginkel Standardized regression coefficients and new estimates for R ² in multiply imputed data
	Edison Choe The asymptotic distribution of average test overlap rate in CAT	Raymond Luong Replicability in psychology: The problem of familywise Type II error
3:50 p.m. to 4:10 p.m.	Refreshment Break – Plaza Central	

Thursday, July 18 – Afternoon – Parallel Sessions 2

Time	Salón Fresno	Aula Magna	Sala Colorada	Sala Matte
	<p>Symposium: Meaningful interpretation of measurement results: challenges in applied psychometrics Chair: David Torres Irribarra</p>	<p>Symposium: Latent variable modeling for intensive longitudinal data Chair: Sebastian Castro Alvarez</p>	<p>Networks II Chair: Ginette Lafit</p>	<p>Scoring and estimation II Chair: Claus Carstensen</p>
	<p>David Torres Irribarra Interpreting psychometric results when model and attributes are defined by legislation</p>	<p>Leonie Vogelsmeier Latent Markov factor analysis for exploring longitudinal measurement invariance</p>	<p>Chang Che Network analysis: A literature review and related R packages</p>	<p>Benjamin Graves GLMM Scores in lme4: Derivations and applications</p>
4:10 p.m. to 5:40 p.m.	<p>Ernesto San Martin How to interpret a guessing parameter? A strategy based on identifiability</p>	<p>Sy-Miin Chow Dynamic models of intraindividual variability with varying coefficients</p>	<p>Wen Qu Permutation test on logistic regression coefficients with social network data</p>	<p>Elissa Burghraeve Estimating linear and polynomial one-factor models using conditional expectations</p>
	<p>Mark Wilson Objectivity and intersubjectivity of measurement across the sciences</p>	<p>Sebastian Castro-Alvarez Using latent state-trait theory to analyze intensive longitudinal data</p>	<p>Joseph Grochowalski Network analysis of answer key matches for test security investigations</p>	<p>Matthias von Davier Non-linear transformations and their effects on the comparability of transformed scores</p>
	<p>Joshua McGrane Establishing invariant and substantive units in psychometric modeling</p>	<p>Robin Wester Approaching process-outcome research with piecewise latent growth curve models</p>	<p>Shuo (Selena) Wang Joint modeling of social networks and item responses</p>	<p>Stella Kim Score scale stability of six scoring methods</p>
			<p>Pei-Hua Chen Hierarchical network model for peer effects: A hierarchical spatial model</p>	

Thursday, July 18 – Afternoon – Parallel Sessions 2 – continued

Time	Auditorium 2	Auditorium 3
4:10 p.m. to 5:40 p.m.	<p>Item response theory II Chair: Keith Markus</p>	<p>Misfitting response patterns Chair: Anton Béguin</p>
	<p>Ken Fujimoto A Bayesian multidimensional item response theory model for small samples</p>	<p>Hassan Mahmoudian Application of person fit index to detection of faking responses</p>
	<p>Marta Desimoni Facing innovation in national testing program: Rasch item-banking applications</p>	<p>Holger Brandt Identifying persons who become inattentive: A dynamic modeling approach</p>
	<p>Danny Avello Identifiability and nonparametric estimation of marginal distributions of latent variables</p>	<p>Andrés Christiansen Influential analysis for detecting aberrant school performances in high-stakes assessments</p>
	<p>Xue Zhang Measurement bias and error correction in a two-stage estimation</p>	<p>María Dolores Nieto Does modeling wording effects help recover uncontaminated person scores?</p>
	<p>Hyun-Woo Nam Bayesian IRT equating: An alternative for small sample and complex design</p>	<p>Yuan Liu How the omitted missingness reflects test-taking motivation? A new method</p>

Friday, July 19 – Morning – Parallel Sessions

Time	Salón Fresno	Aula Magna	Sala Colorada	Sala Matte
	<i>Symposium:</i> Modeling heterogeneity with time series data Chair: Siwei Liu	<i>Symposium:</i> A future for psychometric theory Chair: Maarten Marsman	Structural Equation Modeling Chair: Ken Bollen	Thurstonian IRT Chair: Edward Ip
	Peter Halpin Estimation and prediction of the Hawkes process with random effects	Maarten Marsman Bridging the psychometric disciplines of individual differences and individual dynamics	Hannelies de Jonge Dealing with artificially dichotomized variables in meta- analytic structural equation modeling	Safir Yousofi Pseudolikelihood person parameter estimates for MIRT- models of forced-choice-data
	Lu Ou A methodological review on qualitative heterogeneity in quantitative changes	Lisa Wijssen A look into the future of psychometrics	Ben Kelcey A bias-corrected limited- information estimator for small scale multilevel/categorical SEMs	Kensuke Okada Observed-score reliability and its approximate index in paired- comparison Thurstonian IRT
8:30 a.m. to 10:00 a.m.	Siwei Liu Dynamic mixture modeling: identifying unobserved groups in dynamic processes	Denny Borsboom Why network psychometrics blocks reductionism in psychopathology research	Po-Hsien Huang Sparse estimation for SEM via R package IsIx	HyeSun Lee Evaluation criteria for measurement invariance tests in Thurstonian IRT model
	Cara Arizmendi Clustering of idiographic factor structures	Gabriela Lunansky Personality, resilience, and psychopathology: Slow and fast interacting network processes	Mariska Barendse On the use of pairwise maximum likelihood estimation for clustered data	Xiaohong Gao Test and profile reliability of social and emotional learning assessment
	Philippe Rast Multivariate generalized autoregressive conditional heteroscedasticity models for within-person variability research		Albert Man A mode-jumping algorithm for Bayesian factor analysis	

Friday, July 19 – Morning – Parallel Sessions – continued

Time	Auditorium 2	Auditorium 3
	<i>Reliability in latent variable models</i> Chair: Rianne Janssen	<i>Response times II</i> Chair: Stijn Verdonck
	Cees Glas Reliability issues in high-stakes educational tests	Po-Hsi Chen Detecting rapid guessing behaviors in testlet items
	Ricardo Primi Acquiescence and attitude- achievement paradox in PISA 2012	Hong Jiao Joint modeling of responses and response time for subdomain diagnosis
8:30 a.m. to 10:00 a.m.	Eduardo Garcia-Garzon Assessing general factor reliability in exploratory bi- factor modelling.	Zhaojun Li The differentiation of three types of conditional dependence
	Mark Wilson Measuring sub-dimensions and composites	Daniella Rebouças Bivariate change-point analysis with response time and item responses
	Joseph Rios Ability estimation accuracy under varying noneffortful responding types and rates	
10:00 a.m. to 10:20 a.m.	Refreshment Break – Plaza Central	

Friday, July 19 – Morning

Time	Salón Fresno	Aula Magna
<p>10:20 a.m. to 10:50 a.m.</p>	<p style="text-align: center;">Spotlight Speaker</p> <p style="text-align: center;">Hyeon-Ah Kang</p> <p style="text-align: center;">Detecting item parameter drift online using response and response times Chair: Hua-Hua Chang</p>	<p style="text-align: center;">Spotlight Speaker</p> <p style="text-align: center;">Adrian Quintero</p> <p style="text-align: center;">Selecting the number of factors in Bayesian factor analysis Chair: Irini Moustaki</p>
<p>Time</p>	<p style="text-align: center;">Salón Fresno</p>	
<p>10:55 a.m. to 11:55 a.m.</p>	<p style="text-align: center;">Career Award for Lifetime Achievement</p> <p style="text-align: center;">Susan Embretson</p> <p style="text-align: center;">Modeling cognitive processes, skills and strategies in item responses: implications for test and item design Chair: David Thissen</p>	
<p>11:55 a.m. to 1:10 p.m.</p>	<p style="text-align: center;">Boxed lunch provided – Plaza Central</p>	

Friday, July 19 – Afternoon – Parallel Sessions

Time	Salón Fresno	Aula Magna	Sala Colorada	Sala Matte
	<i>Symposium:</i> Recent developments in school value-added modeling Chair: Ernesto San Martín	<i>Invited Symposium:</i> Recent advances in assessing small group collaborations Chair: Peter Halpin	Models for dynamics and learning Chair: Klaas Sijtsma	Causal Inference and Mediation II Chair: Jee-Seon Kim
	Ernesto San Martín Cohort varying, temporally dynamic, value-added models	Patrick Kyllonen Estimating an individual's contribution to small group performance	Albert Yu IRT models for learning with item-specific learning parameters	Axel Mayer Causal effects based on Poisson regression models
1:10 p.m. to 2:40 p.m.	Garritt Page Exploring complete school effectiveness via quantile value-added	Nafisa Awwal Validating measures of small group collaboration: a process perspective	Tyler Matta Four-dimensionalism and the measurement of evolving psychological attributes over time	Davood Tofighi Sensitivity analysis in longitudinal mediation model
	Joniada Milla Augmenting multidimensional value added with non-cognitive skills	Mark Wilson Further findings from modeling data in collaborative assessments	Anqi Li Detecting item effects with cognitive diagnostic model for learning trajectories	Kai Wang Maximum likelihood analysis of mediation models with treatment-mediator interaction
	Edgar Valencia How stable are value-added indicators across time? an empirical analysis	Peter Halpin Designing and modeling "new" item types for assessments involving small groups	Augustin Kelava A nonlinear dynamic latent class structural equation model	Rui Lu Two-Step BART: Estimate average treatment effects when treatment is latent
			Satoshi Usami A unified framework of longitudinal models to examine reciprocal relations	Jee-Seon Kim Random forests versus matching methods for estimating heterogeneous treatment effects

Friday, July 19 – Afternoon – Parallel Sessions – continued

Time	Auditorium 2	Auditorium 3
	Measurement invariance and DIF III Chair: Timo Bechger	Computer-based testing II Chair: George Engelhard
	Edward Ip Multidimensional DIF, part A: A theoretical analysis of fixed-effects DIF	Claus Carstensen Multi-stage testing of mathematical competence in NEPS
	Terry Ackerman Multidimensional DIF, part B: Examining two-dimensional DIF using projective IRT modeling	Haruhiko Mitsunaga An automated method to detect enemy items using NLP approach
1:10 p.m. to 2:40 p.m.	Chansoon (Danielle) Lee Detection of differential item functioning under small sample size conditions	Dongmei Li Stabilizing measurement precision through scale transformation and adaptive testing
	Hye-Eun Seok A multi-dimensional approach to lack of invariance in measurement invariance	Meichu Fan Impact of IPD on pretest-item parameters using different calibration methods
	Saemi Park A relation between multidimensionality and uniform DIF	Hyung Jin Kim Comparing methods for calibrating pretest items with fixed operational forms

Friday, July 19 – Afternoon

Time	Salón Fresno
2:40 p.m. to 3:25 p.m.	<p>Early Career Award</p> <p>Dylan Molenaar</p> <p>Beyond Simple main effects: challenges to the substantive interpretation of higher-order statistical effects</p> <p>Chair: Sy-Miin Chow</p>
3:25 p.m. to 3:40 p.m.	<p>Refreshment Break – Plaza Central</p>
Time	Salón Fresno
3:40 p.m. to 3:50 p.m.	<p>Chancellor’s Appreciation Speech</p> <p>Ignacio Sánchez</p> <p>Rector Pontificia Universidad Católica de Chile</p> <p>Chair: Francis Tuerlinckx</p>
3:50 p.m. to 4:50 p.m.	<p>Presidential Address</p> <p>Francis Tuerlinckx</p> <p>Things I have learnt so far</p> <p>Chair: Dan Bolt</p>
4:50 p.m. to 5:40 p.m.	<p>Awards and Closing Ceremony</p> <p>Chair: Dan Bolt</p>
7:00 p.m. to 8:30 p.m.	<p>Conference Banquet Reception – Club de la Unión</p>

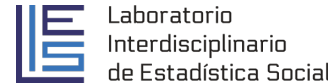


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