



PONTIFICIA  
UNIVERSIDAD  
CATÓLICA  
DE CHILE

# SCHEDULE

## SANTIAGO DE CHILE

July 15-19



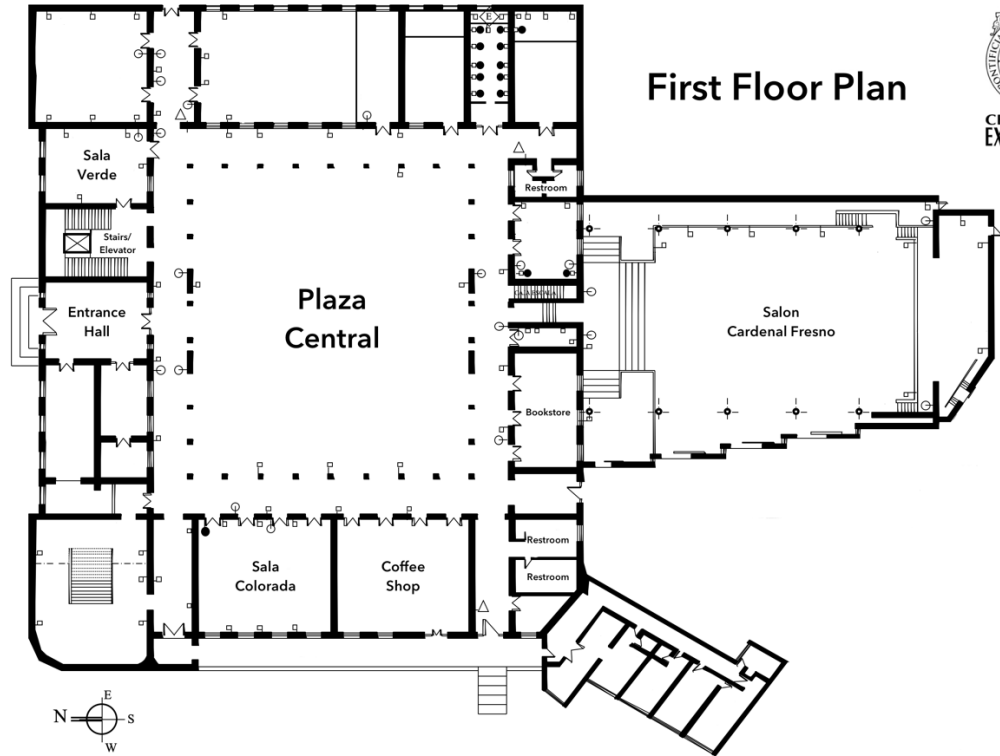
**Psychometric  
Society**

# IMPS 2019

## Conference Venue and Room Maps

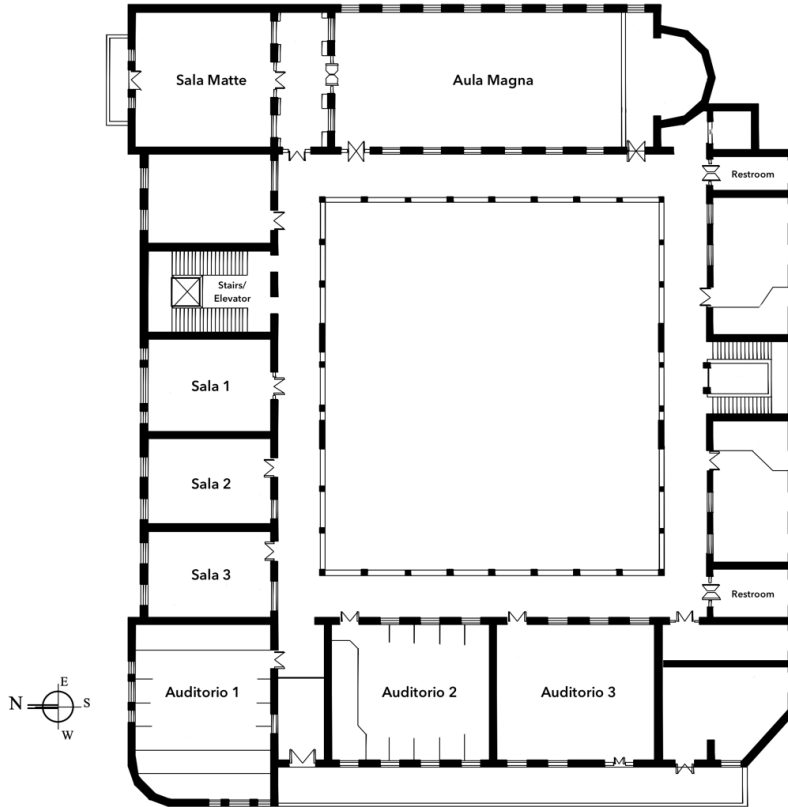
The conference program will take place at the Centro de Extensión of the Pontificia Universidad Católica de Chile (Av. Libertador Bernardo O'Higgins 390, Santiago de Chile), located in downtown Santiago.

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



First Floor Plan





**Second  
Floor Plan**

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

## Tuesday, July 16 – Morning

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**Time**

**Salón Fresno**

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**8:45 a.m. to  
9:00 a.m.**

**Welcome**

Francis Tuerlinckx, David Torres Iribarra, Veronica Santelices, and Jorge Gonzalez

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**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

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**10:05 a.m. to  
10:25 a.m.**

**Group Photo – Plaza Central**

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**10:25 a.m. to  
10:45 a.m.**

**Refreshment Break – Plaza Central**

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## Tuesday, July 16 – Morning – Parallel Sessions

Time	Salón Fresno	Aula Magna	Sala Colorada	Sala Matte
	<p><b>Symposium:</b> <i>Model what you can see, not what you imagine</i> Chair: Gunter Maris</p>	<p><b>Symposium:</b> <i>Advanced topics in linking and equating methods</i> Chair: Inés Varas</p>	<p><b>Symposium:</b> <i>Methodological contributions to improve policy evaluation in highly uncertain contexts</i> Chair: Trinidad González-Larrondo</p>	<p><b>E-learning</b> 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>
<b>10:45 a.m. to 12:15 p.m.</b>	<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

<b>Time</b>	<b>Auditorium 2</b>	<b>Auditorium 3</b>	<b>Auditorium 1</b>
	<b>Measurement invariance and DIF I</b> Chair: Jonathan Weeks	<b>Multilevel and longitudinal data analysis</b> Chair: Steve Boker	<b>Nonparametric modeling</b> 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
<b>10:45 a.m. to 12:15 p.m.</b>	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	
<b>12:15 p.m. to 1:30 p.m.</b>	<b>Boxed lunch provided – Plaza Central</b>		



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

Time	Salón Fresno	Aula Magna	Sala Colorada	Sala Matte
	<p><i>Symposium:</i>  <b>Process data in international large-scale assessments: Methods and applications</b>            Chair: Lu Ou</p>	<p><i>Symposium:</i>  <b>Advanced topics in admission university tests</b>            Chair: Eduardo Alarcón Bustamante</p>	<p><b>Networks I</b>            Chair: Denny Borsboom</p>	<p><b>Response styles</b>            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>
<b>1:30 p.m. to 3:00 p.m.</b>	<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

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

## Tuesday, July 16 – Afternoon

Time	Salón Fresno	Aula Magna
<p data-bbox="73 428 194 481"><b>3:05 p.m. to 3:50 p.m.</b></p>	<p data-bbox="690 359 862 386">Invited Speaker</p> <p data-bbox="565 402 862 439"><b>Dani Gamerman</b></p> <p data-bbox="293 455 862 519">Dynamic generalized structural equation modeling, with application to the effect of pollution on health</p> <p data-bbox="630 529 862 556">Chair: Jean-Paul Fox</p>	<p data-bbox="1268 373 1544 400">State-of-the-Art Speaker</p> <p data-bbox="1263 416 1544 453"><b>Kathleen Gates</b></p> <p data-bbox="1175 469 1544 533">Assessing individual differences in non-traditional data structures</p> <p data-bbox="1365 543 1544 570">Chair: Siwei Liu</p>
<p data-bbox="73 740 194 793"><b>3:50 p.m. to 4:10 p.m.</b></p>	<p data-bbox="662 751 1101 777"><b>Refreshment Break – Plaza Central</b></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></p> <p><i>How testing organizations have shaped the psychometric research and employment opportunities for psychometricians</i></p> <p>Chair: Alina von Davier</p>	<p><i>Symposium:</i></p> <p><i>Non-linear methods and complexity analysis: SEM, network psychometrics and time series analysis</i></p> <p>Chair: Hudson Golino</p>	<p><i>Bayesian statistical inference</i></p> <p>Chair: Ed Merkle</p>	<p><i>Process data</i></p> <p>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 align="center"><i>Equating</i> Chair: Marie Wiberg</p>	<p align="center"><i>Cognitive diagnosis models I</i> Chair: Zhiliang Ying</p>
	<p align="center">Ian Campbell</p> <p>Optimal confidence intervals for equivalence testing of test equating invariance</p>	<p align="center">Jing Lu</p> <p>A sequential exploratory approach to learning attribute hierarchies from data</p>
	<p align="center">Jaime Malatesta</p> <p>Accuracy of IRT scale linking methods under two competing paradigms</p>	<p align="center">Hueying Tzou</p> <p>The impact of Q-matrix structure in multiple-strategy DINA model</p>
	<p align="center">Xiao Li</p> <p>Optimal equating method for test equating in different test cycles</p>	<p align="center">Auburn Jimenez</p> <p>An exploratory unified model for conjunctive processes</p>
	<p align="center">Somayeh Bahmanabadi</p> <p>Comparing the accuracy of different equating methods in multidimensional tests equating</p>	<p align="center">Yinghan Chen</p> <p>Estimation of Q-matrix with unknown number of attributes</p>

## Tuesday, July 16 – Evening

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Time

Salón Fresno

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

Dissertation Prize

**Merijn Mestdagh**

Prepaid parameter estimation without likelihoods

Chair: Carolyn Anderson

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

Poster and Welcome Reception – Plaza Central

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## Wednesday, July 17 – Morning – Parallel Sessions

Time	Salón Fresno	Aula Magna	Sala Colorada	Sala Matte
<b>8:30 a.m. to 10:00 a.m.</b>	<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

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**Time**

**Salón Fresno**

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

Keynote Speaker

**Burr Settles**

Improving language learning and assessment with data

Chair: Alina von Davier

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

Boxed lunch provided – Plaza Central

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

**IMPS 2019 Excursion: Santiago City Tour**

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

## Thursday, July 18 – Morning

Time	Salón Fresno	Aula Magna
9:55 a.m. to 10:40 a.m.	<p>Invited Speaker</p> <p><b>Gunter Maris</b></p> <p>The wiring of intelligence</p> <p>Chair: Jorge Gonzalez</p>	<p>Invited Speaker</p> <p><b>Minjeong Jeon</b></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.	<b>Refreshment Break – Plaza Central</b>	
Time	Salón Fresno	Aula Magna
11:00 a.m. to 11:30 a.m.	<p>Spotlight Speaker</p> <p><b>Marjolein Fokkema</b></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><b>Thorsten Meiser</b></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.	<b>Meeting of Members – Salón Fresno</b>	
12:15 p.m. to 1:30 p.m.	Boxed lunch provided – Plaza Central	

## Thursday, July 18 – Afternoon

Time	Salón Fresno	Aula Magna
<b>1:30 p.m. to 2:15 p.m.</b>	<p style="text-align: center;">Invited Speaker</p> <p style="text-align: center;"><b>Ernesto San Martin</b></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;"><b>Leah Feuerstahler</b></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> <b>Advances in process data analysis</b> Chair: Jingchen Liu</p>	<p><i>DEMRE Symposium:</i> <b>A major change of the national college admission system in Chile: opportunities to improve</b> Chair: Daniela Jiménez</p>	<p><b>Model uncertainty and robustness</b> Chair: Yves Rosseel</p>	<p><b>Cognitive diagnosis models II</b> 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 &amp; 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

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

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

Time	Salón Fresno	Aula Magna	Sala Colorada	Sala Matte
4:10 p.m. to 5:40 p.m.	<p><b>Symposium:</b> <i>Meaningful interpretation of measurement results: challenges in applied psychometrics</i> Chair: David Torres Irribarra</p>	<p><b>Symposium:</b> <i>Latent variable modeling for intensive longitudinal data</i> Chair: Sebastian Castro Alvarez</p>	<p><b>Networks II</b> Chair: Ginette Lafit</p>	<p><b>Scoring and estimation II</b> Chair: Claus Carstensen</p>
	<p><b>David Torres Irribarra</b> Interpreting psychometric results when model and attributes are defined by legislation</p>	<p><b>Leonie Vogelsmeier</b> Latent Markov factor analysis for exploring longitudinal measurement invariance</p>	<p><b>Chang Che</b> Network analysis: A literature review and related R packages</p>	<p><b>Benjamin Graves</b> GLMM Scores in lme4: Derivations and applications</p>
	<p><b>Ernesto San Martin</b> How to interpret a guessing parameter? A strategy based on identifiability</p>	<p><b>Sy-Miin Chow</b> Dynamic models of intraindividual variability with varying coefficients</p>	<p><b>Wen Qu</b> Permutation test on logistic regression coefficients with social network data</p>	<p><b>Elissa Burghgraeve</b> Estimating linear and polynomial one-factor models using conditional expectations</p>
	<p><b>Mark Wilson</b> Objectivity and intersubjectivity of measurement across the sciences</p>	<p><b>Sebastian Castro-Alvarez</b> Using latent state-trait theory to analyze intensive longitudinal data</p>	<p><b>Joseph Grochowalski</b> Network analysis of answer key matches for test security investigations</p>	<p><b>Matthias von Davier</b> Non-linear transformations and their effects on the comparability of transformed scores</p>
	<p><b>Joshua McGrane</b> Establishing invariant and substantive units in psychometric modeling</p>	<p><b>Robin Wester</b> Approaching process-outcome research with piecewise latent growth curve models</p>	<p><b>Shuo (Selena) Wang</b> Joint modeling of social networks and item responses</p>	<p><b>Stella Kim</b> Score scale stability of six scoring methods</p>
				<p><b>Pei-Hua Chen</b> 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><b>Item response theory II</b> Chair: Keith Markus</p>	<p><b>Misfitting response patterns</b> Chair: Anton Béguin</p>
	<p><b>Ken Fujimoto</b> A Bayesian multidimensional item response theory model for small samples</p>	<p><b>Hassan Mahmoudian</b> Application of person fit index to detection of faking responses</p>
	<p><b>Marta Desimoni</b> Facing innovation in national testing program: Rasch item-banking applications</p>	<p><b>Holger Brandt</b> Identifying persons who become inattentive: A dynamic modeling approach</p>
	<p><b>Danny Avello</b> Identifiability and nonparametric estimation of marginal distributions of latent variables</p>	<p><b>Andrés Christiansen</b> Influential analysis for detecting aberrant school performances in high-stakes assessments</p>
	<p><b>Xue Zhang</b> Measurement bias and error correction in a two-stage estimation</p>	<p><b>María Dolores Nieto</b> Does modeling wording effects help recover uncontaminated person scores?</p>
	<p><b>Hyun-Woo Nam</b> Bayesian IRT equating: An alternative for small sample and complex design</p>	<p><b>Yuan Liu</b> 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
<b>8:30 a.m. to 10:00 a.m.</b>	<i>Symposium:</i> <b>Modeling heterogeneity with time series data</b> Chair: Siwei Liu	<i>Symposium:</i> <b>A future for psychometric theory</b> Chair: Maarten Marsman	<b>Structural Equation Modeling</b> Chair: Ken Bollen	<b>Thurstonian IRT</b> 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
	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
8:30 a.m. to 10:00 a.m.	<p><b>Reliability in latent variable models</b> Chair: Rianne Janssen</p>	<p><b>Response times II</b> Chair: Stijn Verdonck</p>
	<p>Cees Glas Reliability issues in high-stakes educational tests</p>	<p>Po-Hsi Chen Detecting rapid guessing behaviors in testlet items</p>
	<p>Ricardo Primi Acquiescence and attitude-achievement paradox in PISA 2012</p>	<p>Hong Jiao Joint modeling of responses and response time for subdomain diagnosis</p>
	<p>Eduardo Garcia-Garzon Assessing general factor reliability in exploratory bi-factor modelling.</p>	<p>Zhaojun Li The differentiation of three types of conditional dependence</p>
	<p>Mark Wilson Measuring sub-dimensions and composites</p>	<p>Daniella Rebouças Bivariate change-point analysis with response time and item responses</p>
	<p>Joseph Rios Ability estimation accuracy under varying noneffortful responding types and rates</p>	
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;"><b>Hyeon-Ah Kang</b></p> <p style="text-align: center;">Detecting item parameter drift online using response and response times</p> <p style="text-align: center;">Chair: Hua-Hua Chang</p>	<p style="text-align: center;">Spotlight Speaker</p> <p style="text-align: center;"><b>Adrian Quintero</b></p> <p style="text-align: center;">Selecting the number of factors in Bayesian factor analysis</p> <p style="text-align: center;">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;"><b>Susan Embretson</b></p> <p style="text-align: center;">Modeling cognitive processes, skills and strategies in item responses: implications for test and item design</p> <p style="text-align: center;">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> <b>Recent developments in school value-added modeling</b> Chair: Ernesto San Martín	<i>Invited Symposium:</i> <b>Recent advances in assessing small group collaborations</b> Chair: Peter Halpin	<b>Models for dynamics and learning</b> Chair: Klaas Sijtsma	<b>Causal Inference and Mediation II</b> 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
	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
<b>1:10 p.m. to 2:40 p.m.</b>	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
	<b>Measurement invariance and DIF III</b> Chair: Timo Bechger	<b>Computer-based testing II</b> 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
<b>1:10 p.m. to 2:40 p.m.</b>	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><b>Dylan Molenaar</b></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><b>Refreshment Break – Plaza Central</b></p>
Time	Salón Fresno
3:40 p.m. to 3:50 p.m.	<p>Chancellor’s Appreciation Speech</p> <p><b>Ignacio Sánchez</b></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><b>Francis Tuerlinckx</b></p> <p>Things I have learnt so far</p> <p>Chair: Dan Bolt</p>
4:50 p.m. to 5:40 p.m.	<p><b>Awards and Closing Ceremony</b></p> <p>Chair: Dan Bolt</p>
7:00 p.m. to 8:30 p.m.	<p><b>Conference Banquet Reception – Club de la Unión</b></p>

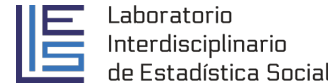


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