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RMT

RASCH MEASUREMENT TRANSACTIONS

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Transactions of the Rasch Measurement SIG
American Educational Research Association

Overview of The Issue

The Spring 2024 issue of RMT includes several announcements that may be interesting to our community of Rasch measurement researchers.

First, we have announcements from the AERA Rasch Measurement SIG. The first is the results of this year's elections for SIG officers and the appointment for program co-chairs. The second is the announcement of the speaker for the Rasch Measurement SIG business meeting.

Next, we have an announcement about the Inaugural Conference of the Society for the Study of Measurement in August 2024.

Third, we have included an announcement about a recent book release, *Rasch Meta-Metres of Growth for Some Intelligence and Attainment Tests* by David Andrich, Ida Marais, and Sonia Sappl.

We end the issue with information about upcoming Rasch-related sessions at AERA in Philadelphia, PA in April 2024. We hope to see you there.

As always, we welcome your contributions to the next issue for RMT. We would appreciate receiving your research note, conference or workshop announcement, etc. by June 1, 2024. Please contact Stefanie at swind@ua.edu to submit something for inclusion.

Sincerely,
Stefanie A. Wind & Leigh Harrell-Williams

Rasch Measurement Transactions

www.rasch.org/rmt

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& Stefanie A. Wind

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Rasch SIG Chair: Trent Haines

Secretary: Haiying Long

Treasurer: Eli Jones

Program Chairs: Kaiwen Man &

Audrey Conway Roberts

Announcements from the Rasch Measurement SIG

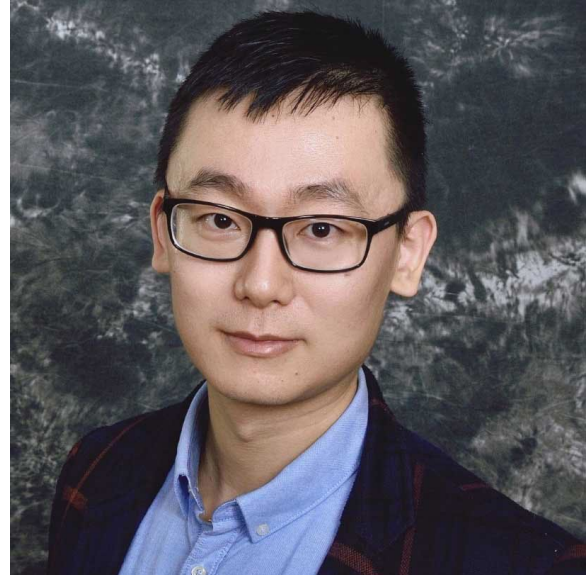
Election Results for Rasch Membership Officers for 2024- 2026

Please congratulate the new officers, whose term will start immediately after the conclusion of AERA in April 2024.

SIG Chair: Stefanie A. Wind, Associate Professor of Measurement and Evaluation, University of Alabama
Most recently, Stefanie has been the co-editor of *Rasch Measurement Transactions*. Stefanie was also the first recipient of the SIG-sponsored Georg William Rasch Early Career Publication Award in 2015.



SIG Treasurer: Kaiwen Man, Assistant Professor, Educational Measurement/Quantitative Studies, University of Alabama
Most recently, Kaiwen has been a Rasch Measurement SIG program co-chair.



SIG Secretary: Audrey Conway Roberts, Bowling Green State University
Most recently, Audrey has been a Rasch Measurement SIG program co-chair.



2024 SIG Business Meeting at AERA

The Rasch Measurement SIG will have their business meeting on Sunday April 14th. This year's guest speaker will be 2023 Georg William Rasch Early Career Publication Award winner Jue Wang.

2024-2025 AERA SIG Program Co-chairs Update

Program co-chairs are appointed by the SIG chair on a volunteer basis. This year's program co-chairs are:

R. Trent Haines, Chair of Rasch SIG

Eli Jones, Treasurer of Rasch SIG

Haiying Long, Secretary of Rasch SIG

A Farewell Note from Outgoing Rasch Measurement SIG Chair

Dear Rasch Colleagues,

It has been an honor to serve as the Chair of the Rasch Measurement SIG at AERA for the past two years. We have had strong programs at the AERA Annual Meeting as well as excellent speakers during our business meetings.

I look forward to continuing my membership in the SIG under the leadership of Stefanie A. Wind, incoming Chair, as well as the rest of the leadership team. Please help me congratulate them on their election and appointment.

I hope to see you at the AERA Annual Meeting in Philadelphia in just a few short weeks. Please be sure to stop by our sessions and the business meeting.

Rasch measurement is a vital part of the research community, so I hope you will consider renewing or rejoining the SIG if your membership has lapsed.

See you in Philly!

Sincerely,

R. Trent Haines, Chair
Rasch Measurement SIG

Conference Announcement

Inaugural Conference of the Society for the
Study of Measurement

August 5-6, 2024

University of California, Berkeley
Berkeley, CA

<https://measurementsociety.org/conference/>

Deadline to [submit proposals](#) extended to
April 15, 2024:

The Conference of the Society for the Study of Measurement is an interdisciplinary conference that explores the philosophy and history of measurement. It aims to consolidate and develop the study of these topics, following previous conferences that predate the foundation of the Society in Bielefeld (2013), Cambridge (2015), Paris (2018) and Milan (2022). It will bring together philosophers, historians, sociologists, psychometricians, and metrologists to address questions related to measurement across disciplines ranging from the natural sciences to the human sciences.

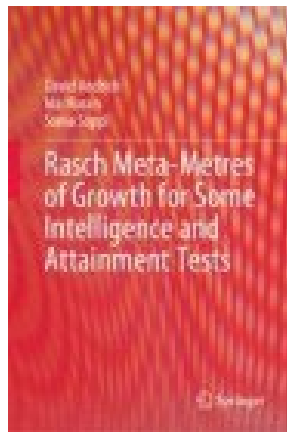
2024 Measurement at the Crossroads

Organizing Committee

- Mark Wilson (Host & Scientific Committee co-Chair)

- William Fisher (Host, Sponsorship sub-Committee chair & Scientific Committee co-Chair)
- Qing Cai (Venue sub-Committee chair)
- Perman Gochyyev (IT sub-Committee Co-chair)
- David Torres Irribarra (IT sub-Committee Co-chair)
- Himilcon Inciarte (Advertising sub-Committee chair)
- Yunting Liu (Day-of-Event sub-Committee chair)
- Smriti Mehta (Conference Agenda sub-Committee chair)
- Josh Sussman (Organizing Committee Secretary)
- Mingfeng Xue (Finances sub-Committee Chair)

Book Announcement



Rasch Meta-Metres of Growth for some Intelligence and Attainment Tests was recently released by Springer. The structure and title of the monograph pays homage to Rasch's (1960) book, *Probabilistic Models for some intelligence and attainment tests*.

This volume discusses the phenomenon of growth, which is an issue of fundamental importance in social as well as natural sciences. It must be observed that growth is rarely, if ever, linear, which presents major methodological challenges to researchers. However, the authors of the volume take advantage of a fundamental insight made by the Danish statistician Georg Rasch, who demonstrated that a logarithmic transformation could resolve the problems created by non-linearity. Rasch labeled the

transformed scale a meta-meter. According to The Oxford Dictionary of Biochemistry and Molecular Biology a meta-meter is "A quantity derived from an observation, and independent of all parameters, that conveys the magnitude of the phenomenon observed." This formulation is in line with Rasch's thinking, and in the first part of the book the authors present several examples of how the meta-meter elegantly resolves issues in describing growth of different phenomena, such as weight of babies and development of intelligence, reading, and mathematics.

The second part of the book broadens the discussions by bringing up fundamental issues of measurement. Here too the thinking of Rasch plays an important role. He formulated a set of requirements of measurement that need to be satisfied, such as invariance of comparisons between objects with respect to different instruments. Rasch concluded that when these requirements are satisfied by data, they can be used for studying growth.

This is an extremely rich and many-faceted volume, into which just a few glimpses have been made here. However, any reader with an interest in theory and methodology of

measurement and growth will be richly rewarded by reading the book from cover to cover.

Acknowledgements

The first author was fortunate to study for his PhD at The University of Chicago in the early 1970s. There he attended lectures by Ben Wright on the measurement theory of Georg Rasch, a distinct form of modern test theory. He then studied with Rasch, attending lectures on growth for which Rasch is hardly known. At The University of Chicago, he also attended lectures by Darrell Bock who, like Rasch, made major contributions to both a form of modern test theory now known as item response theory, and to the study of growth. Two data sets that Bock published, one physiological and one behavioural, are reanalysed and reported in the monograph.

More information can found on the publisher's website:

<https://link.springer.com/book/10.1007/978-981-99-4693-8>

David Andrich

Ida Marais

Sonia Sappl

The University of Western Australia

Women in Measurement Events at AERA/NCME

Women in Measurement is hosting a networking reception during AERA in Philadelphia on Thursday April 11, 5:30 – 7:30pm at City Winery Philadelphia. This event will include a ceremony honoring Dr. Lorrie Shepard as the 2024 Women in Measurement Leadership Award recipient. This event is open to all. Light hors d'oeuvres and a ticket for beer and wine will be provided. Tickets can be purchased at: <https://www.zeffy.com/en-US/ticketing/3b3758ed-1c16-4091-a9e1-71cadaaddef5>

At the NCME conference, the Women in Measurement ResearchHERs will share their research in a panel session moderated by Dr. Fiona Hinds. The presenters (Dr. Shelia Lallmamode, Dr. Xaviera Gonzalez-Wegener, Dr. Leslie Rosales and Maria Hamdani, MSc) will illustrate the findings of qualitative research studies and provide insight into the intersectionality of identities and experiences of Latin American and Muslim women to uncover challenges and barriers.

Rasch-Focused Presentations at AERA 2024

Rasch SIG Business Meeting

- Sun, April 14, 4:55pm to 6:25pm,
Philadelphia Marriott Downtown,
Floor: Level 3, Room 308

Thursday, April 11, 2024

- Thursday Poster Session 12:40 pm
 - *Time:* Thu, April 11, 12:40pm to 2:10pm, Pennsylvania Convention Center, Floor: Second Floor, Exhibit Hall A
 - *Poster:* Measuring Upper-Elementary Students' Understanding of AI Concepts: A Rasch Model Analysis (Poster 8) – *S. Chakraborty, Indiana University, J. Kim, Indiana University, K. D. Glazewski, North Carolina State University, C. E. Hmelo-Silver, Indiana University, A. Leftwich, Indiana University, V. Johnson, Indiana University, B. Mott, North Carolina State University, J. C. Lester, North Carolina State University*

Friday, April 12, 2024

- Friday Roundtable Session - Illuminating Adult/Child, Teacher/Learner Relationships Through Critical Mixed and Quant Methodologies
 - *Time:* Fri, April 12, 11:25am to 12:55pm, Pennsylvania Convention Center, Floor: Second Floor, Exhibit Hall B Table 25
 - *Paper:* The Measure and Meaning of Trust in the Lives of Foster Youth – *W. Morrison-Cavendish, University of Miami,*

N. Schreiner, University of Miami, K. M. Stewart, Miami Law Clinic

- Assessing Computational Thinking: Updates and Advances in the Field
 - *Time:* Friday, April 12, 11:25am to 12:55pm, Philadelphia Marriott Downtown, Floor: Level 5, Salon L
 - *Papers:*
 - Assessing Students' Growth in Computer Science Knowledge: Applying Diagnostic Classification Modeling – *C. Na, Utah State University, S. McGee, The Learning Partnership*
 - The Relationship between Computational Thinking and Mathematics Understanding in Integrated Elementary Mathematics Instruction – *A.C. Huggins-Manley, University of Florida, M. Israel, University of Florida, J. Li, University of Florida, B.D. Gane, University of Kansas, N. Elagha, University of Illinois at Chicago, F. Luo, University of Alabama, J.W. Pellegrino, University of Illinois at Chicago*
- Friday Roundtable Session - Promoting Literacy in Early Childhood Settings
 - *Time:* Fri, April 12, 3:05pm to 4:35pm, Pennsylvania Convention Center, Floor: Second Floor, Exhibit Hall B Table 5
 - *Paper:* Alphabet Knowledge in Young Spanish-Speaking Children – *C. Gillanders, University of Colorado – Denver, M. F. Valenzuela,*

Universidad de los Andes, C. Donovan, University of Colorado – Denver, H. Burke, University of Colorado - Denver

- Friday Roundtable Session - Fostering Inclusive Engagement: Insights From Student Experience
 - *Time:* Fri, April 12, 4:55pm to 6:25pm, Pennsylvania Convention Center, Floor: Second Floor, Exhibit Hall B Table 36
 - *Paper:* Development and Validation of the College Student Organization New Member Hazing Experiences Scale – *A. M. McCready, University of Connecticut, L.S. Dahl, New York University, C. D. Challenger, Montclair State University*
- Friday Poster Session - Division D Graduate Student Committee In-Progress Research Gala Poster Session
 - *Time:* Fri, April 12, 4:55pm to 6:25pm, Pennsylvania Convention Center, Floor: Second Floor, Exhibit Hall A
 - *Poster:* Multifaceted Poisson Count Models With Item Covariate Effects: Application to Rasch and Conway-Maxwell Poisson Count Models – *G. Arbet, University of Texas at Austin*

Saturday, April 13, 2024

- Saturday Roundtable Session - Relational Elements of School Community, Climate, and Culture: Family Engagement and Leadership Approaches
 - *Time:* Sat, April 13, 7:45am to 9:15am, Pennsylvania Convention Center, Floor: Second Floor, Exhibit Hall B Table 10
 - *Paper:* Parental Involvement and Student Progress: Role-Based Measurement Invariance Analysis

– *N. H. Shannon, University of Alabama*

- Survey Development in Education: Using Surveys with Students and Parents
 - *Time:* Sat, April 13, 7:45am to 9:15am, Philadelphia Marriott Downtown, Floor: Level 4, Room 410
 - *Paper:* Validating the Spiritual Development, Belonging, and Coping (SDBC) Scale for African American Football Student-Athletes – *M. Xiao, University of Kentucky, R. Flowers, University of Kentucky, K.D. Bradley, University of Kentucky*
- Saturday Roundtable Session - Innovative Methodologies in Item Response Theory
 - *Time:* Sat, April 13, 1:15pm to 2:45pm, Pennsylvania Convention Center, Floor: Second Floor, Exhibit Hall B Table 20
 - *Paper:* Measuring the Impact of Multidimensional Science Instructional Materials – *C.F. Herrmann-Abell, BSCS Science Learning, J. Snowden, BSCS Science Learning, M. A.M. Stuhlsatz, BSCS Science Learning, B. M. Donovan, BSCS Science Learning, C. M. Passmore, University of California – Davis, P. Olson, BSCS Science Learning, C. D. Wilson, Biological Sciences Curriculum Study*
- Promoting and Assessing Sociocultural Competence in Dual Language Bilingual Education Programs
 - *Time:* Saturday, April 13, 3:05pm to 4:35pm, Philadelphia Marriott

Downtown, Floor: Level 4, Franklin
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- *Paper:* Using the Rasch-Guttman Scenario (RGS) Framework to Develop a Sociocultural Competence Measure for Dual Language Students – *A.P. Bellara, Western Carolina University, E.R. Howard, University of Connecticut, S.S. Silva-Enos, Providence College, E. Sada, Boston College, D. Galvez, University of Connecticut, M.M. Wagner, University of Connecticut*

Sunday, April 14, 2024

- Sunday Roundtable Session - Exploring Equity and Fairness in Educational Measurement
 - *Time:* Sun, April 14, 9:35am to 11:05am, Pennsylvania Convention Center, Floor: Second Floor, Exhibit Hall B Table 39
 - *Paper:* Beyond Reading Scores: Revisiting PISA Reading Attitudes Items Through the Lens of Four Building Blocks – *Q. Cai, University of California – Berkeley, M. Xue, University of California - Berkeley*
- Sunday Roundtable Session - Assessing Bi/Multilingual Learners in Mathematics and Science
 - *Time:* Sun, April 14, 11:25am to 12:55pm, Pennsylvania Convention Center, Floor: Second Floor, Exhibit Hall B Table 25
 - *Paper:* Does Rater Personality Affect Rater Leniency in Self- and Peer-Assessment of Writing? – *C. Lei, East China Normal University*
- Sunday Roundtable Session - Improving Special Education Evaluation and Identification Through an Interdisciplinary Approach
 - *Time:* Sun, April 14, 1:15pm to 2:45pm, Pennsylvania Convention

Center, Floor: Second Floor,
Exhibit Hall B

- *Paper:* Evaluating an Observation Protocol for General and Special Education Teachers in a Multi-Tiered Instructional Framework – *H. Sohn, University of Wisconsin - La Crosse, M. T. Brownell, University of Florida, A. E. Benedict, Arizona State University, J. Williams, University of Florida, C. Huggins-Manley, University of Florida, B. Kelcey, University of Cincinnati*
- Advanced Psychometric Analyses in Rasch Modeling (Rasch Measurement SIG Session)
 - *Time:* Sun, April 14, 1:15pm to 2:45pm, Philadelphia Marriott Downtown, Floor: Level 4, Room 401
 - *Papers:*
 - A Differential Item Functioning Analysis of the Sources of Research Self-Efficacy Scale Using Rasch Measurement – *E.A. Jones, University of Memphis, L.M. Harrell-Williams, University of Memphis, L. Walden, University of Memphis, J. Piontek, University of Memphis*
 - Exploring the Psychometric Properties of Digital Game Usage in the Mathematics Classroom Survey – *S.A. Wind, University of Alabama, A.R. Denham, University of Alabama, K.E. Harbour, University of South Carolina*
 - Using Latent Regression Rasch Model to Evaluate Surveys – *J. Li, University*

*of Georgia, G. Engelhard
University of Georgia*

- Unlocking Student Success: Insights from Community College Research
 - *Time:* Sun, April 14, 1:15 to 2:45pm, Pennsylvania Convention Center, Floor: Level 100, Room 107A
 - *Paper:* Is the Community College Survey of Student Engagement valid and reliable? Using the Rasch Analysis – *J. Lee, University of Kentucky, O.O. Kolawole, University of Kentucky, J. Kim, Texas A&M University – Commerce*
- Sunday Roundtable Session - Advancements in Measurement Models and Evaluation Methods (Rasch Measurement SIG Session)
 - *Time:* Sun, April 14, 3:05pm to 4:35pm, Pennsylvania Convention Center, Floor: Second Floor, Exhibit Hall B Table 14
 - *Papers:*
 - Calibrating and Evaluating Automated Scoring Engines and Human Raters Over Time, Using Measurement Models – *Y. Xu, University of Alabama & S. Wind, University of Alabama*
 - Explore the Criteria of Functional Matching in Anchor Item Selection Under the Rasch Framework – *Y. Xia, University of Kentucky, K. Bradley, University of Kentucky & R. Jin, Shenzhen University*
 - Investigating the Quality of Life for Children With Autism Spectrum Disorder Scale Using Rasch Methodology – *L. Chezan, Old Dominion University, J. Liu, University of South Carolina, R. Gao, University of South Carolina*