

Introduction to the Special Issue in Honour of Prof. Wang Wen-Chung (Part 2)

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The *Journal of Applied Measurement* (JAM) and Guest Editors Mark Wilson, Karen Draney, Xiaoting Huang, and Xuelan (Sherry) Qiu invited submissions to a Special Issue in honor of the late Professor Wang Wen-Chung, an eminent psychometrician and educational statistician recognized locally and internationally for his pioneering contributions to the theorizing, research, and teaching of measurement. Prof. Wang's work has inspired scholars, researchers, and students across multiple disciplines. He left us unexpectedly in 2018, but the legacy he left behind is profound.

This second volume of that Special Issue celebrates Prof. Wang's significant achievements in measurement research and scholarship. While the subject focus of the papers is broad, the Special Issue aims to: (a) promote the relevance of measurement across the sciences, (b) highlight key ways in which measurement can be an important contributor to rigorous methodology, (c) encourage innovative areas of common interest to interdisciplinary scholars and students, and (d) make visible contributions to measurement by researchers

from locations where research outputs are less accessible to the Western world due to language and culture differences.

The JAM issued a Call inviting manuscript submissions that honor the spirit of discovery that embodied within Prof. Wang's published work. That spirit reflects his deep appreciation for inquiry into new knowledge to inform high quality measurement. We therefore welcomed applied and methodological contributions that build on the legacy of Prof. Wang's scholarly, advocacy, and pedagogic work, and that offer insights into the challenges, opportunities, technologies, and methods in both theory and practice of measurement. Following Prof. Wang's example of immense generosity, we were keen to engage a broad range of participants, from established to emerging researchers across diverse fields.

The Guest Editors encouraged a wide range of possible topics for this special issue. We hoped to see that the submitted papers have connections to Prof. Wang, be it through his work, his findings, his interests, his discoveries,

his generous mentorship, and/or through the inspiration he had provided to many. The topics of papers submitted included the following:

- Conceptual and theoretical issues in measurement and their implications for the measurement community.
- Empirical studies that implement measurement methods across populations, settings, and contexts.
- Measurement models, software programs, interpretation of software outputs, and operational frameworks.
- Systematic reviews of the landscape and dynamics of measurement issues, together with their implications for researchers.
- Thoughtful essays, histories, and personal accounts from former co-authors, colleagues, and students.
- Summaries of contextualized research work in practical terms for applied researchers, together with software resources and succinct guidelines for their proper implementation as well as interpretation of output.

Nine papers made it all the way through the review process to be included in Part 2, and these are included here in this issue. *Thank you!* to the authors of these papers, for your contributions, and your readiness to respond to reviewers' comments.

The resulting set of papers can be seen as being composed of several sub-parts, and the papers are listed in order of those sub-parts in the Table of Contents for Part 2. The first three paper is unique in that it is a reflection about Prof. Wang from among those who knew him well, contributed by three of his appreciative students, whose work he enjoyed so much: Cheng-Te Chen, Ching-Lin Shih, and Chia-Wen Chen.

The first group of research papers in Part 2 are all in general area of improving measurement theory in the human sciences. All three of these papers describe innovative approaches to measurement: *A Systematic Review of Forced-*

Choice Measures and Item Response Theory Modelling (Xuelan Qiu and Jimmy de la Torre), *Retrofitting the Partially Confirmatory Cognitive Diagnosis Modelling to Large-Scale Educational Assessments* (Yi Jin and Jinsong Chen), *A Graphical Framework Using Item Response Modeling to Detect Nonuniform Differential Item Functioning* (Bunyong Dejanipont and Mark Wilson), *Dirichlet Item Response Models for Multidimensional Compositional Items with Specific Objectivity* (Chia-Wen Chen, Wen-Chung Wang, and Magdalena Mo Ching Mok), and *Relating Selected Response to Constructed Response Items: Systematic Effects of Item Format* (Mark Wilson, Weeraphat Suksiri, Linda Morell, Jonathan Osborne, and Sara Dozier).

The second group of research papers reflects aspects of Prof. Wang's breadth of interests in the applications of measurement across a broad range of topics: *The Efficiency of Integrating Multidimensional Rasch Analysis with Machine Learning Algorithms to Predict Mathematical Proficiency Waypoints in Probability and Statistics* (Putcharee Junpeng and Mark Wilson), *Engaging in Free Open Access Medical Education (FOAMed): Development and Validation of a FOAMed Engagement Instrument in Nephrology Fellows* (Dana M. Larsen, Perman Gochyyev, Christy K. Boscardin, and Mark Wilson), *Chinese Teachers' Assessment Self-Efficacy and the Effects of Gender and Teaching Experience* (Jinxin Zhu), and *Using an Exploratory Item Response Modeling Approach to Develop a Teacher Continuing Professional Development Progress Variable* (Jerred Jolin and Alexander Blum).

Finally, *Thank you!* to all readers of the two volumes of the Special Issue in Honour of Prof. Wang Wen-Chung. We, the Guest Editors, hope that you will enjoy the originality and diversity of the papers included here in Part 2 (as well as those previously published in Part 1), and that you will be inspired by these papers to follow-up with new contributions of your own that contribute to the breadth of JAM, and to the strength of the measurement discipline that Prof. Wang did so much to promote.