In memoriam Jürgen Rost (1952-2017)

Matthias von Davier[1], Claus Carstensen, Rolf Langeheine & Michael Eid

Jürgen Rost passed away on July 1st, 2017, after a long and serious illness. For those who do not know him well, he was a professor of psychology at the Christian Albrechts University of Kiel, and research director at the institute for science education before his early retirement.[2]

Jürgen was a brilliant and passionate psychometrician. He is known internationally as a leading scholar in this area for his groundbreaking contributions to item response theory and latent class modeling. His work on the development of mixture distribution Rasch models had a lasting impact on the field. Jürgen was not only interested in developing the sophisticated theory of his models but he was also passionate about making his work, and more general, advanced psy-

chometric modeling, accessible to applied researchers. He wrote a textbook on test theory that became the essential German language reference on item response theory. This textbook was published in a first edition in 1996, and then republished in 2004 in extended and revised form. It became the go-to reference for applied researchers and has been used by academic teachers for entry-level and advanced classes on modern test theory.

In collaboration with his doctoral students he also developed user friendly computer programs, among these WINMIRA and MULTIRA, that allowed researchers to apply

complex psychometric models through easy to use graphical interfaces. These software packages are central tools accompanying the textbook and were included first on CDROM and later as a download, together with exercises and example data sets that were part of the chapters. That way readers could practice what they learned immediately using free versions of these programs, which can be used to estimate a vast majority of the models discussed in Jürgen's textbook.

Aside from writing textbooks and developing teaching tools, Jürgen was also a very active book editor, often in conjunction with colleagues, and often based on groundbreaking conferences that brought together scholars from across the world who followed different lines of thought, and who would consider their own approaches different from those of others. A (mis-)conception that was often either softened or resolved after either attending one of these conferences, or after reading the proceedings that came out of these meetings. Among many of the impactful edited volumes, two are of particular and of continued interest to the world of psychometrics: "Latent Trait and Latent Class Models" edited by Rolf Langeheine and Jürgen Rost, published in 1988, and named by Neil Henry one of the most important references on latent class analysis in his 50-year review of research in this domain. This volume is recognized as a classic and was followed by another emerging classic entitled "Applications of Latent Trait and Latent Class Models in the Social Sciences", published in 1997, and edited by Jürgen Rost, and his long-term friend and colleague Rolf Langeheine as co-editor. These two volumes brought together researchers and results that stirred developments of integrated and general families of psychometric models. In this sense, his many contributions have in important ways prepared the bedrock on which modern psychometrics stands. Jürgen's website www.jrost.de shows a list of titles that were either edited by him, or that were enriched by his contributions as a sought-after chapter author in psychometrics, but also fields such as environmental psychology and science education. These domains were of great interest to Jürgen, and here he contributed both substantially as well as a methodology advisor and academic teacher.

Moreover, Jürgen was one of the founders of the Division of Quantitative Psychology of the German Psychological Association and he was very active in establishing a network of German and European psychometricians. In addition, he founded the journal *Methods of Psychological Research – Online* in 1996 which was the first online journal on research methodology representing the Quantitative Division. One could say that Jürgen invented or at least anticipated the open access journal concept years before big publishing

companies started this now very successful line of business. He was convinced that researchers everywhere should have free access to the results of methodological research. Not only methodologists but also applied researchers should have the opportunity to read up on recent results published in high quality articles on new methodological developments. He was always interested in bringing advanced methods to applied researchers to improve psychological and educational research. As mentioned above, he also had strong interests in different areas of applied research. He contributed to research in educational and in environmental psychology in important ways, by applying best practices to studies in areas that traditionally were not among those of the highest methodological sophistication.

Jürgen supported his doctoral students in ways that need a few words. His approach to working with students was providing guidance as needed but looking out for his mentees so that they would be allowed and enabled to finish their doctoral work in time. He had a hand for guiding those who needed more guidance, and letting others research and create on their own, if their desire for independence was strong. His students ended up in jobs and post-docs around the world. From Berlin to Hamburg, Muenster and Bamberg, Princeton, Melbourne, Philadelphia, California, and Samoa(!), among other places. He looked out for people and tried to gently nudge those who did not believe enough in themselves, and when listening to his former students' stories, you will hear more than once: "I did not know I could do this, but Jürgen showed me I could do more that I knew!"

Jürgen was a generous, reliable, hospitable and humorous friend. He was a person you could truly rely on, and for many students who looked for an advisor, they found a good friend in the process. We are grateful for all the beautiful encounters with him. We will miss him dearly.