Rasch models and the R package eRm

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The R package eRm (extended Rasch modelling) was designed for computing Rasch models and several extensions. A unique feature of eRm is the implementation of a unitary, efficient conditional maximum likelihood (CML) approach to estimate model parameters and their standard errors. The main characteristic of IRT models, the Rasch model being the most prominent, concerns the separation of two kinds of parameters, one that describes qualities of subjects under investigation, the other relates to qualities of the situation under which the response of a subject is observed. Using CML estimation both types of parameters can be estimated independently from each other. The talk covers some theoretical basics of the RM and how to test its assumptions. Estimation as well as graphical and numeric tools for assessing model, item, and person fit using the eRm package are demonstrated.