

IRT Scale Scores in C++

(IRTScore special version for 285)

(The modified version of) IRTScore (for 285):

- Reads a file of IRT (graded model) item parameters
- Computes response pattern EAPs, response pattern MAPs, summed-score EAPs, and (an as-yet unpublished) linear approximation to the response pattern EAPs for
- Either user-entered response patterns or (thousands of) simulated response patterns (to evaluate the performance of the estimators)

The structure of the C++ is:

main.cp calls procedural routines in

io.cp (.h) which depend upon the class

IRT04s.cp (.h) which is a small version of our developing “IRT” classes, for “tests”, made up of items, each of which is an instance of the class

itemstuff.cp (.h) which is a container for IRT information about each item, based on the

LstArray class (as a library)

Purposes in talking about these things:

io.cp (.h) contains some interesting input-output

IRT04s.cp (.h) shows basic (scoring) IRT computations (including MAP and EAP) in C++

itemstuff.cp (.h) illustrates the use of C++ classes to encapsulate data, with flexible dynamic allocation

LstArray permits higher-level language type syntax (list arithmetic), dynamic memory allocation, and encapsulation of new-delete