Subject: A Calculus-level language, FortranCalculus, Compiler for Tweaking Parameters.
Posted by brubaker.phil on Sat, 14 Feb 2015 17:00:30 GMT
View Forum Message <> Reply to Message

The FortranCalculus (FC) compiler calculate partial derivatives on the fly. All a user does is enter their math equations & an objective (function) and FC tweaks parameters for solution to the given problem. The FC compiler is free (download and use) at least for the next year or two; see http://fortranCalculus.info/apps/fc-compiler.html .

FC can solve Algebraic thru Differential equations. FC uses Automatic Differentiation (AD) to calculate either the jocabian or Hessian matrix on the fly. Thus it is easy to use (next thing to a slide rule!) and exact. Most problems require a math model (i.e. your equations) and just a handful of other misc. code. Try it, you'll like it. :)

Our textbook, http://fortranCalculus.info/textbook, has many (40+) FC example problem from industry. See and run other examples in fc-compiler's demo section. These demos examples can easily be modified to create one's own problem ... an hour or two and you should have solved your problem.

Please share FC with your colleagues, students, and friends. Knowing FC will help future students get jobs in industries that include math modeling.

Thanks,
Phil