

Michael Kupferschmid

Computer Programming

I will seriously consider offers of employment as a programmer on projects requiring the skills described below.

FORTRAN Programming Design, documentation, and coding of new programs; debugging, modification, testing and comparison of old programs; code tuning for execution speed and numerical accuracy; parallel processing via MPI, and vectorization. I have been programming in Fortran since 1965, so I have extensive experience in both writing new applications and managing legacy codes. My second textbook was *Classical Fortran*, now in its second edition (see the *Numerical Computing* section of this web page).

MATLAB Programming My textbook *Introduction to Mathematical Programming* (see the *Applied Mathematics* section of this web page) is based on Octave, a free version of Matlab. For several years I taught a service course about using Matlab, and I consider myself a skilled programmer in the base language.

Software Development in Unix Organization of software projects using standard program development utilities and custom shell scripts; program testing and evaluation, including the precise measurement of processor time, the generation of random inputs, and the analysis of test results. I twice taught a course on the design of computational experiments.

Unix Shell Programming My primary computing platform is a laptop running Linux, so shell programming is constantly present in my everyday life. I have written a large collection of shell scripts for a wide variety of applications, and I have taught service courses on shell programming.