

How to run and compile my program:

type 'make' to compile code

write 'sbatch jobscript.slm' to send machine code to cluster

PROGRAMS MODIFIED:

- Newton: Inexact newtons method for non-linear diffusion equation
- func: computes $F(U)$
- Jacobian: computes $F'(U)$
- vecdot: computes vector dot product for distributed vectors a, b
- matmult: computes matrix vector product
- negu: determines if computed solution U is negative
- cg: computes CG algorithm to find solution to $Ax = b$
- main: main function for running newton, returns results and saves solution
- input: file which contains 'm' and 'lambda' (can be changed by user)