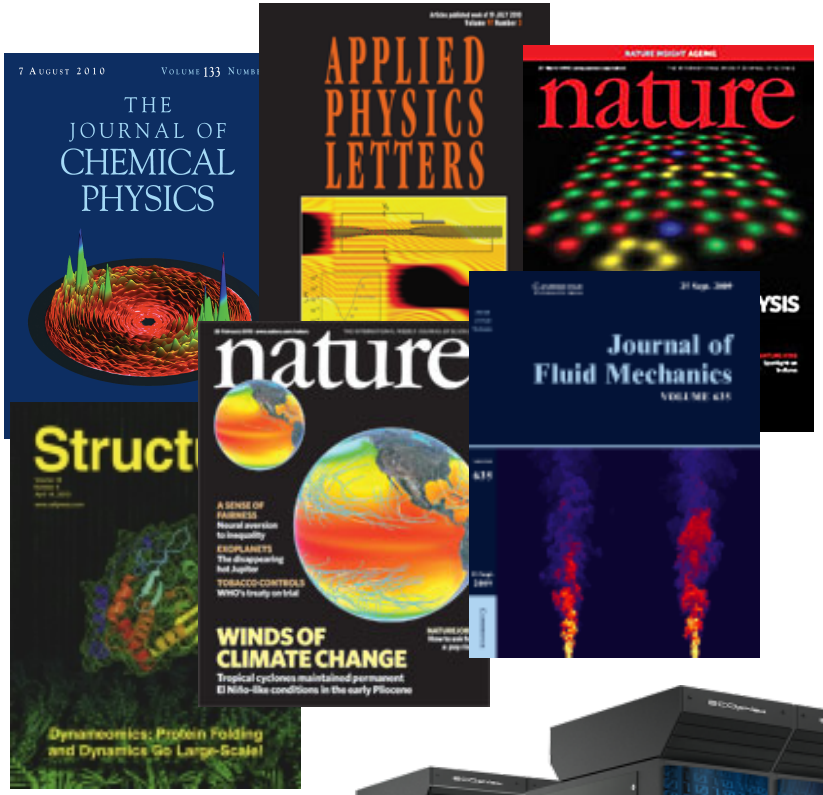
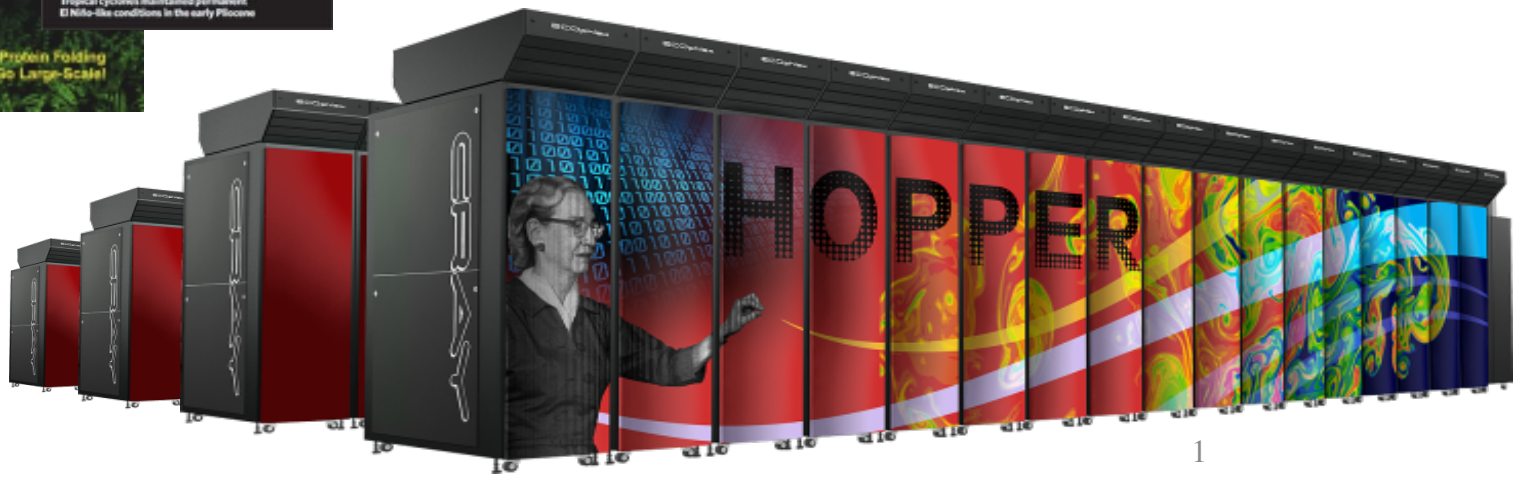
NERSC is the Production Computing Center for DOE Office of Science



NERSC computing for science

- 4000 users, 500 projects
- From 48 states; 65% from universities
- Hundreds of users each day
- ***1500 publications per year***

Systems designed for science



NERSC Systems

Large-Scale Computing Systems

Edison (NERSC-7): Cray XC30
- Stay Tuned for Phase 2 Info

Hopper (NERSC-6): Cray XE6
- 6,384 compute nodes, 153,216 cores
- 1.3 Pflop/s peak

Clusters

140 Tflops total

Carver
- IBM iDataplex cluster

PDSF (HEP/NP)
- ~1K core cluster

GenePool (JGI)
- ~5K core cluster

NERSC Global Filesystem (NGF)

Uses IBM's GPFS
- 1.5 PB capacity
- 10 GB/s of bandwidth

HPSS Archival Storage

- 40 PB capacity
- 4 Tape libraries
- 150 TB disk cache

Analytics

Dirac GPU testbed (48 nodes)

Getting enabled to run at NERSC

- To be able to run at NERSC you need to have an *account* and an *allocation*.
- An *account* is a username and password
  - Simply fill out the Account Request Form:

    https://nim.nersc.gov/nersc_account_request.php
- An *allocation* is a repository of CPU hours
  - Good news, you already have an allocation
  - Repo m1266. Talk to me or Dan Martin to get access.

Getting Your Own Production Allocation

- If you have exhausted your CSGF allocation, apply for your own allocation with DOE
- Research must be relevant to the mission of the DOE
- https://www.nersc.gov/users/accounts/
- Builds relationship with DOE program managers