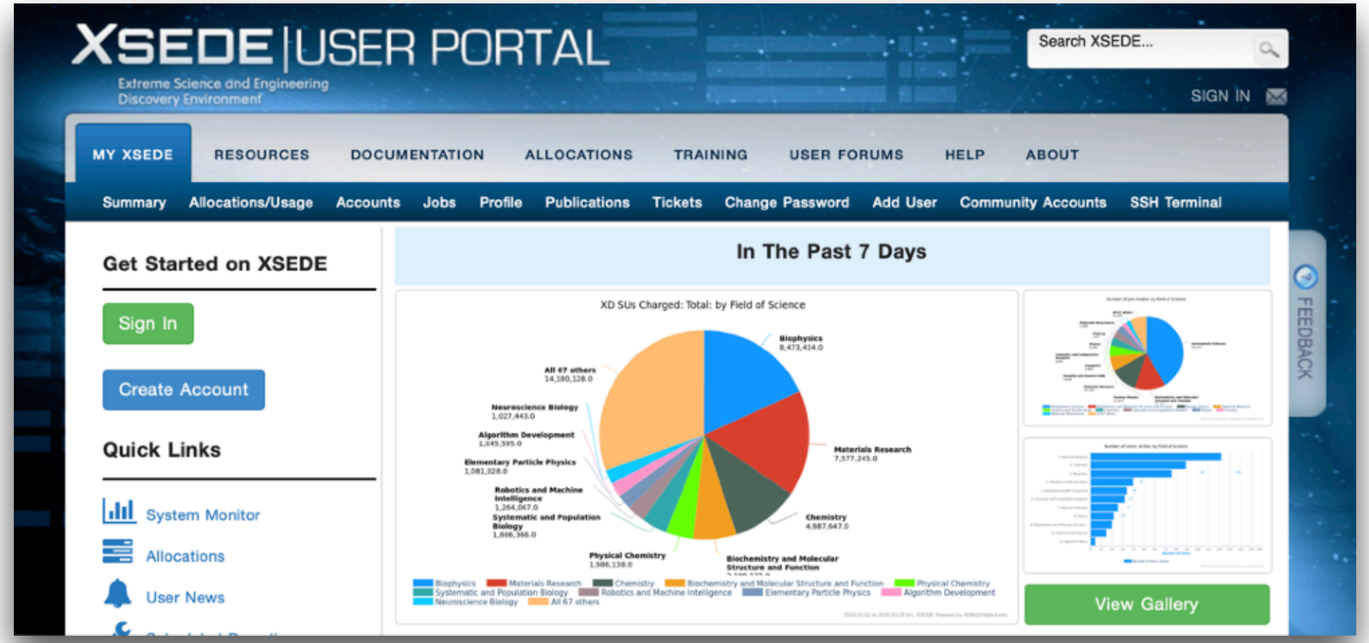
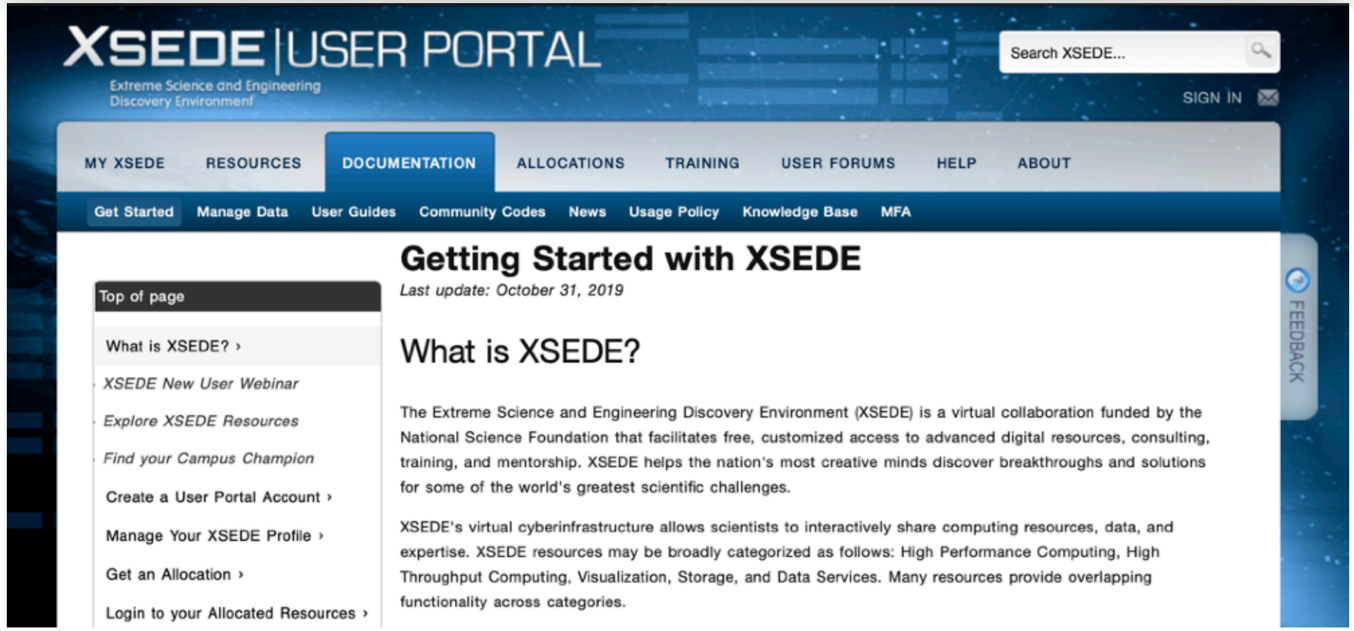
- A lot of what we will work through today is covered in the“Getting started with XSEDE” tutorial.
- This can be found at http://portal.xsede.org/. Click on the tabs marked “Documentation” and “Get Started”.
- You should already have
  - an XSEDE account and access to the class allocation
  - signed up for Multi-Factor Authentication with Duo (https://portal.xsede.org/mfa)
- So you can start from “Login to your Allocated Resources” on the left pane.





Cluster computing

On 7/22/2019, your professor visited the
Texas Advanced Computing Center (TACC),
home of an XSEDE computing cluster, Stampede2.

- The XSEDE supercomputers are not especially fast computers, but are computing clusters, groups of computing nodes that work together
- The most common way for computational scientists to utilize these computers is to submit a batch job to the queue
  - a batch job contains
    - information about the job, e.g.
      - allocation
      - maximum duration
      - type and amount of resource, e.g. CPUs or GPUs
    - a series of commands, like if you typed them into the terminal
  - The queue
    - is usually managed by a master node
    - prioritizes jobs
    - distributes jobs to worker nodes