

# **PARSL AS A GATEWAY FOR RESEARCH COMPUTING AT A LIBERAL ARTS COLLEGE**

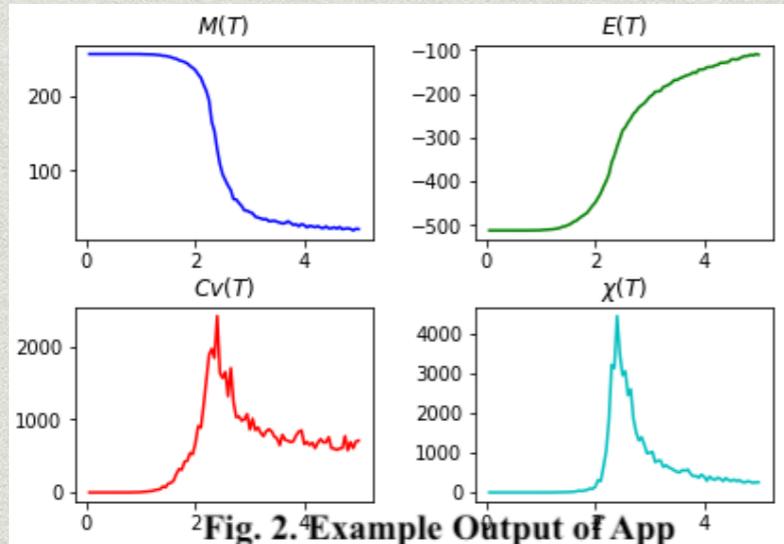
**BEN GLICK, LEWIS & CLARK COLLEGE\***

# About Our Needs

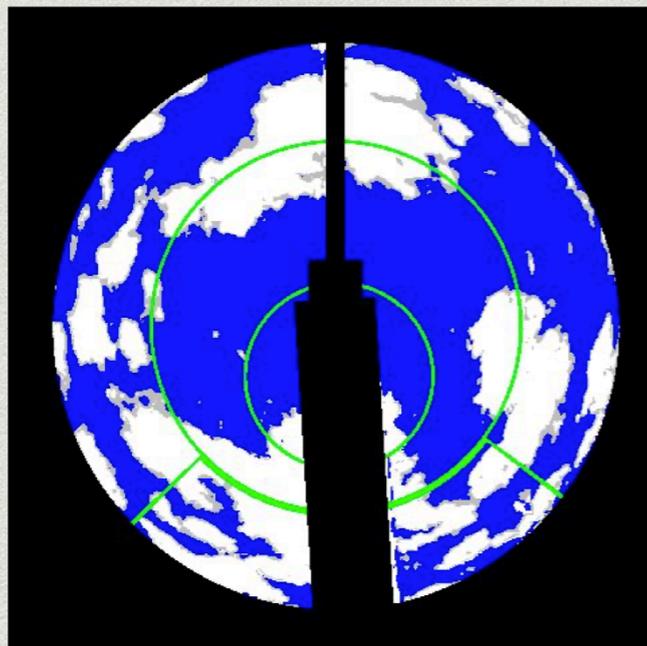
- \* Me: Recent graduate at Lewis & Clark
  - \* Who helps out every now and again
- \* Research computing office
  - \* Small HPC system shared by whole college
  - \* Balanced demands between research & teaching
  - \* (Extremely) limited support

# Examples

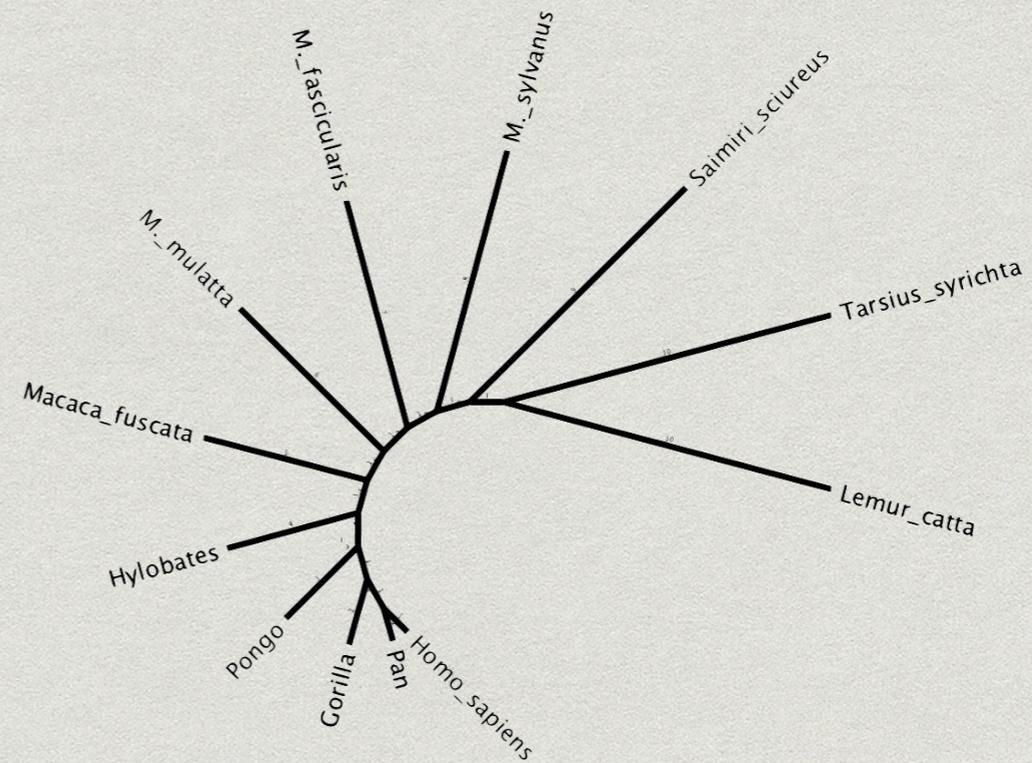
- Comp. Statistical Mechanics



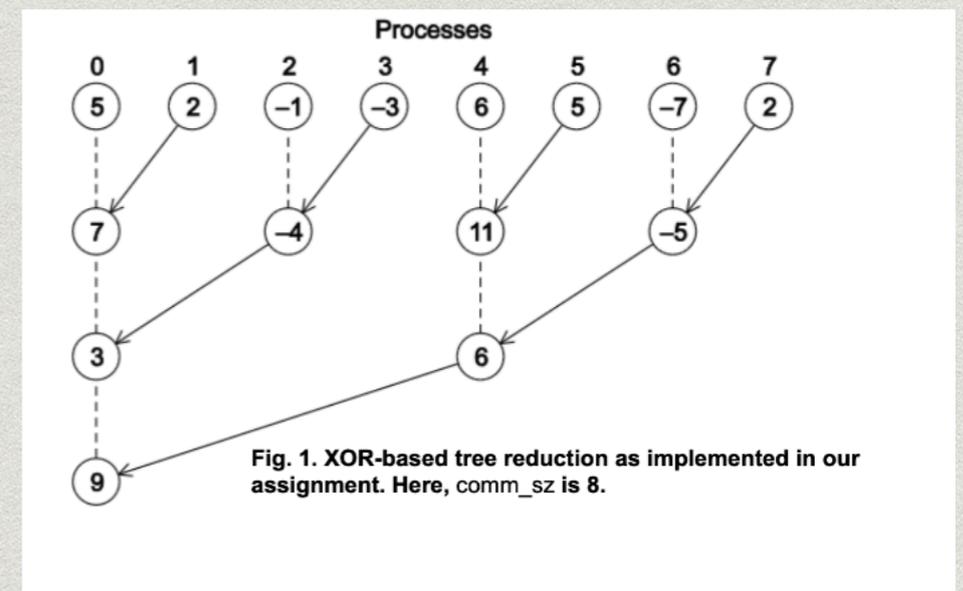
- Scientific AI



- Bioinformatics / Phylogenetics



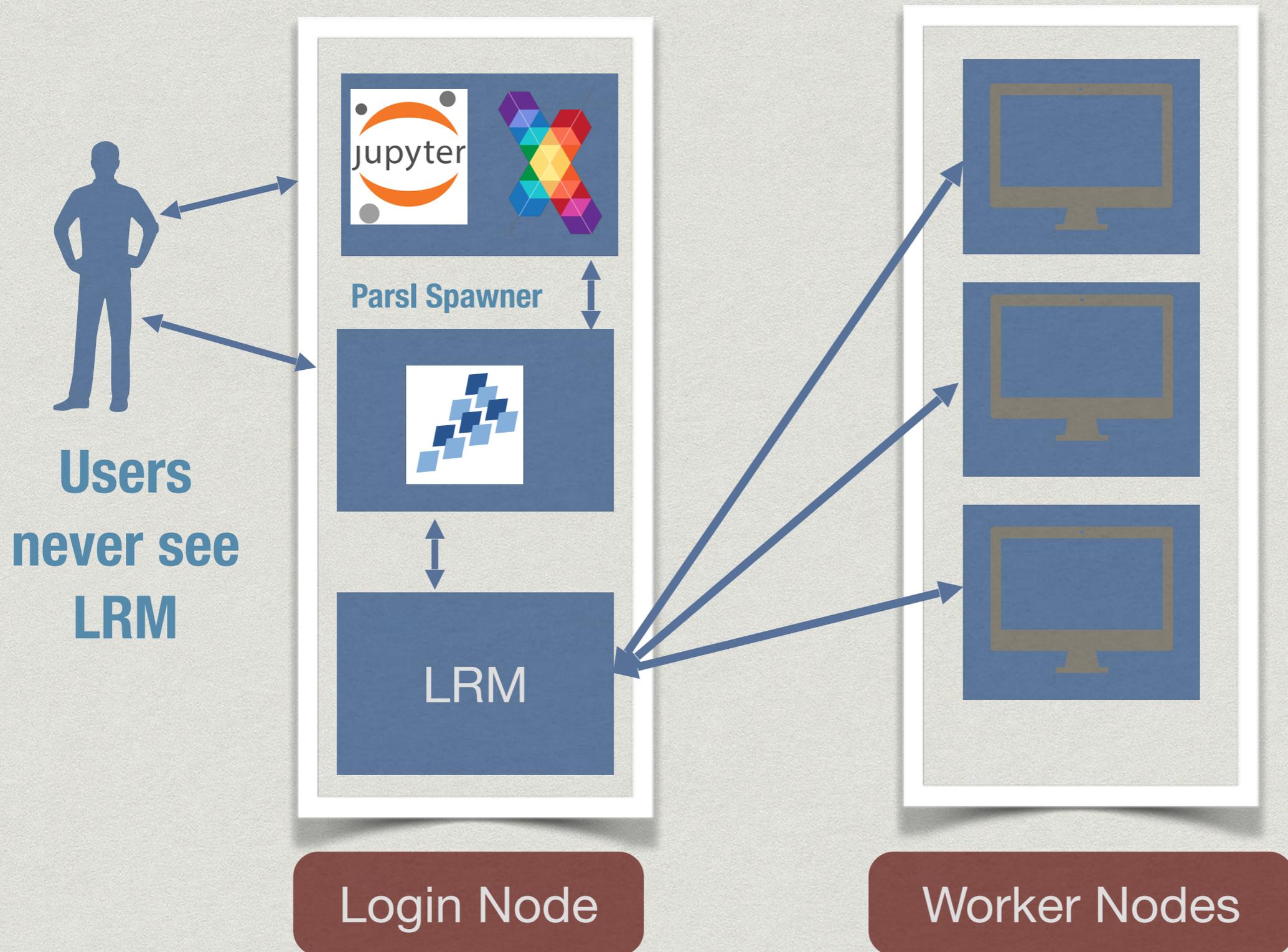
- HPC/CS Education



# Problem Overview

- \* Lack of experience
- \* Usability challenges
- \* Lack of support staff
- \* Researchers lack HPC know-how
- \* Dealing with CLI is a pain point
- \* Dealing with LRM is a pain point

# Solution: Parsl as Infrastructure



# Things we love about Parsl and some future desires

- \* Love: Level of abstraction (control of execution environment, dataflow)
- \* Love: Python as a single point of debugging
  - \* Serverless Supercomputing
- \* Love: FuncX!
  
- \* Desire: Interactive management/ reconfiguration of tasks
- \* Desire: Transfer task across pilot job

# Conclusions

- \* Parsl helps us provide a uniform interface not dependent on knowledge of HPC systems.
- \* Thanks to the Parsl team!
- \* Thanks to Jeremy McWilliams, Mohamed Anber, Greta Binford, and Jens Mache at Lewis & Clark
- \* Feel free to email [glick@lclark.edu](mailto:glick@lclark.edu) with questions.