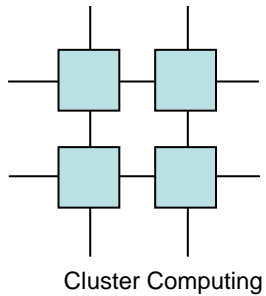


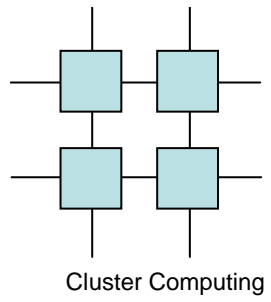
Mandatory Assignment 4

The Wind Trap

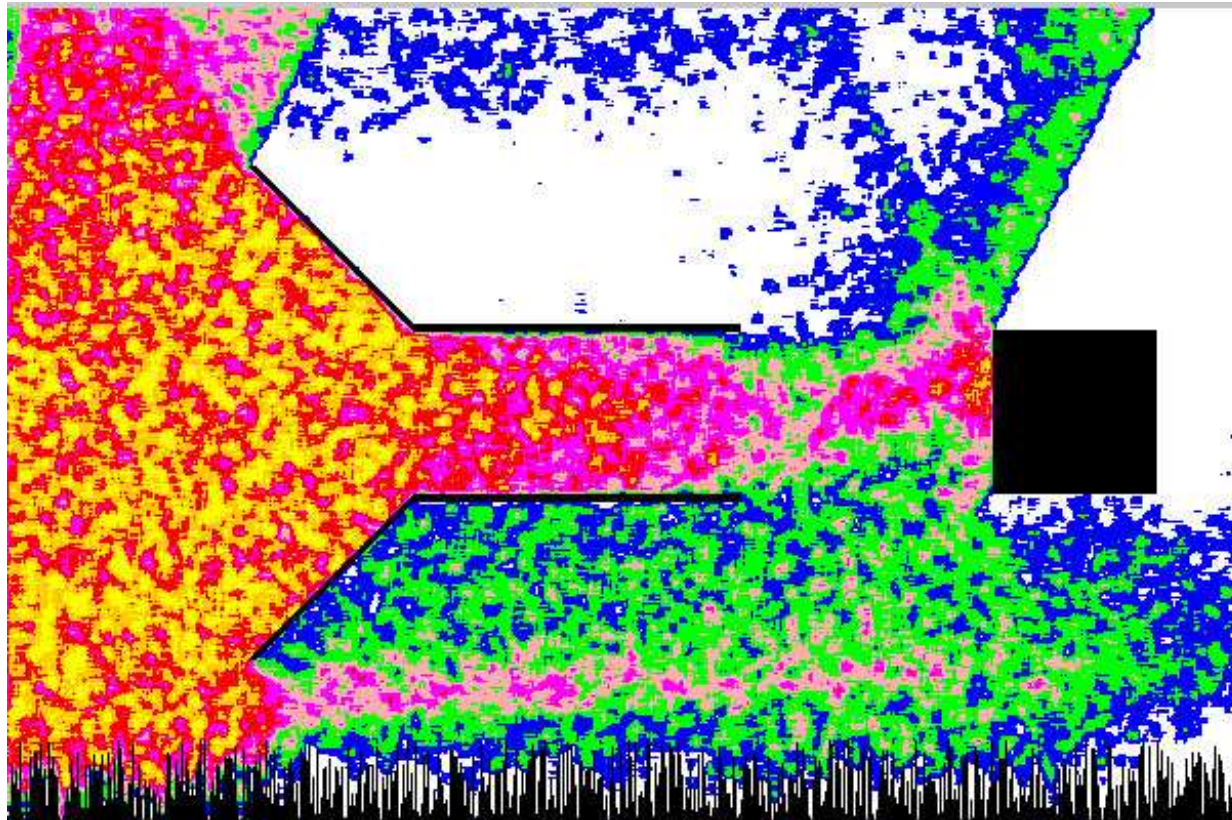


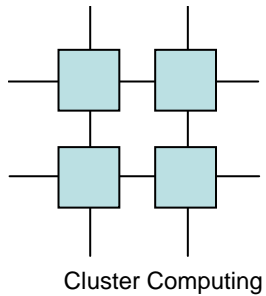
Wind Trap

- Virtual wind-tunnel
- An actual scientific application
- 2D – but a 3D model exists that use the same access pattern
- Represents the pipelined application type
- Can achieve really good speedup



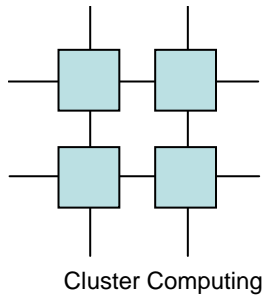
Wind Trap



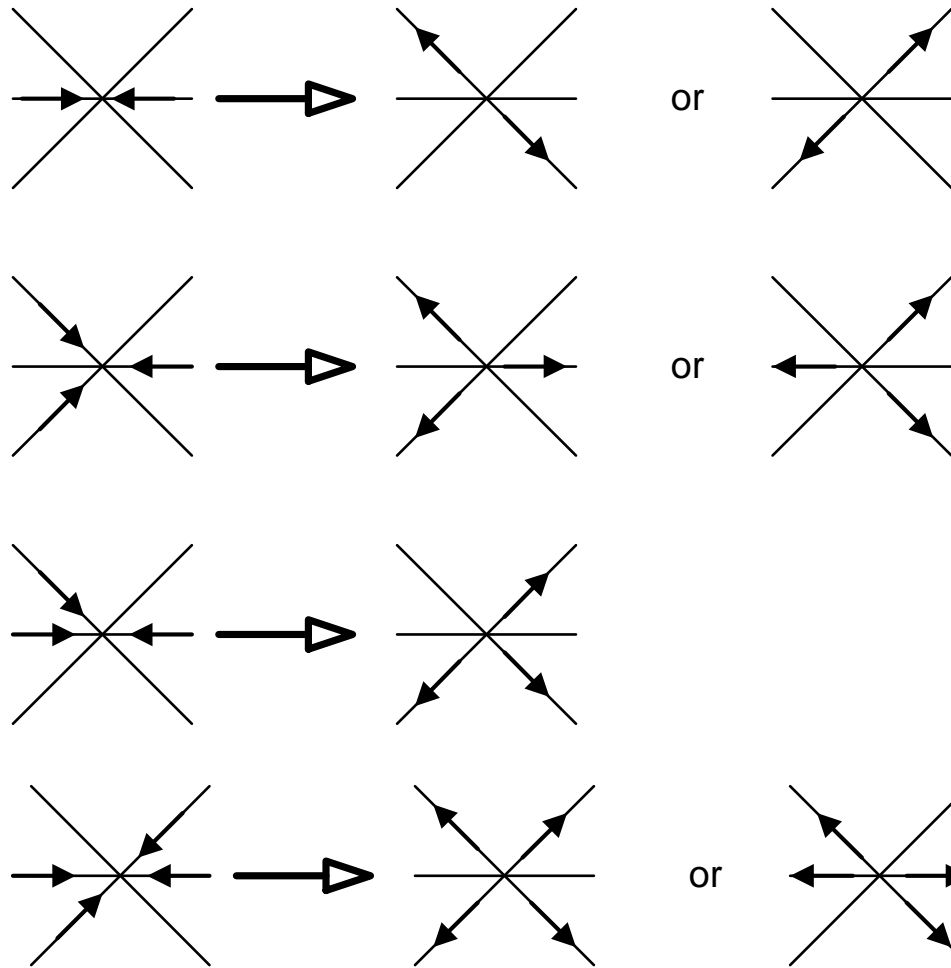


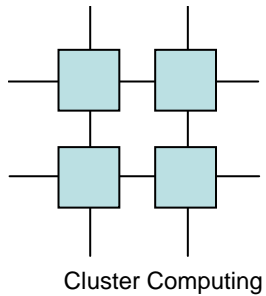
Wind Trap

- Lattice Gas Automaton
- A simpler version of the Lattice-Boltzmann CFD
 - Which is more detailed
- A typical example of lattice-communication applications
- Can achieve very good speedup



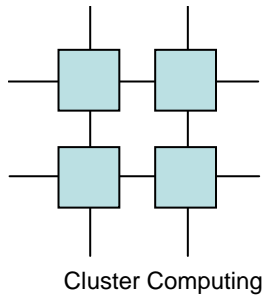
Lattice Gas Rules





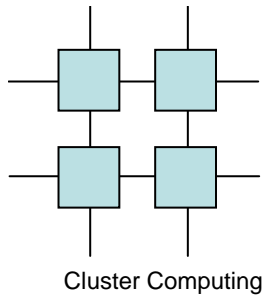
Assignment

- Write a parallel version of the sequential application
- Evaluate your solution
 - Include performance graph
 - Disable graphics for this



Decomposition

- Striping
- Tiling
- Cyclic striping



Practical issues

- Keep the report short
 - Analyses
 - Decomposition
 - Performance
 - Graph
 - Hand in June 5th 9.15
 - That is **before** the lecture