

## Particle Model

- Locking
  - keys
- Interactions
- Aggregations
- flow, time type components
- lattice structure / locality
- cascade / catalyst events
- Question of more powerful interaction
  - umping, less powerful locks
- Stable states
- Hierarchical
  - Q) How is static state exhibited?
  - Q) How is static structure exhibited?

# Important theory

- A particle is a key that unlocks access to a decoupled domain
- In the same sense a particle is the indirection allowing addressing into a decoupled domain
- need to add in concept of a cursor
- given the above we can build
  - data structures - linear, tree, etc
  - Compute as extension of turing machines
- What remains are questions of efficiency of model environment
  - ratio of  $P_1$  to  $P_2$  (Particle to Particle)
  - ratio of  $P_1$  to  $D_1$  (Particle to domain)
  - ratio of  $D_1$  to  $D_2$  (Domain to domain)
- the concept of cursor seems to be important in terms of compression at many layers of re-use of data structures and generic compute elements.