Population annealing meeting

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* First, the # of replicas at any given time is not fixed. Replicas can be added and deleted
* Potentially have each replica contained within a class of its own
* Perhaps we define a max number of active replicas and then only use some of them as we go
  + Could use an “isActive” boolean in the class

Matcha paper

* Ignore section 3 (weighed averages)
* Pseduo code
  + Need to add another loop – outermost for-loop in the pseudo code
  + Q value – equation (2) : need to figure out how to calculate this
  + Q compares between beta states, so we are comparing as the temperature decreases
    - This is different than the way we are doing thermal annealing right now
    - This is calculated for all the replicas at once
  + Master process needs to know the energy of each replica and its spin state
* Will need a Poisson distribution library for sampling
  + There is in all likelihood a C++ library for this
* New parameters: how many resampling steps, how many MC sweeps per resampling step
  + -r parameters will be INITIAL number of replicas

Things to figure out

* Structure the code so that we can vary the number of replicas present in each set of sweeps
* Implement computations for the tau and Q values, including the Poisson distribution

First NE CyberTeam meeting will be on WEDNESDAY at 2:30 PM

* Need to do a project launch presentation
* Will end up needing some slides (5 or so?)
* 10 minutes or so
* Should be getting an email sometime soon with more information