Computation on Meshes


```
for(i = 0; i < 100M; i++) {
     edge = edges_of_mesh[i]
   flux = flux_calc(edge)  /* millions of instructions */
   v0 = head(edge)
   v1 = tail(edge)
   Flux[v0] += flux
   Flux[v1] -= flux
}
```

1. What types of data locality exist in this loop?
2. How would you exploit this data locality? (two ways)
3. Instruction stream parallelism vs. data stream parallelism. What is benefit of each and which works here?
4. What are issues with data parallelism here?
5. Name three ways of dealing with them?