「モデリングとシミュレーション特論」課題（解答例)

2019/7/9

1 Network Dynamics

課題 1 The sample programs from the folowing URL contains a package `randomWalk`, which has `Walker` and `Simulation` classes.

　https://github.com/modeling-and-simulation-mc-saga/NetworkDynamics

　The `Simulation class` has two methods: `walkerAtNode()` collects the number of walkers for each node, and `degreeVSNumWalkers()` uses the output of `walkerAtNode()` to observe the relation between degree and the number of walker. Complete the method `walkerAtNode()`.

解答例

Source Code 1　walkerAtNode() method

```
 1   public static List<Point> degreeVSNumWalkers(AbstractNetwork network,
 2       Map<Node, Integer> node2numWalker) {
 3   List<Point> list = Utils.createList();//(次数,walker数)のリスト
 4   for (Node node : node2numWalker.keySet()) {
 5       int n = node2numWalker.get(node);
 6       int k = network.neighbours(node).size();
 7       list.add(new Point(k, n));
 8   }
 9   return list;
10   }
```