Input:

Particle, sensorsPos, mutationProbability,env, coverageThreshold, LB, HB

OutPut:

Mutated particle

Start:

1. mutatedParticle= particle
2. set waitTimeOut, smallBias
3. if rand < mutationProbability

randomIndex=select random Particle index

mutatedParticle(randomIndex)=unifrnd(LB,HB)

cov = computeCov(mutatedParticle,env)

c=0

while cov<covThreshold

rvpIndex= find\_rvp\_that\_has\_least\_coverage\_ratio

SenIndex= find\_random\_non\_covered\_sensor

mutatedParticle(rvpIndex)=

unifrnd(sensorsPos(senIndex)-smallBias ,sensorsPos(senIndex)+smallBias)

c=c+1

if c>waitTimeOut

mutatedParticle=particle

return

end

cov=computeCov(mutatedParticle,env)

end

else

mutatedParticle=Particle

end