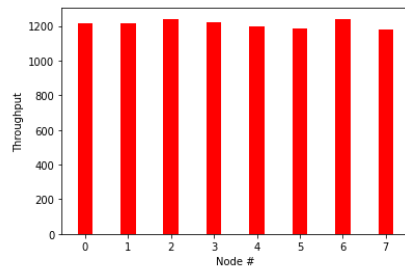


### 3.2 packet size = 1

```

Node 0 attempts 1213 success 1213 coll 0
Node 1 attempts 1218 success 1218 coll 0
Node 2 attempts 1241 success 1241 coll 0
Node 3 attempts 1220 success 1220 coll 0
Node 4 attempts 1197 success 1197 coll 0
Node 5 attempts 1184 success 1184 coll 0
Node 6 attempts 1237 success 1237 coll 0
Node 7 attempts 1179 success 1178 coll 0
Time 10000 attempts 9689 success 9688 util 0.97
Inter-node fairness: 1.00
Inter-node weighted fairness: 1.00

```

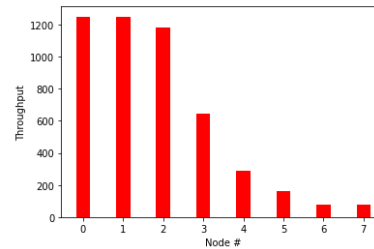


### 3.5

```

attaching 0.5 to node 0
attaching 0.25 to node 1
attaching 0.125 to node 2
attaching 0.0625 to node 3
attaching 0.03125 to node 4
attaching 0.015625 to node 5
attaching 0.0078125 to node 6
attaching 0.00390625 to node 7
Node 0 attempts 1249 success 1249 coll 0
Node 1 attempts 1250 success 1250 coll 0
Node 2 attempts 1180 success 1180 coll 0
Node 3 attempts 642 success 642 coll 0
Node 4 attempts 289 success 289 coll 0
Node 5 attempts 163 success 163 coll 0
Node 6 attempts 80 success 80 coll 0
Node 7 attempts 75 success 75 coll 0
Time 10000 attempts 4928 success 4928 util 0.49
Inter-node fairness: 0.60
Inter-node weighted fairness: 0.90

```

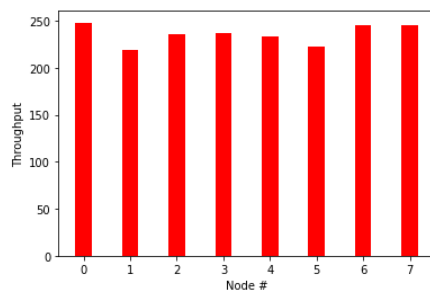


### Packet size = 5

```

Node 0 attempts 248 success 248 coll 0
Node 1 attempts 219 success 219 coll 0
Node 2 attempts 236 success 236 coll 0
Node 3 attempts 237 success 237 coll 0
Node 4 attempts 233 success 233 coll 0
Node 5 attempts 222 success 222 coll 0
Node 6 attempts 245 success 245 coll 0
Node 7 attempts 246 success 245 coll 0
Time 10000 attempts 1886 success 1885 util 0.94
Inter-node fairness: 1.00
Inter-node weighted fairness: 1.00

```



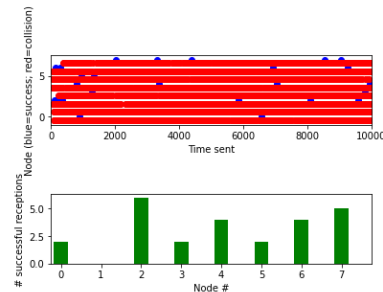
### 4.3

Pmax = 0.1 pmin = 0.05

```

Protocol: Aloha with stabilization
Node 0 attempts 481 success 2 coll 479
Node 1 attempts 490 success 0 coll 489
Node 2 attempts 513 success 6 coll 507
Node 3 attempts 490 success 2 coll 487
Node 4 attempts 516 success 4 coll 512
Node 5 attempts 486 success 2 coll 484
Node 6 attempts 473 success 4 coll 469
Node 7 attempts 492 success 5 coll 486
Time 10000 attempts 3941 success 25 util 0.03
Inter-node fairness: 0.74
Inter-node weighted fairness: 0.74

```

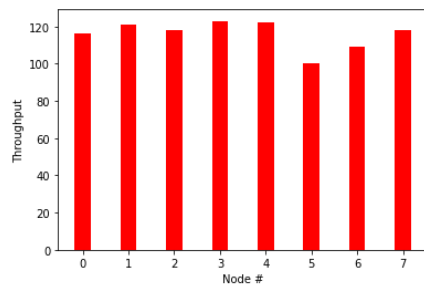


### Packet size = 10

```

Node 0 attempts 116 success 116 coll 0
Node 1 attempts 121 success 121 coll 0
Node 2 attempts 118 success 118 coll 0
Node 3 attempts 123 success 123 coll 0
Node 4 attempts 122 success 122 coll 0
Node 5 attempts 100 success 100 coll 0
Node 6 attempts 109 success 109 coll 0
Node 7 attempts 119 success 118 coll 0
Time 10000 attempts 928 success 927 util 0.93
Inter-node fairness: 1.00
Inter-node weighted fairness: 1.00

```

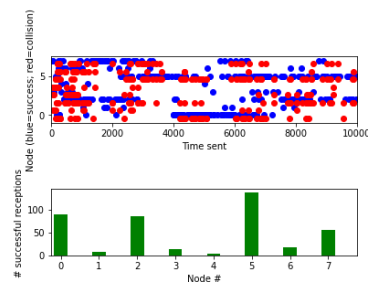


Pmax = 0.95 pmin = 0

```

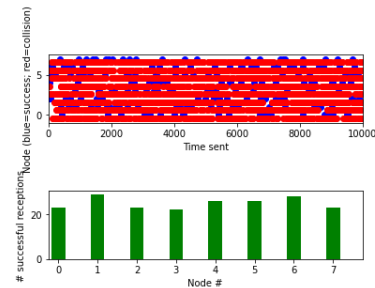
Protocol: Aloha with stabilization
Node 0 attempts 134 success 90 coll 44
Node 1 attempts 23 success 8 coll 15
Node 2 attempts 141 success 85 coll 56
Node 3 attempts 33 success 13 coll 20
Node 4 attempts 16 success 4 coll 12
Node 5 attempts 204 success 138 coll 66
Node 6 attempts 41 success 18 coll 23
Node 7 attempts 90 success 55 coll 35
Time 10000 attempts 682 success 411 util 0.41
Inter-node fairness: 0.56
Inter-node weighted fairness: 0.56

```



## 4.4

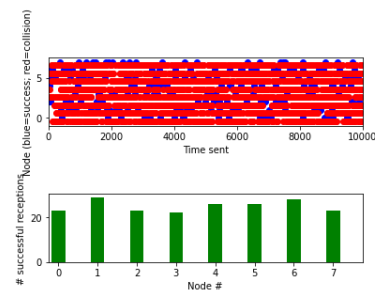
Protocol: Aloha with stabilization  
Node 0 attempts 287 success 23 coll 263  
Node 1 attempts 286 success 29 coll 257  
Node 2 attempts 317 success 23 coll 293  
Node 3 attempts 308 success 22 coll 286  
Node 4 attempts 278 success 26 coll 251  
Node 5 attempts 320 success 26 coll 293  
Node 6 attempts 298 success 28 coll 269  
Node 7 attempts 304 success 23 coll 281  
Time 10000 attempts 2398 success 200 util 0.20  
Inter-node fairness: 0.99  
Inter-node weighted fairness: 0.99



## 4.5

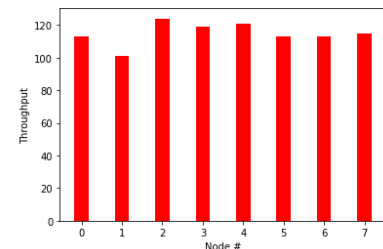
### Stable-Aloha:

Protocol: Aloha with stabilization  
Node 0 attempts 287 success 23 coll 263  
Node 1 attempts 286 success 29 coll 257  
Node 2 attempts 317 success 23 coll 293  
Node 3 attempts 308 success 22 coll 286  
Node 4 attempts 278 success 26 coll 251  
Node 5 attempts 320 success 26 coll 293  
Node 6 attempts 298 success 28 coll 269  
Node 7 attempts 304 success 23 coll 281  
Time 10000 attempts 2398 success 200 util 0.20  
Inter-node fairness: 0.99  
Inter-node weighted fairness: 0.99



### TDMA

Node 0 attempts 113 success 113 coll 0  
Node 1 attempts 101 success 101 coll 0  
Node 2 attempts 124 success 124 coll 0  
Node 3 attempts 119 success 119 coll 0  
Node 4 attempts 121 success 121 coll 0  
Node 5 attempts 113 success 113 coll 0  
Node 6 attempts 113 success 113 coll 0  
Node 7 attempts 116 success 115 coll 0  
Time 10000 attempts 920 success 919 util 0.92  
Inter-node fairness: 1.00  
Inter-node weighted fairness: 1.00

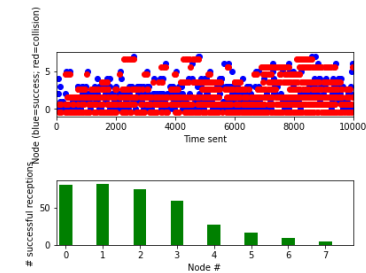


## 4.6

### Node = 8

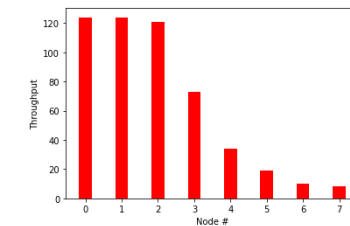
### Stable-Aloha

Protocol: Aloha with stabilization  
attaching 0.05 to node 0  
attaching 0.025 to node 1  
attaching 0.0125 to node 2  
attaching 0.00625 to node 3  
attaching 0.003125 to node 4  
attaching 0.0015625 to node 5  
attaching 0.00078125 to node 6  
attaching 0.000390625 to node 7  
Node 0 attempts 293 success 80 coll 213  
Node 1 attempts 303 success 82 coll 221  
Node 2 attempts 287 success 75 coll 212  
Node 3 attempts 208 success 59 coll 149  
Node 4 attempts 154 success 27 coll 127  
Node 5 attempts 66 success 16 coll 50  
Node 6 attempts 79 success 9 coll 70  
Node 7 attempts 45 success 5 coll 40  
Time 10000 attempts 1435 success 353 util 0.35  
Inter-node fairness: 0.67  
Inter-node weighted fairness: 0.83



### TDMA

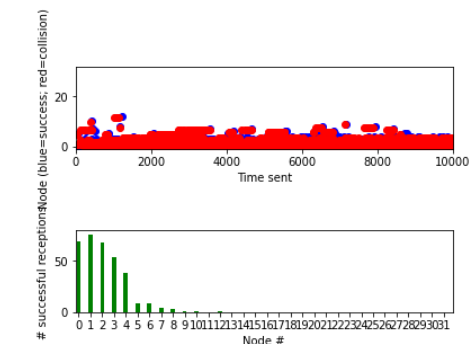
attaching 0.05 to node 0  
attaching 0.025 to node 1  
attaching 0.0125 to node 2  
attaching 0.00625 to node 4  
attaching 0.003125 to node 4  
attaching 0.0015625 to node 5  
attaching 0.00078125 to node 6  
attaching 0.000390625 to node 7  
Node 0 attempts 124 success 124 coll 0  
Node 1 attempts 124 success 124 coll 0  
Node 2 attempts 121 success 121 coll 0  
Node 3 attempts 73 success 73 coll 0  
Node 4 attempts 34 success 34 coll 0  
Node 5 attempts 19 success 19 coll 0  
Node 6 attempts 10 success 10 coll 0  
Node 7 attempts 8 success 8 coll 0  
Time 10000 attempts 513 success 513 util 0.51  
Inter-node fairness: 0.63  
Inter-node weighted fairness: 0.88



### Node = 32

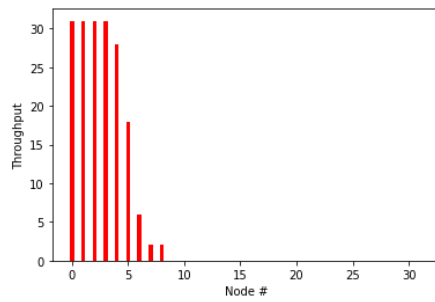
### Stable-Aloha

Time 10000 attempts 1531 success 333 util 0.33  
Inter-node fairness: 0.18  
Inter-node weighted fairness: 0.14



## TDMA

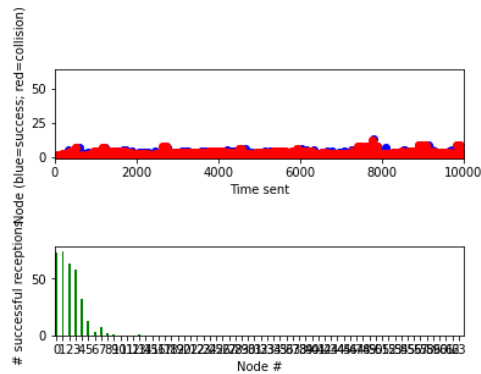
Time 10000 attempts 180 success 180 util 0.18  
Inter-node fairness: 0.20  
Inter-node weighted fairness: 0.20



Node = 64

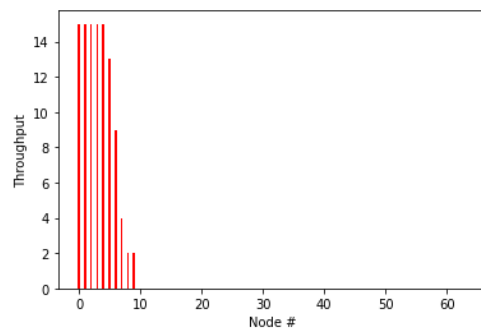
## Stable-aloha

Time 10000 attempts 1488 success 327 util 0.33  
Inter-node fairness: 0.09  
Inter-node weighted fairness: 0.03



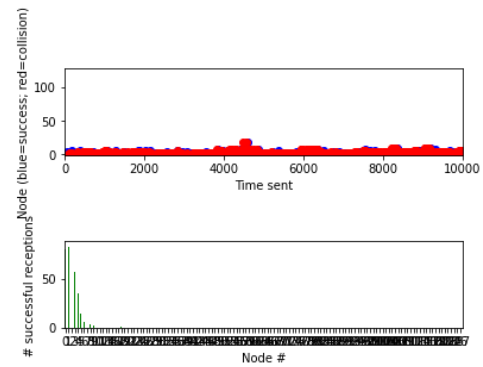
## TDMA

Time 10000 attempts 105 success 105 util 0.10  
Inter-node fairness: 0.12  
Inter-node weighted fairness: 0.09



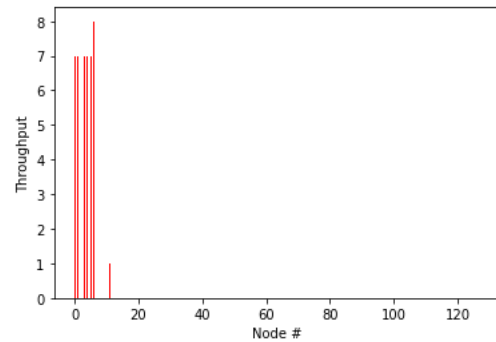
Stable-aloha

Time 10000 attempts 1438 success 368 util 0.37  
Inter-node fairness: 0.04  
Inter-node weighted fairness: 0.01



## TDMA

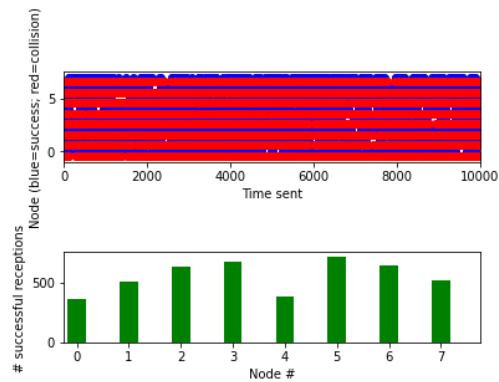
Time 10000 attempts 54 success 54 util 0.05  
Inter-node fairness: 0.06  
Inter-node weighted fairness: 0.02



## 5.3

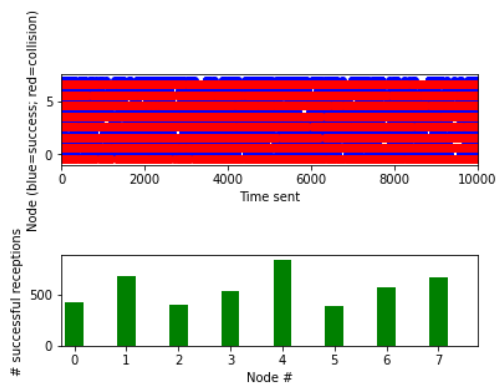
### CSMA

Time 10000 attempts 9315 success 4452 util 0.45  
Inter-node fairness: 0.95  
Inter-node weighted fairness: 0.95



### Stable Aloha

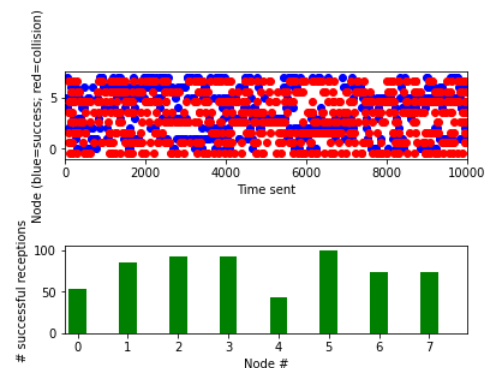
Time 10000 attempts 9351 success 4483 util 0.45  
Inter-node fairness: 0.93  
Inter-node weighted fairness: 0.93



## 5.4

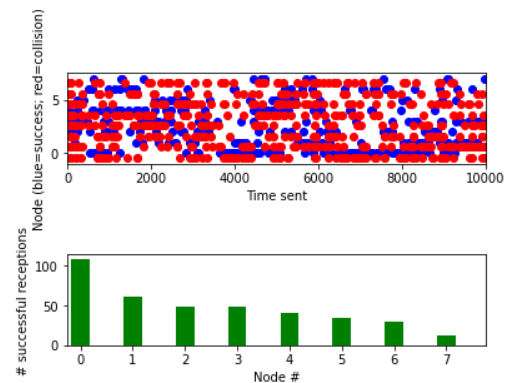
### CSMA

Time 10000 attempts 1332 success 613 util 0.61  
Inter-node fairness: 0.94  
Inter-node weighted fairness: 0.94



## Stable Aloha

Time 10000 attempts 888 success 387 util 0.39  
Inter-node fairness: 0.77  
Inter-node weighted fairness: 0.77

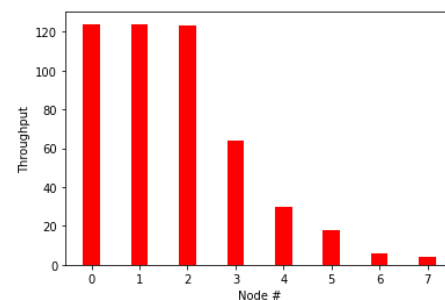


## 5.5

### Node = 8

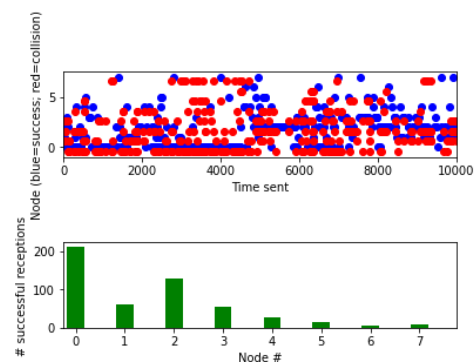
### TDMA

Time 10000 attempts 493 success 493 util 0.49  
Inter-node fairness: 0.59  
Inter-node weighted fairness: 0.87



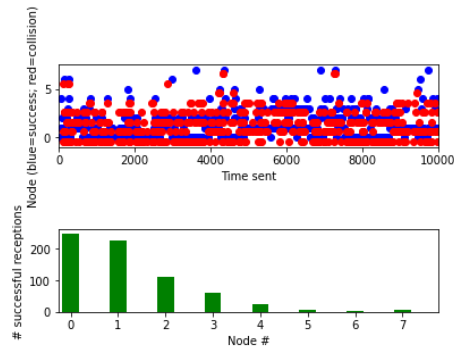
### Stable aloha

Time 10000 attempts 858 success 507 util 0.51  
Inter-node fairness: 0.47  
Inter-node weighted fairness: 0.87



### CSMA

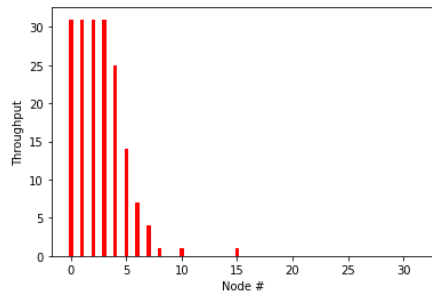
Time 10000 attempts 1208 success 689 util 0.69  
Inter-node fairness: 0.45  
Inter-node weighted fairness: 0.92



Node = 32

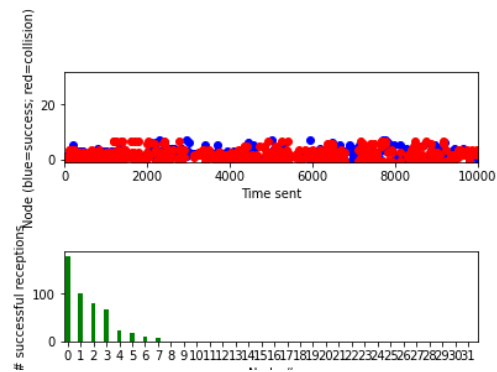
TDMA

Time 10000 attempts 177 success 177 util 0.18  
Inter-node fairness: 0.21  
Inter-node weighted fairness: 0.04



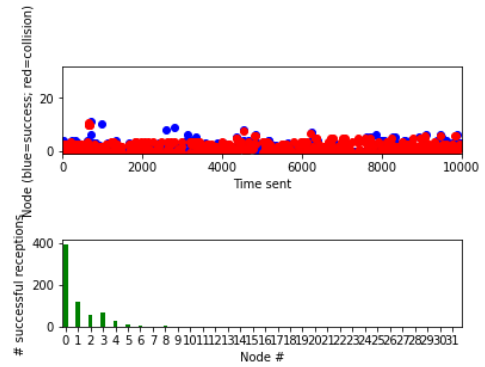
Stable Aloha

Time 10000 attempts 879 success 483 util 0.48  
Inter-node fairness: 0.13  
Inter-node weighted fairness: 0.21



CSMA

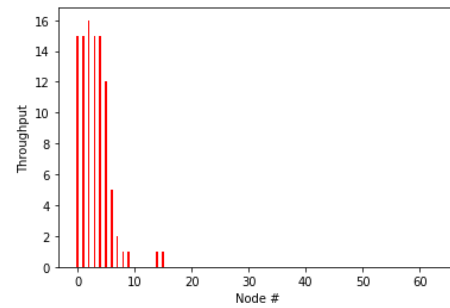
Time 10000 attempts 1210 success 685 util 0.69  
Inter-node fairness: 0.08  
Inter-node weighted fairness: 0.21



Node = 64

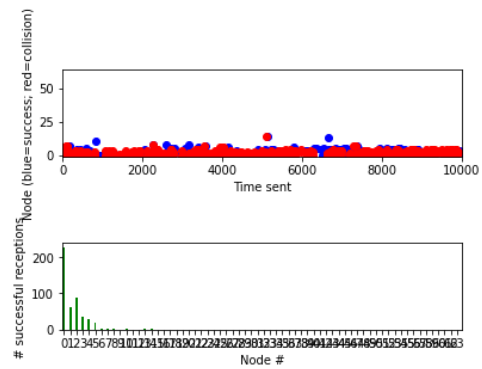
TDMA

Time 10000 attempts 99 success 99 util 0.10  
Inter-node fairness: 0.11  
Inter-node weighted fairness: 0.03



Stable Aloha

Time 10000 attempts 843 success 474 util 0.47  
Inter-node fairness: 0.05  
Inter-node weighted fairness: 0.04

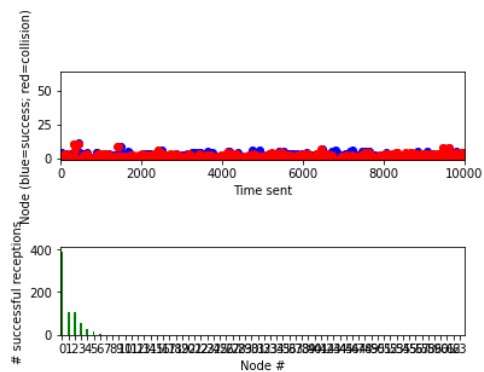


CSMA

```

node 0s attempts 0 success 0 coll 0
Time 10000 attempts 1203 success 714 util 0.71
Inter-node fairness: 0.04
Inter-node weighted fairness: 0.09

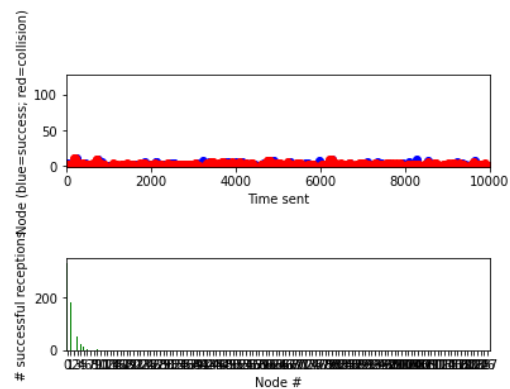
```



```

Time 10000 attempts 1236 success 700 util 0.70
Inter-node fairness: 0.03
Inter-node weighted fairness: 0.05

```



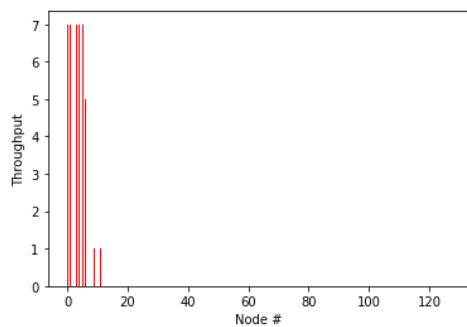
Node = 128

TDMA

```

Time 10000 attempts 52 success 52 util 0.05
Inter-node fairness: 0.06
Inter-node weighted fairness: 0.02

```

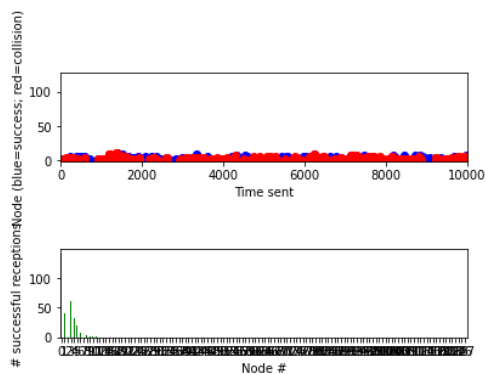


Stable Aloha

```

node 127 attempts 762 success 377 util 0.38
Inter-node fairness: 0.04
Inter-node weighted fairness: 0.06

```



CSMA