

problem solution  
ACO algorithm  
shortest path  
survivable  
physical  
link  
network  
virtual  
topology  
paths  
fitness  
total  
table  
resource  
mutation  
nodes  
data  
values  
networks  
based  
search  
time  
hubs  
solutions  
design  
success  
pheromone  
cost  
first  
wavelength  
path  
hub  
best  
study  
ga  
ant  
wdm  
mapping  
light  
paths  
links  
algorithm