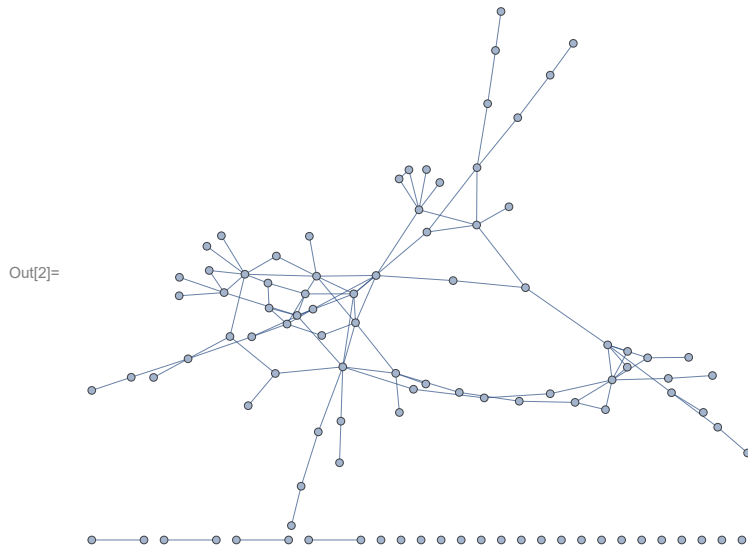


Cargando red del modelo: Compuesto por

Nodos: 100

Enlaces: 500

```
In[2]:= lanet = Import[File[  
    |importa |fichero  
    "C:\\Users\\usuario\\Documents\\Trabajo de Grado I\\Modelo\\Redes\\network-100-3-500.  
    |constante |número i  
    g6"]]
```



Medidas de rigor:

```
In[3]:= VertexCount[lanet]  
|número de vértices
```

**Nodos : 100**

```
In[4]:= EdgeCount[lanet]  
|conteo de aristas
```

**Enlaces : 105**

```
In[5]:= MeanGraphDistance[lanet]  
|distancia media de grafo
```

Out[5]=  $\infty$

```
In[6]:= VertexDegree[lanet, 68]  
|grado de vértice
```

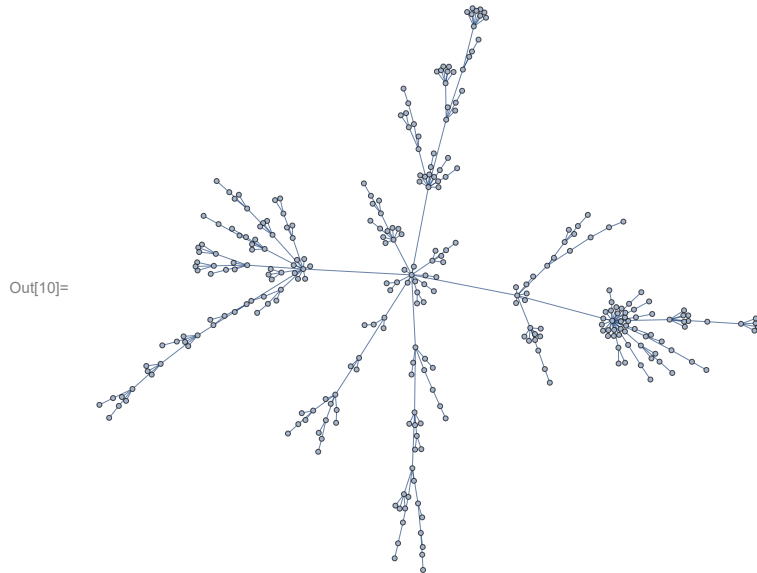
Out[6]= 3

```
In[8]:= Select[VertexList[lanet], VertexDegree[lanet, #] == 0 &]  
|selecc... |lista de vértices |grado de vértice
```

Out[8]= {2, 8, 14, 19, 20, 25, 29, 44, 50, 63, 69, 70, 74, 83, 85, 86, 90, 92, 95}

## Importando una red con preferential-attachment

```
In[10]:= sfnet = Import[File[
    |importa |fichero
    "C:\\Users\\usuario\\Documents\\Trabajo de Grado I\\Modelo\\Redes\\Redesscalefree.g6"]
    |constante |número i
]
```



```
In[11]:= VertexCount[sfnet]
    |número de vértices
```

Out[11]= 300

```
In[12]:= EdgeCount[sfnet]
    |conteo de aristas
```

Out[12]= 299

```
In[14]:= N[MeanGraphDistance[sfnet]]
    |.. |distancia media de grafo
```

Out[14]= 6.22165

```
In[15]:= GlobalClusteringCoefficient[sfnet]
    |coeficiente de acumulación global
```

Out[15]= 0

```
In[16]:= FindCycle[sfnet]
    |encuentra ciclo
```

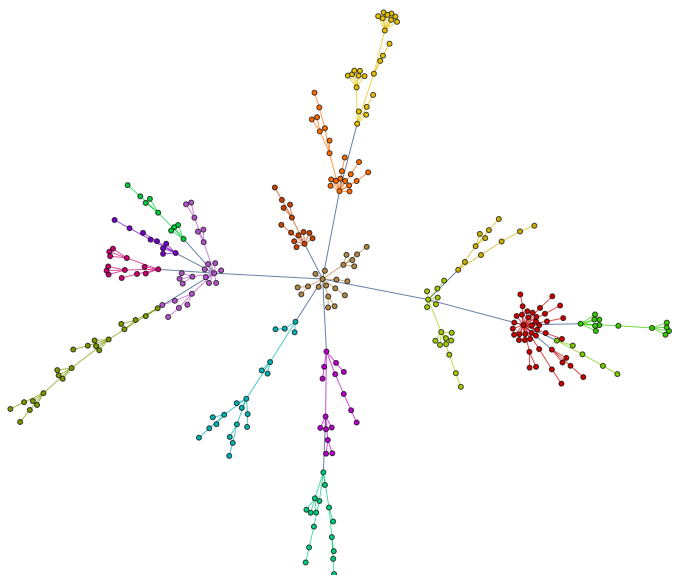
Out[16]= { }

```
In[18]:= Length[FindGraphCommunities[sfnet]]
    |longitud |encuentra comunidades de grafo
```

Out[18]= 18

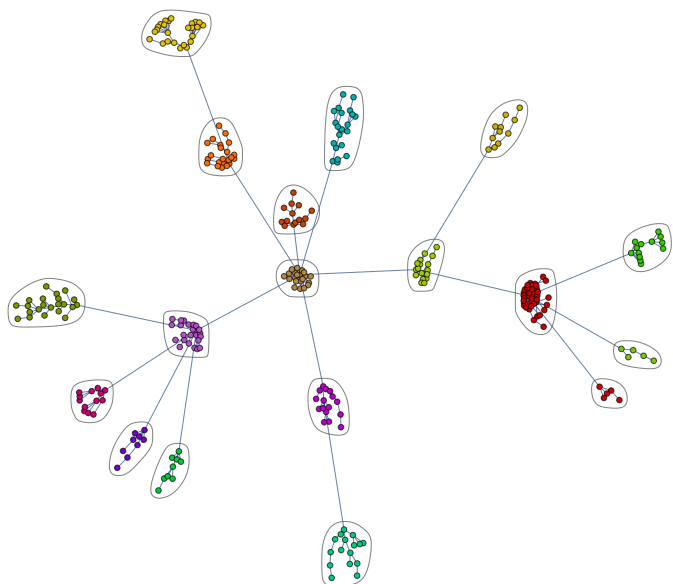
```
In[19]:= HighlightGraph[sfnet, Map[Subgraph[sfnet, #] &, FindGraphCommunities[sfnet]]]
destaca grafo apl subgrafo encuentra comunidades de grafo
```

Out[19]=

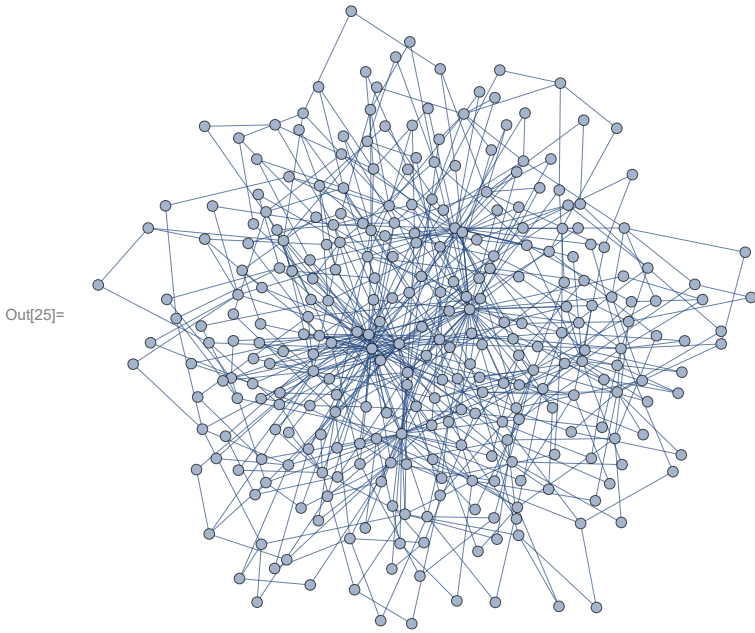


```
In[20]:= CommunityGraphPlot[sfnet, FindGraphCommunities[sfnet]]
representación de grafo de comun encuentra comunidades de grafo
```

Out[20]=



```
In[25]:= bara = RandomGraph[BarabasiAlbertGraphDistribution[300, 2]]
```



```
In[26]:= MeanGraphDistance[bara]
```

In[27]:=  $\frac{78\,518}{22\,425}$  // N

valor numérico

Out[27]= 3.50136

```
In[28]:= N[GlobalClusteringCoefficient[bara]]  
      .. coeficiente de acumulación global
```

Out[28]= 0.0256859

```
In[29]:= EdgeCount[bara]
```

Out[29]= 597

```
In[30]:= DegreeCentrality[bara]
```

```
Out[30]= {34, 32, 43, 31, 27, 4, 8, 6, 10, 9, 10, 4, 8, 5, 15, 3, 6, 9, 29, 5, 4, 3, 12, 2, 6, 3, 3, 6,
20, 9, 6, 3, 5, 7, 3, 3, 3, 3, 2, 5, 5, 3, 2, 12, 7, 4, 4, 3, 8, 5, 6, 5, 2, 5, 4, 5, 2, 3,
6, 4, 2, 2, 5, 2, 4, 6, 6, 3, 8, 4, 9, 9, 3, 2, 4, 5, 5, 2, 2, 3, 2, 4, 12, 3, 9, 2, 4, 3,
3, 5, 3, 5, 4, 4, 3, 10, 2, 3, 2, 3, 2, 4, 2, 3, 3, 4, 2, 3, 7, 2, 3, 2, 3, 3, 2, 2, 3, 3,
4, 5, 4, 4, 2, 8, 3, 3, 3, 6, 3, 4, 2, 3, 3, 4, 4, 5, 4, 5, 3, 2, 5, 3, 3, 2, 3, 2, 2, 5, 2,
3, 2, 5, 2, 2, 3, 2, 5, 3, 2, 2, 6, 2, 2, 2, 3, 4, 2, 4, 2, 2, 2, 2, 2, 2, 2, 2, 4, 3, 2,
3, 3, 2, 4, 3, 2, 3, 2, 2, 2, 2, 2, 4, 2, 2, 2, 3, 2, 2, 2, 2, 3, 4, 2, 3, 4, 2, 4, 2, 2,
2, 2, 2, 2, 2, 4, 3, 2, 3, 2, 2, 2, 3, 3, 3, 2, 2, 3, 2, 2, 2, 2, 2, 2, 3, 3, 2, 2, 3, 2,
2, 2, 3, 2, 2, 3, 2, 3, 2, 4, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2,
2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 3, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2}
```