# 研究背景

按classic排列

1.Internet topology studies

2.Topological connective attacks

3.Bandwidth bottleneck studies

4.Control-Plane and link-floding attakcs

# weakness or strong,and how to make up

* The current studies provide important insights into layer-3 topology of the Internet,however, we just simply observehow the routes are distributed on the topology and we are only focus on the route-destination regions of potential adversary interest.
* The current studies concluded that the node degree of the routers and ASes have power-law distribution,however,we discovers a new power-law distribution in the internet and is different in two aspects compared to current researches.First, we measured power law for the link usage instead of node degree distribution; Second, our power-law scope is limited to a chosen route-destination region instead of the entire Internet.
* The current networking research term 'bottleneck' has been used to represent the link with the smallest avaiable bandwidth on a route,however, our routing bottlenecks are unrelated to the link copacity, but the number of routes served by each link.

# our contribution

* We exploit the vulnerability of today's Internet and pervasive routing bottlenecks
* We also explored the characteristics of bottleneck links;e.g.,link type and distance to targets.
* We provide several practical countermeasures.