**INTRODUCTION**

A Novel Model For Competition And Cooperation Among the Cloud Providers :

Cloud computing has received significant investments in the industry. Many cloud providers are participating in the market, forming a competitive environment which is referred to as multiuser and multi-provider cloud market Hereafter, we will use the terms “providers” and “users” to refer to the cloud actors. Since the amount of resources in a user’s request is much smaller than the capacity of a provider, the user’s request can be satisfied by any provider. A rational user will choose the provider whose resources best satisfy his computational needs, and the resource usage cost does not exceed his budgetary constraint. The user’s satisfaction can be evaluated through a utility measure which depends not only on the resource properties but also on the user’s preference to choose certain providers, i.e., two providers with the same resource capacities and usage price may be considered different for a user due to the user’s choice behavior and loyalty. Furthermore, the task of optimally pricing cloud resources to attract users and improve revenue is very challenging They need to take into account a wide range of factors including the preferences of users, resource capacities and potential competition from other providers