

报告人: 吴嘉婧博士 (香港理工大学)

题 目: Concept of Node Usage Probability from Complex Networks and Its Applications to Communication Network Design

时 间: 4 月 20 日(周一)14:30

地 点: 电院群楼 2-410

邀请人: 汪小帆教授

摘要:

THE past decade has seen increasing interest in the exploitation of research results from the rapidly emerging discipline of network science for applications in engineering. The statistical study of complex networks has provided important insights into the way in which network topology affects the performance of communication networks. The principal objective of our work is to study the performance of communication networks from a network science perspective. We introduce a new metric, namely, node usage probability, for characterizing the traffic load distribution and how frequently a node is chosen to relay packets in a network. Based on the concept of node usage probability, effective network design strategies, including routing algorithms and resource allocation schemes, can be developed to improve the overall traffic performance. Our results provide important insights into how network management algorithms should be designed and developed for achieving optimum network performance.

简介:

吴嘉婧, 女, 1989 年 10 月生, 2014 年博士毕业于香港理工大学电子与资讯工程学系。现为香港理工大学博士后, 中山大学讲师。主要从事网络科学与通信网络的交叉研究方向。