

سمینار

# جنبه‌های الگوریتمی و اقتصادی

## سیستم‌های شبکه‌ای و اینترنت

ارائه کننده: وهاب میررکنی

دکترای علوم کامپیوتر از دانشگاه MIT

دانشکده مهندسی کامپیوتر

شنبه ۸۴/۱۰/۱۰

ساعت ۱۲ الی ۱۳:۳۰

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### Abstract:

Distributed competitive decision making, as opposed to centralized planning, is emerging as the norm in modern networking systems such as the Internet. In recent years we have seen a fascinating confluence of ideas from algorithmic computer science and game theory, in the service of advancing our understanding of several networking systems and the Internet. We study the economic incentives facing the agents in the network, how these incentives affect the structure, and how we can design mechanisms to account for these incentives. Furthermore, we discuss several mechanism design questions motivated by e-commerce applications. More specifically, I will summarize recent results on applications of algorithmic mechanism design for selfish routing and network congestion games, distributed caching and load balancing in wireless networks, clustering the web graph using the spectral clustering, and some algorithms related to Page Rank Computation and Rank Aggregation.

### Biography:

Sayyed Vahab Mirrokni is a Postdoctoral Associate at the Computer Science and Artificial Intelligence Laboratory at the Massachusetts Institute of Technology. He received his B.S. from Sharif University in 2001 and his PhD from MIT in 2005. He has worked at Bell-Laboratories, Microsoft Research, IBM T. J. Watson, and Amazon.com. His research interests include Algorithmic Aspects of Game Theory and Economics, Approximation Algorithms for Combinatorial Optimization, Network Optimization, Mobile Computing, and Graph Theory.



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