



УНИВЕРЗИТЕТ
У НОВОМ САДУ



ФАКУЛТЕТ
ТЕХНИЧКИХ НАУКА

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86. Sastanak IEEE u Novom Sadu / 86th IEEE Meeting in Novi Sad
Obaveštenje / Announcement

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u **utorak, 30. 06. 2009.** u Zbornici
Fakulteta tehničkih nauka u Novom
Sadu, sa početkom u **13:00 h**, održaće

On **Tuesday, June 30, 2009**, in the
Assembly Hall of the Faculty of Technical
Sciences, at **1:00 pm** will deliver

P R E D A V A N J E L E C T U R E

KORIŠĆENJE INTERFERENCIJE U KOOPERATIVNIM I KOGNITIVNIM BEŽIČNIM MREŽAMA

Exploiting Interferences Through Cooperation and Cognition

Abstract: Cooperation among network nodes in wireless networks may be a key ingredient in their future success. The best method to handle interference created by their simultaneous transmissions is one of the key - yet unanswered - questions. We propose cooperative and cognitive techniques to exploit interference and increase network performance. Proposed techniques utilize capacity-achieving approaches from multi-user and MIMO communications, exploit joint encoding of data streams and techniques for reducing interference. We propose a novel method for relaying messages of multiple sources - forwarding interference along with the desired message, to facilitate interference cancellation. We then present encoding strategies enabled by cognitive radios which overhear messages of other users. This approach demonstrates performance gains over current cognitive paradigms, suggests more efficient bandwidth usage, and is optimal under certain conditions. Our proposed techniques suggest new ways to exploit cognition and to design more efficient, future wireless networks.

Su-organizatori: Odsek za računarsku tehniku i komunikacije i

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