



Information  
Systems  
Networks  
Seminar



**Amir Leshem**  
Bar-Ilan University

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**“Stable Marriage and spectrum allocation in cognitive radio networks – A cross layer perspective”**

Date: Noon, Wednesday September 1st.  
Venue: Rhodes Hall, 380.

Distributed spectrum allocation is a major problem in cognitive radio networks, where no centralized spectrum management entity exists. In this talk I will describe recent application of the celebrated Gale-Shapley theorem to the problem of spectrum allocation in cognitive radio networks. I will also demonstrate other game theoretic approaches to the spectrum allocation problem and discuss practical implementation issues.

Pizza will be served 15 minutes prior to the start of the talk.

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*Short Bio:*

Amir Leshem received the B.Sc. degree (cum laude) in mathematics and physics, the M.Sc. degree (cum laude) in mathematics, and the Ph.D. degree in mathematics, all from the Hebrew University, Jerusalem, Israel. He is one of the founders of the School of Electrical and Computer Engineering, Bar-Ilan University, Ramat Gan, Israel, where he is currently an Associate Professor and Head of the signal processing track. In the period 2000-2003 he was director of advanced technologies in Metalink broadband where he was in charge of developing new technologies such as VDSL and wireless MIMO systems. In that capacity he was also involved in standards effort for VDSL, SHDSL, 802.11n and dynamic spectrum management for DSL networks. Prior to that he was with Delft University of Technology where he worked on signal processing techniques for communications and for radio astronomical imaging.

His main research interests include multichannel communication, applications of game theory to communication, array and statistical signal processing with applications to sensor arrays and networks, wireless communications, radio-astronomy and brain research, set theory, logic, and foundations of mathematics.

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