Invited Talk

Multi-Player Games: An Overview, General Strategies, and Avoidance Conditions

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Multi-player games are used as a model for a variety of natural and man-made systems, such as multiple vehicle coordination, economics and ecology models, and networks of sensors and actuators. Even though the concept is very basic, the theoretical background is known to be one of the most challenging and still very open problems. In this talk, an overview of the multi-player games, with different models for the players, will be presented and the problem of defining strategies for the players using different cost functions will be addressed. Strategies will be linked to the common notions of collaboration and competition. Finally, the problem of safety verification of multiple players (in this case vehicles) will be considered using the avoidance conditions (previously introduced by Leitmann for the two-player game) via vector-type Liapunov functions.

Time: 15:00. December 21, 2004
Place: B202

Everybody interested is warmly welcome!