Workshop on Games, Communication and Strategic Complexity
July 26-28, 2015
in Honor of Abraham Neyman's 66th Birthday

Organizers: Olivier Gossner (École Polytechnique and LSE) and Ron Peretz (LSE)

The Stony Brook Center for Game Theory will host a Workshop on Games, Communication and Strategic Complexity as part of the 2015 Stony Brook Game Theory Festival. Inspired by Abraham Neyman's work the workshop will focus on research at the interface between

- (i)   repeated games,
- (ii)   information theory,
- (iii)   communication complexity, and
- (iv)   strategic complexity.

A special birthday gift would be progress on the following conjecture:

Learning Finite Automata Behavior by Experimentation

An unknown deterministic finite automaton with a known number of states n is put in a black box. The states of the automaton are colored in two colors, 0 and 1. Given an input bit the automaton outputs the color of its current states and moves to a new state as a function of the current state and the input bit. A decision maker trying to predict the behaviour of the automaton by feeding it input bits and observing the output repeatedly. An attempt is called *successful* if the input bit is equal to the output bit. How many attempts does the decision maker need until he can succeed in 99% of the attempts (in expectation)? Neyman (1997) showed that $O(n \log n)$ is sufficient and conjectured that $\Omega(n \log n)$ is necessary.

For further information, please contact the conference organizers:
Olivier Gossner (ogossner@gmail.com), and
Ron Peretz (mailto:ronprtz@gmail.com).

To learn about the center, visit gtcenter.org.

You are invited to submit a complete paper or extended abstract by Friday, April 24, 2015. Submissions should be sent by e-mail as a PDF file to the organizers.

Contributors will receive e-mail notification as to whether their paper has been accepted for presentation before Friday, May 15, 2015.