

Non-Cooperative Games
Shmuel Zamir, Hebrew University of Jerusalem, Israel

1. Describing non-cooperative games:

- Games in extensive form.
- Games in Strategic form.

2. Solution concepts:

- Domination; Repeated elimination of dominated strategies.
- Stability; Nash Equilibrium.
- Security; Maxmin.

3. Two-person zero-Sum games; Value and Equilibrium.

4. Randomized strategies:

- Mixed strategies: Nash Theorem.
- Behavioral strategies; Perfect recall.

5. Refinement of the Nash Equilibrium.

- Sub-game perfect equilibrium; Backward induction (looking forward).
- Forward induction (looking backward).
- Perfect equilibrium; the trembling hand principle.
- Sequential equilibrium; consistent beliefs.

6. Correlated equilibrium.

7. Repeated games and the Folk Theorem.