

The Hong Kong University of Science and Technology
Department of Information Systems,
Business Statistics and Operations Management

Seminar Announcement

Subgame Perfect Consistent Stability

by

Professor Daniel Granot

Sauder School of Business

University of British Columbia

Date: Thursday, 19 May 2011

Time: 11:00 am – 12:00 noon

Venue: ISOM Conference Room 4379 (Lift 17/18)

~~~~~ All interested are welcome ~~~~~

### **Abstract:**

Farsighted game theoretic solution concepts have been shown to provide insightful results in many applications as compared to Nash equilibrium analysis. However, we provide simple examples demonstrating that the existing solution concepts are not sufficiently farsighted. This paper proposes a new farsighted solution concept, the Subgame Perfect Consistent Set (SPCS), based on von Neumann Morgenstern stability, subgame perfect equilibrium and a pessimistic decision rule. We show that the SPCS leads to satisfactory predictions in many situations as compared to existing myopic or farsighted solution concepts. Strikingly, the SPCS is shown to always achieve Pareto efficiency in normal form games. This result is demonstrated in various oligopolistic and supply chain settings.

(joint work with Eran Hanany, Department of Industrial Engineering, Tel Aviv University)