



Nanyang Technological University  
**DIVISION OF ECONOMICS**  
Seminar Series

The Division of Economics invite you to a seminar by Professor  
Parkash CHANDER

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- Speaker** : **Professor Parkash CHANDER**  
*Professor of Economics*  
*Executive Director of Center for*  
*Environmental Economics and Climate Change*  
*Jindal School of Government and Public Policy*
- Topic** : **"Subgame-Perfect Cooperation in an Extensive Game"**
- Chairperson** : **Assistant Professor Fuhai HONG**  
*Division of Economics*  
*School of Humanities & Social Sciences*
- Date** : **30 November 2016 (Wednesday)**
- Time** : **2:30pm to 3:30pm**
- Venue** : **HSS Meeting Room 5 (HSS 04-89)**  
*Nanyang Technological University*  
*School of Humanities and Social Sciences*  
*14 Nanyang Drive*  
*Singapore 637332*

**About the Speaker:**

Parkash Chander, Professor of Economics and Executive Director of Center for Environmental Economics and Climate Change at Jindal School of Government and Public Policy, is a Fellow of the Econometric Society, an Associate Editor of Journal of Public Economic Theory, a member of the Advisory Board of Journal of Economic Surveys, and a member of the International Advisory Board of Singapore Economic Review. He has previously held professorial positions at Indian Statistical Institute, Delhi and National University of Singapore (in reverse order). Also, he served as Head of Indian Statistical Institute, Delhi and as Head of Department of Economics, National University of Singapore.

Professor Chander has researched primarily in the areas of microeconomics, public economics, environmental economics, and game theory and applications. He has held visiting appointments at Johns Hopkins University, California Institute of Technology, University of Pennsylvania, Vanderbilt University, CORE (Louvain-la-Neuve), the Autonomous University of Barcelona, and International Monetary Fund, among other institutions.

**Abstract:**

We propose a cooperative solution concept for games in extensive form that incorporates both cooperation and subgame perfection. This new concept, which we label the subgame-perfect core, is a refinement of the core of an extensive game in the same sense as the set of subgame-perfect Nash equilibria is a refinement of the set of Nash equilibria. Moreover, each subgame-perfect core payoff vector can be obtained as a subgame-perfect Nash equilibrium payoff vector of a modified extensive game. We establish several additional properties of the subgame-perfect core and demonstrate its applicability by studying three applications: the centipede game, the two-player infinite bargaining game of alternating offers, and a dynamic game of climate change. In addition, we motivate and introduce a concept of subgame-perfect strong Nash equilibrium of an extensive game and show that it is coalition proof.

Keywords: Extensive game, subgame perfection, characteristic function game, core, centipede game, coalition-proof Nash equilibrium.

**Reservation:**

Admission is free. Please reply to [h-dae@ntu.edu.sg](mailto:h-dae@ntu.edu.sg) to confirm your attendance.