第七屆暑期作業研究與供應鏈管理研習營

- **主旨**:延請國際知名在作業研究與供應鏈管理領域之傑出學者,來台講授相關領域之先進 研究議題,與國內學者與研究生進行交流,以其提昇台灣學界在作業研究與供應鏈管理領 域研究之水準,並協助提供國內學者及研究生與傑出國際學者交流的管道。
- **對象**:希望進修作業研究與供應鏈管理領域研究主題之(1)教師、(2)博士班研究生、(3)碩士班研究生

時間:2015年6月28日(日)~6月30日(二)

📠 地點:國立交通大學 台北校區 三樓第二演講廳(台北市忠孝西路一段 118 號)

#### 🛄 邀請講授學者:

1

Prof. Gangshu (George) CAI (Associate Professor, Santa Clara University)Prof. Shih-Fen CHENG (Associate Professor, Singapore Management University)Prof. Hsiao-Hui LEE (Assistant Professor, the University of Hong Kong)

din.		
0	主辦單位:	國立交通大學管理學院 運輸與物流管理系、
		高階主管管理碩士學程(EMBA)、運籌與供應鏈管理研究中心
•	協辦單位:	國立台灣大學工業工程研究所
		國立清華大學工業工程與工程管理系
		科技部工業工程與管理學門
		台灣作業研究學會
		Production and Operations Management Society (POMS), Taiwan Chapter
		中國工業工程學會
		中國華民國運輸學會
n	登胜去马()	山正英聿版白山白〉
μ	寄佣安貝(16	·姓氏筆畫順序排序)
	方述誠 (1	r卡羅來納州立大學)

王小璠	(國立清華大學)
上小油	$(\square \square \Pi \mp \Pi \mp)$

- 王茂駿 (科技部工業工程與管理學門)
- 江行全 (中國工業工程學會)
- 吳政鴻 (國立台灣大學) 周雍強 (國立台灣大學)
- 林則孟 (國立清華大學)
- 林妙聰(國立交通大學)
- 俞明德 (國立交通大學)
- 姚銘忠 (國立交通大學、台灣作業研究學會)
- 洪一薰 (國立台灣大學)
- 范書愷 (POMS, Taiwan Chapter)
- 陳文智 (國立交通大學)
- 陳正剛 (國立台灣大學)

張國浩 (國立清華大學) 黃奎隆 (國立台灣大學) 廖崇碩 (國立清華大學) 鍾惠民 (國立交通大學) 羅孝賢 (中國華民國運輸學會)

#### 🖥 邀請之國外傑出學者之講授主題與摘要

 Prof. Gangshu (George) CAI (Associate Professor, Operations Management & Information Systems Department, Leavey School of Business, Santa Clara University)

## **Title: Modeling Multichannel Supply Chain Competition with Marketing Mixes Abstract:**

The speaker will first survey the research on "Modeling Multichannel Supply Chain Competition with Marketing Mixes." He will then share his working experience in this area and present several related research papers including topics on "Exclusive Channels and Revenue Sharing in a Complementary Goods Market" and "Price Matching Negotiation in Competing Channels."

 Prof. Shih-Fen CHENG (Associate Professor, School of Information Systems, Singapore Management University)

# Title: Applied Game Theory: An Introduction for Business and Engineering Applications Abstract:

Business is all about competition: competing for limited resources, competing for talents, competing to innovate, and most important of all, competing for survival! No wonder people have been relating running businesses to raging wars.

In business, as in warfare, the more you calculate beforehand, the more likely you will survive in the end. As famously said by the legendary strategist, Sun Tzu, "... *do many calculations lead to victory, and few calculations to defeat* ...".

Unfortunately, calculation in business is extremely difficult. Firstly, the environment is constantly changing: your perfectly crafted plan might become obsolete the moment it's put into practice, since some or all of your assumptions might be violated. Secondly, your opponents are intelligent: they are potentially capable of planning as intelligently as you do, and they might even be able to predict and anticipate what you might do and conduct preemptive strikes. Therefore, the evolution of competition is always dynamic, and a plan created without these considerations in mind will be doomed to fail.

In this course, we teach students how to utilize game theory for calculating in a changing environment filled with collaborative friends or competitive foes. We seek to balance between theoretical model, computational methods, and real-world applications. In particular, we will introduce examples in operations, marketing, transportation, and security planning. Through these applications, students will be able to appreciate the importance and power of game-theoretic models in practical context.

#### Objective

Upon successful completion of this course, a student will be able to:

- Appreciate the importance of considering uncertainty and opponent modeling when designing strategic, tactic, and operational policies.
- Understand how to utilize game theory in policy/strategy evaluations.
- Complete the full cycle of using game theory:
  - $\diamond$  Modeling problems of interest using game theory.
  - $\diamond$  Solving games computationally.

 $\diamond$  Incorporating "human factors", such as limited rationality or strategic reasoning ability.

 Prof. Hsiao-Hui LEE (Assistant Professor, Faculty of Business and Economics, the University of Hong Kong)

## Topic 1: Supply Chain Management using game theoretical models Topic 2: Supply Chain Management using empirical models Abstract:

In today's rapidly changing business environment, the relationship between supply chain parties becomes competitive as well as cooperative. On the one hand, a successful supply chain requires sound collaboration to deliver good quality products and/or services. On the other hand, both parties have to defend their own profits. In this lecture, we will discuss supply chain management along two directions—game theoretical models and empirical analysis.

In particular, Topic 1 of the lecture focuses on supply chain contracting and coordination in a game-theory set-up. We will first discuss various contracts to illustrate how to achieve coordination under both manufacturing and service outsourcing environments. As managing quality becomes more and more important in supply chain research, we will also discuss various instruments, in addition to contract terms, to achieve optimal product quality.

In Topic 2 of this lecture, we will discuss the recent advancement on the empirical side. Due to data availability, empirical works are lacking in the supply chain management literature. We will center our discussion on different approaches in collecting supply-chain related data, and the applications of such data to examine how supply chain coordination affects the selection of suppliers and the consequences of supply chain performance.

## 🕘 預定時程安排

	日期	天別	上午	下午
Ц.	6/28	星期日	08:30-08:55 報到	13:30-16:30
X1	<b>7</b>		08:55-09:00 開幕	Modeling Multichannel Supply
			09:00-12:00	Chain Competition with Marketing
			Modeling Multichannel Supply	Mixes (Part 2)
	1		Chain Competition with Marketing	Prof. Gangshu (George) CAI
			Mixes (Part 1)	
			Prof. Gangshu (George) CAI	
A)	6/29	星期一	09:00-12:00	13:30-16:30
			Applied Game Theory: An	Supply Chain Management Using
			Introduction for Business and	Game Theoretical Models
			Engineering Applications	Prof. Hsiao-Hui LEE
	/		Prof. Shih-Fen CHENG	
Ŷ	6/30	星期二	09:00-12:00	13:30-16:30
	1		Applied Game Theory: An	Supply Chain Management Using
EXT.	Ň		Introduction for Business and	Empirical Models
	/ 8		Engineering Applications	Prof. Hsiao-Hui LEE
			Prof. Shih-Fen CHENG	

▲報名費用:免費(研習營免費提供授課教材及講義,其餘由學員自行負擔)

## 🖃 主辦單位聯絡教師:

姚銘忠教授(myaoie@gmail.com)

① 研習營相關資訊網址:<u>http://www.orstw.org.tw/files/2015OR-SCMworkshop.pdf</u>

報名網址: <u>Click here</u>

#### 🕾 研習營相關問題聯絡:

柳美智 小姐 (meichih@mail.nctu.edu.tw) (03) 571-2121 ext 57651 國立交通大學運輸與物流管理系

## ✓ 講授學者介紹

#### Prof. Gangshu (George) CAI

Associate Professor, Operations Management & Information Systems Department, Leavey School of Business, Santa Clara University Santa Clara, California 95053



Dr. Gangshu Cai (蔡港樹) is a tenured associate professor in Operations Management and Information Systems at Santa Clara University. He is the Faculty Director of Graduate Business Programs of Leavey School of Business and Chair of the Graduate Business Policy Committee. Dr. Cai received his B.S. in physics from Peking University and his M.S. in business statistics and economics from the Guanghua School of Management at Peking University, and earned his Ph.D. in operations research from North Carolina State University. His research has been financially supported by the National Science Foundation of U.S.A. and the National Natural Science Foundation of China. He has published in Marketing Science, Production and Operations Management, Journal of Retailing, and Decision Sciences. He is the recipient of the Best Paper Award of Fifth International Conference on Electronic Commerce, Kansas State University President's Faculty Development Award, CBA Fellowship, CBA Outstanding Contributions in Research Award, and Santa Clara University Dean's Award for Scholarship Excellence. He has also won a number of teaching awards in both public and private universities, including Ralph Reitz Outstanding Teaching Award in Kansas State University and multiple Dean's Award for Teaching Excellence in Santa Clara University. He is an associate editor of Decision Sciences Journal and has been a special issue editor and editorial board member of several other journals.

## 〃 講授學者介紹 (續)

#### Prof. Shih-Fen CHENG

Associate Professor, School of Information Systems, Singapore Management University Singapore 178902



Shih-Fen Cheng (鄭世吩) is Associate Professor of Information Systems and Deputy Director of the Fujitsu-SMU Urban Computing and Engineering Corp Lab at the Singapore Management University. He received his Ph.D. degree in industrial and operations engineering from the University of Michigan, Ann Arbor, and B.S.E. degree in mechanical engineering from the National Taiwan University.

His research focuses on the modeling and optimization of complex systems in engineering and business domains. He is particularly interested in the application areas of transportation, manufacturing, and computational markets. He is a member of INFORMS, AAAI, and IEEE, and serves as Area Editor for Electronic Commerce Research and Applications.

**Prof. Hsiao-Hui LEE** Assistant Professor, Faculty of Business and Economics, the University of Hong Kong Pokfulam, Hong Kong



Hsiao-Hui Lee (李曉惠) is Assistant Professor in Innovation and Information Management Area, the School of Business, at the University of Hong Kong. Her research interests include Service Operations Management, Healthcare Operations, and Contract and Coordination in Supply Chains, and Innovation and sustainability. She has published research papers in several academic journals including *Management Science*, *Operations Research*, *Manufacturing & Service Operations Management*, *IIE transactions*, and *Decision Support System*, and has been active in the organization of POM-HK 2014 Conference. Prior to joining the University of Hong Kong, Dr. Lee was a visiting assistant professor of OPIM at the School of Business, University of Connecticut in 2010-2011. She received her Ph.D. and Master degree in Operations Management from the University of Rochester, and her Master and Bachelor degrees in Civil Engineering, National aiwan University.

### 🗇 台北市住宿相關資訊

KDM Hotel (凱統飯店)
地址:台北市大安區忠孝東路3段8號
電話:(02)2721-1162
傳真:(02)2711-9096
網址: <u>http://www.kdmhotel.com.tw/</u>

Caesar Park Hotel (台北凱撒大飯店)
地址:台北市忠孝西路一段38號
電話:(02)2311-5151
網址:<u>http://taipei.caesarpark.com.tw/</u>

 Agoda 線上訂房系統 網址:<u>http://www.agoda.com/zh-tw</u>