

TIMS 国際会議報告

日本オペレーションズリサーチ学会がTIMS(The Institute of Management Sciences)東京支部との共催で、去る8月21日から24日までの4日間、東京・丸の内内のパレスホテルで367人に登る参会者(内主としてアメリカであるが、44人の外国からの参会者をふくむ)を集めて盛大におこなわれた。これは、TIMSの年次国際会議であり、日本オペレーションズ・リサーチ学会がTIMS東京支部とともに会議の主催をしたものであって、多数の学会員が参加していたことは言うまでもない。

会議は4日間に16の部会にわかれておこなわれたが、それらは、

- Session A Methodoogy of Management Science**
- B Mathematical Programming
 - C Queueing and Related Problems
 - D Inventory
 - E Behavioral Science Applications
 - F Prediction and Forecasting
 - G Decision Problems
 - H Managerial Economics
 - I Planning I
 - J Computer application
 - K Planning II
 - L Industrial applications

などの一般の部会のほかに、TIMSのCollege Sessionのやりかたにかわるものとして、通訳つき

の4つのRound Table Exchangesとして

- M Mathematical Programming
- N Production Scheduling
- O Marketing
- P Planning

が開かれた。

これらの部会で発表された報告は70篇にのぼり、会議語として英語が使われたにもかかわらず熱心な聴講がその不便を克服したようであった。

第1日午前のSession Aは、経営科学の方法論についての議論がなされた。R. E. Machol (Conductron Corp., U.S.A)は経営科学のEngineering Approachの必要性を強調し、F. Hanssman (IBM, U.S.A)はモデルの有効性は、そのモデルの論理的完備性によってはかられるべきであることを主張した。W. Karush (System Development Corp., U.S.A)はシステム研究における学問領域の研究過程を数学者の立場から論じた。最後に、H. Kreiner (U.S. Navy)は、運命を左右するような決定問題に

直面しての有効さの尺度について報告した。

このSession Aは、開会宣言(早大河辺旨教授)に引続いて、東大森口繁一教授を座長にして開かれたもので、大会の冒頭に当りほとんど全参加者が一堂に集まったのSessionであっただけに、感銘の深い講演があった。

特別講演としては、日本オペレーションズリサーチ学会長安川第五郎氏の歓迎の言葉のほかに、C.W. Churchman(カリフォルニア大学)、K.J. Arrow(スタンフォード大学)、松下幸之助氏(松下電器)の講演が昼食会のときにおこなわれた。プログラムは下記の通りであった。(出居茂記)

Wednesday 21 August

9:00 ~ 9:10 AM

Opening Session

SUSUMU KOBE

Waseda University

President of Tokyo Chapter of TIMS

9:10 ~ 11:50 AM

Session A : Methodology of Management Science

Chairman : SIGEITI MORIGUTI, University of Tokyo

(A.1) "Management Science, Operations Research and System Engineering"

ROBERT E. MACHOL
Conductron Corporation
Ann Arbor, Michigan

(A.2) "Some Methodologies for Model Construction"

FRED HANSSMANN
International Business Machines Corp.
Yorktown Heights New York

(A.3) "On Mathematical Modeling and Rese-

arch in Systems³⁾

WILLIAM KARUSH

System Development Califoration

Santa Monica, California

- (A.4) "Prudence—Measures of Effectiveness for
Fateful Decisions"

HOWARD W. KREINER

Navy Department, Washington D.C.

12:20 ~ 1:45 PM

Welcome Speech : Mr. DAIGORO YASUKAWA,
President of the Japan O.R. Society.

Keynote Address : Prof. C. WEST CHURCHMAN,
University of California.

"Reflections on Management Science"

2:00 ~ 5:00 PM

Session B : Mathematical programming

Chairman : RONALD A. HOWARD, Massachusetts
Institute of Technology

- (B.1) "On Control Process with Certain Pro-
bability Criterion and its Applications
to Inventory Problem"

TOSHIO ODANAKA

Tokyo Metropolitan Technical College,
Tokyo

- (B.2) "Variable Separation Principle for
Mathematical Programming"

IWARO TAKAHASHI

Waseda University, Tokyo

- (B.3) "A Gradient Method for the Variational
Problems with Inequality Constraints"

TAIROKU KOSE*, HIROSHI TOJIMA*,
RYOSUKE HOTAKA**

* Otaru University, Otaru, Hokkaido

**University of Hokkaido, Sapporo,
Hokkaido

- (B.4) "A New Tree Problem"

SEIEMON IOI

Waseda University, Tokyo

- (B.5) "Primal Partition Programming for Block
Diagonal Matrices"

J. BEN ROSEN

Stanford University

Stanford, California

- (B.6) "An Optimization Problem of Communi-
cation Network"

MITSURU YOKOI

Nippon Telegraph & Telephone Public
Corporation, Tokyo

Session C : Queueing and Related Problems

Chairman : KIYONORI KUNISAWA, Tokyo
Institute of Technology

- (C.1) "On some Preventive Maintenance
Policies"

HAJIME MAKABE* and HIDENORI
MORIMURA**

* Yokohama National University, Yoko-
Hama

**Tokyo Institute of Technology, Tokyo

- (C.2) "Queueing Simulator and its Applica-
tion"

KIYONORI KUNISAWA*, HIDENORI
MORIMURA*, YUKIO MIZUNO**

* Tokyo Institute of Technology, Tokyo

**Nippon Denki, Co., Ltd. Tokyo

- (C.3) "Queueing Systems with a Removable
Service Station"

P. NAOR

University of North Carolina

Chapel Hill, North Carolina

M. YADIN

Israel Institute of Technology

Haifa, Israel

- (C.4) "Management's Answer to the Reliability
Problem"

JOS. V.J. RAVENIS, II

The Johns Hopkins University

Baltimore, Maryland

- (C.5) "Job-Shop-Like Queueing Systems"

JAMES R. JACKSON

Western Management Science Institute

Los Angeles, California

Thursday 22 August

9:00 ~ 11:50 AM

Session D : Inventory

Chairman : EDWARD W. BARANKIN, University
of California

- (D.1) "Statistical and Computational Methods
for Estimating Inventory Model Chara-
cteristics"

MURRAY A. GEISLER

The RAND Corporation

- Santa Monica, California
- (D.2) "Application of Stochastic Programming to Production and Inventory Control" SHIV K. GUPTA
Indian Institute of Management
Calcutta, India
- (D.3) "A Single Item Dynamic Inventory Model with Fixed and Variable Inventory Carrying Costs"
FRANK T.HSU
Socony Mobil Oil Company, Inc.
New York, New York
- (D.4) "Experiences in Implementing and Advanced Inventory Model at U.S. Army Inventory Control Points"
BERNARD B.ROSENMAN
Frankford Arsenal
Philadelphia, Pennsylvania
- (D.5) "Computation of Approximately Optimal Inventory Policies"
HARVEY M.WAGNER
Stanford University
Stanford, California

Session E: Behavioral Science Applications

Chairman : C.WEST CHURCHMAN, University of California

- (E.1) "A Model for the Simulation of Conflict Resolution : Labor-Management Relation"
MALCOLM H.GOTTERER
Georgia Institute of Technology
Atlanta, Georgia
- (E.2) "Scientific Observation of Human Behavior;The Control, Instrumentation and Analysis of Laboratory Experiments"
AUSTIN HOGGATT
University of California, Berkeley,
- (E.3) "Self-Organizational Aspect of a General Systems Theory Model of an Organizational"
C. GREMONT SPRAGUE, III and M.D. MESAROVIC
Case Institute of Technology
Cleveland, Ohio
- (E.4) "Psychopathology and Organizations"

PHILBURN RATOOSH
San Francisco State College
San Francisco, California

- (E.5) "A Study of Competitive Business Behavior by Use of Management Games"
GIFFORD H.SYMONDS
Case Institute of Technology
Cleveland, Ohio

12:20 ~ 1:45 PM

Luncheon

Presidential Address : Prof. KENNETH

J.ARROW, Stanford University

2:00 ~ 4:50 PM

Session F: Prediction and Forecasting

Chairman : JOHN E.WALSH, System Development Corp.

- (F.1) "A Theory of Multiple-Prediction"
JIRO KONDO
University of Tokyo, Tokyo
- (F.2) "Probabilistic and Non-Formal Models in Prediction and Forecasting"
SEBASTIAN B.LITTAUER
Columbia University
New York, New York
- (F.3) "Analysis of the Stock Market and its Application to Forecasting"
HIROSHI NOGUCHI and HARUO SUNOUCHI
Waseda University, Tokyo
- (F.4) "An Application of Computer in Election Forecast for Newspaper Office"
HIROJIRO AOYAMA
The Institute of Statistical Mathematics
Tokyo

Session G: Decision Problems

Chairman : STANLEY REITER, Purdue University

- (G.1) "Information Pattern, Learning Structure and Optimal Decision Rule"
MINORU SAKAGUCHI
University of Electro-Communications,
Chofu, Tokyo
- (G.2) "A Bayesian Approach to Team Decision Problems"
KOICHI MIYAZAWA
University of Tokyo, Tokyo

(G.3) "Actual Versus Consistent Decision Behavior"

JACOB MARCHAK
University of California
Los Angeles, California

(G.4) "Decisions in an Integrated System"

SHOICHI MATRUDA*, SHIGERU IDEI* and
YOSHIO SUZUKI**
* Waseda University, Tokyo
**Tech. Res. Labs. Nippon Broadcasting
Corp., Tokyo

(G.5) "Effects of Information, Instruction
and Motivation on Decisions in Experi-
ments on Human Communication"

RHEA S.DAS
Indian Statistical Institute,
Calcutta, India

Friday 25 August

9:00 ~ 11:50 AM

Session H: Managerial Economics

Chairman: GEORGE MORTON, London School
of Economics and Political Science

(H.1) "Application of the Cost Isoquant
Method to the Determination of the
Optimum Plant Location"

YOSHIRO KURATANI and JOSE TRAVINO
Case Institute of Technology
Cleveland, Ohio

(H.2) "Engineering Estimates of Capital-
Labor Substitution in Metal Machining
Operations"

MORDECAI KURZ
Stanford University
Stanford, California

(H.3) "A Method of Marking Market Indices"

KAZUO MIZUTANI
The Catholic University of Nagoya,
Nagoya

(H.4) "Use of Network Modeling in Top
Management Planning and Control"

BRUCE SKAGGS
General Electric Company
Phoenix, Arizona

(H.5) "Excessive Competition in a Japanese
Context"

M. BRONFENBRENNER
Carnegie Institute of Technology
Pittsburgh, Pennsylvania

Session I: Planning I

Chairman: MARTIN GORFINKEL, Stanford
Research Institute

(I.1) "Optimum Location of a Road Network
Serving a Central City"

M. BECKMANN
Institut für Oekonometrie und Unter-
nehmensforschung der Universität Bonn
Bonn, West Germany

(I.2) "Management of Urban Road Facilities"

S. YOUNG RHEE
International Business Machines Corpo-
ration
New York, New York

(I.3) "A Model for Maritime Transportation"

JOHN E. WALSH
System Development Corporation
Santa Monica, California

PAUL B. BILLING
Norair Division
Northrop Corporation

(I.4) "An Econometric Analysis of Domestic
Migration and Regional Economy"

SHINCHI ICHIMURA
University of Osaka, Osaka

12:00 ~ 1:45 PM

Luncheon

Speaker: Mr. KONOSUKE MATSUSHITA,
Matsushita Electric Industrial Co.
"My Ideas on Management"

2:00~5:10 PM

Session J: Computer Application

Chairman: ROBERT E. MACHOL, Conductron
Corp.

(J.1) "An Analogue Computer for Network-
Flow Problems"

MASAO IRI
University of Tokyo, Tokyo

(J.2) "Computer Simulation of the Tobata
Iron Ore Port Installation"

YOSHIMASA MATSUMURA
Yawata Iron & Steel Co., Ltd. Yawata

(J.3) "Table Look-Up Models for Operations"

Research”

GILBERT W.KING

International Business Machines Corporation

Yorktown Heights, New York

- (J.4) “The Past, Present, and Future of General Simulation Languages”

HOWARD S.KRASNOW

International Business Machines Corp.
Yorktown Heights, New York

REINO A.MERIKALLIO

International Business Machines Corp.
Yorktown Heights, New York

- (J.5) “Automated Information System in Planning, Control and Command”

ANDREW VAZSONYI

North American Aviation, Inc.
Tarzana, California**Session K : Planning II**

Chairman : KAZUO MIZUTANI, Nanzan University, Nagoya

- (K.1) “A Mathematical Model of Long-Range Planning”

THOMAS E.OBERBECK

U.S. Naval Postgraduate School
Monterey, California

- (K.2) “Adapting Long Range Plans to Arms Control Agreements”

J. R. SUMMERFIELD

Douglas Aircraft Company, Inc.
Santa Monica, California

- (K.3) “Individuals : Neglected Elements in Economic Development Planning”

WILLIAM J. PLATT

Stanford Research Institute
Menlo Park, California

- (K.4) “Allocation under Uncertainty”

MARTIN GORFINKEL

Stanford Research Institute
Menlo Park, California

- (K.5) “Models for the Planning of Social Expenditure”

GEORGE MORTON

London School of Economics and Political Science, London.

Saturday 24 August**9:00 ~ 11:50 AM****Session L : Industrial Application**

Chairman : EIJI YAMAGUCHI, Shinetsu Kagaku Co., Ltd.

- (L.1) “Provision of Spare Cable”

YOSHITSUGU OHMAE

Nippon Telegraph & Telephone Public Corporation, Tokyo

- (L.2) “On the Most Economical Water Utilization Policy of Reservoirs”

ICHIRO HANO, YASUO TAMURA and HIROSHI TAKAMORI

Waseda University, Tokyo

- (L.3) “The Optimum Capacity of Production Facilities”

KAZUO KURAHASHI

Nippon Telegraph & Telephone Public Corporation, Tokyo

- (L.4) “Operation of Caboose in Special Use”

YOSHIHIRO KAWARABATA

Japanese National Railways, Tokyo

- (L.5) “Estimates of Community Health Demand Based on Age-Specific Measures of Utilization of Health Facilities in Great Britain (England and Wales.)”

B. C. DAS

Indian Statistical Institute,
Calcutta, India

- (L.6) “Some Empirical Studies in Discrimination Analysis”

K. S. KRETSCHMER and L. L. VINTON

General Electric Company
New York, New York**2:00 ~ 4:40 PM****Round Table Exchange****Session M : Mathematical Programming**Chairman : J.BEN ROSEN, Stanford University
Interpreter : SIGEITI MORIGUTI, University of Tokyo

- (M.1) “Discrete Optimizing”

STANLEY REITER

University of Purdue
Lafayette, Indiana

- (M.2) “Decision Problems in Dynamic Probabi-

bilistic Systems”

RONALD A. HOWARD

Lexington, Massachusetts

Sessoion N : Production Scheduling

Chairman : WILLIAM KARUSI, System Development Corp.

Interpreter : RYUICHI YOSHIYA, Waseda University

(N.1) “Scheduling General Production Systems Using Schedule Algebra”

BERNARD GIFFLER

International Electric Corporation
Paramus, New Jersey

(N.2) “Assembly Line Production With Stochastic Demand”

RUDOLF HENN

St. Gallen, Switzerland

Session O : Marketing

Chairman : SEBASTIAN B. LITTAUER, Columbia University

Interpreter : KOICHI MIYAZAWA, University of Tokyo, YUICHI SHINZAWA, Waseda University

(O.1) “A Model for Marketing and Advertising in New Product Development”

ABRAHAM CHARNES

Northwestern University
Evanston, Illinois

W.W. COOPER

Carnegie Institute of Technology
Pittsburgh, Pennsylvania

JAMES DEVOE

Batten, Barton, Durstine and Osborn, Inc.

New York, New York

DAVID LEARNER

Batten, Barton, Durstine and Osborn, Inc.

New York, New York

(O.2) “Practical Applications of Game Theory”

MARITIN SHUBIK

International Business Machines Corporation

Yorktown Heights, New York

Session P : Planning

Chairman : GIFFORD H. SYMONDS, Case Institute of Tecnology

Interpreter : JIRO KONDO, University of Tokyo

(P.1) “An Approach for Educational Planning in the Developing Countries”

HENRY F. MCCUSKER, Jr.

Stanford Research Institute
Menlo Park, California

(P.2) “The Potential Applications of Operations Research and Management Science in the Developing Coutries”

MICHEL VERHULST

Ecole Nationale des Ponts and Chaussées
Paris, France

(P.3) “Applicability of Managemnt Principles in Underdeveloped Economies”

LEON C. MEGGINSON and EUGENE C. MCCANN

Louisiana Stata University
Baton Rouge, Louisiana