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# PROGRAM OF STOCHASTIC CONTROL CONFERENCE

# Sponsored by

NBER Conference on the Computer in Economic and Social Research Palo Alto, Cal., May 26 28, 1976

### Wednesday, May 26 9:00-10:30

#### Room 1 Macroeconomics 1 Chairman: David Kendrick

- 1. Gregory Chow (Princeton) "The Usefulness of Imperfect Models in Setting Macroeconomic Stabilization Policies"
- 2. Roger Craine (FRS, Washington, D.C.) "Monetary Policy under Uncertainty"
- 3. Franklin Shupp and Don Schlagenhauf (U. of Illinois. Urbana) "Wage Price Controls in a Fixprice-Flexprice Model"

### 11:00-12:30

Identification I

# Room I

Chairman: Edison Tse

- 1. Thomas Cooley and Kent Wall (NBER, Cambridge) "Identification Conditions for Time-Varying Models"
- 2. Suresh P. Sethi (U. of Toronto, Canada) "Identification and Estimation of Dynamic Sales-Advertising Relationships and Their Causality Implications"

#### Room 2 Energy

Chairman: Robert Pindyck

- 1. James Sweeny (FEA) "The Project Independence Evaluation System"
- 2. John Pearson (FEA) "The International Energy Model"
- 3. Robert Marshalla (FEA) "Optimal Valuation of Energy Systems"

### 2:00-3:30

# Room 1 Microeconomics I Chairman: S. Sethi

- Y. C. Ho and Marcia Kastner (Harvard) "New Classes of Multiple Equilibria in the Job Market Signaling Problem"
- 2. B. F. Gardner and J. B. Cruz, Jr. (U. of Illinois, Urbana) "Modeling and Strategy for a Supply-Oriented Multistage Duopoly"

### Room 2 Estimation I

Chairman: Fred Norman

- 1. T. W. Anderson and John B. Taylor (Columbia) "Some Experimental Results on the Statistical Properties of Least Squares Estimates in Control Problems"
- 2. Kenneth Garbade (N.Y.U.) "Two Methods for Examining the Stability of Regression Coefficients"
- 3. T. Kailath and M. Morf (Stanford) "Recent Results in Least-Squares Estimation Theory"

### 4:00-5:30

# Room ! Methods of Deterministic and Stochastic Control I Chairman: Masanao Aoki

- 1. Alfred Norman (Texas) "Alternative Dual Control Strategies"
- 2. David Sworder (UCLA) "Minimax Control of Stochastic Systems"
- 3. J. K. Sengupta (U. of Cal., Santa Barbara) "Decision Rules in Dynamic Planning: An Application of Sensitivity Analysis"

# Room 2 Macroeconomics II Chairman: Roger Craine

- Pierre Nepomiastchy (IRIA) and Bruno Oudet (Grenoble)
   "Comparison of Optimization Techniques for a French
   Monetary Model"
- 2. Gotz Uebe (Institut fur Statistik und Unternehmens forschung, Munchen, Ger.) "Some Ordering Properties of Macroeconometric Models-The Redundancy Problem"
- 3. S. Chang and H. O. Stekler (SUNY, Stony Brook) "Fuzziness in Economic Systems: Its Modeling and Control"

## Thursday, May 27 9:00-10:30

## Room 1 Exhaustible Resources

Chairman: Gordon Rausser

- 1. Donald Hanson (Ohio State) "The Optimal Growth Rate of the Price of an Exhaustible National Resource When Substitution Possibilities Are Uncertain"
- 2. Robert Pindyck (MIT) "Optimal Pricing Models for Exhaustible Resource Cartels"
- 3. Richard Gilbert (Stanford) "Resource Depletion under Uncertainty: Exploitation and the Value of Information"

# Room 2 Identification II and Controllability

Chairman: Jerry Mendel

- 1. C. H. Hsiao (U. of Cal. at Berkeley) "Identification for a Linear Dynamic Simultaneous Error-Shock Model"
- 2. Edison Tse (Stanford) "Identification and Estimation of Linear Models with Measurement Error"
- 3. Bruno Sitzia (U. of Rome, Italy) "Controllability Considerations in Econometric Models"

#### 11:00-12:30

### Room I

Games and Social Processes Chairman: James Sweeny

- Roberto Brito (Ohio State) and Michael Intriligator (UCLA) "A Fixed Point Approach to Multiagent Adaptive Control"
- 2. D. Siljak (U. of Cal., Santa Clara) "On Stochastic Stability of Competitive Equilibrium"
- 3. I. W. Sandberg (Bell Labs) "On the Mathematical Theory of Social Processes Characterized by Weak Reciprocity"

# Room 2 Macroeconomics III

Chairman: Gregory Chow

- 1. William Conrad (FRB) "Recognition and Response Lags in Stabilization Policy: An Optimal Response to Imperfect Information"
- 2. David Kendrick (Texas) "Adaptive Control of a Macroeconometric Model With Measurement Errors"
- 3. Ray Fair (Yale) "The Use of Optimal Control Techniques to Measure Economic Performance"
- 4. Carl Palash (FRB) "On the Specification of Unemployment, Output and Inflation in the Objective Function"

### 2:00-3:30

## Room 1 Commodities and Environment Chairman: Yaakov Bar-Shalom

- 1. John Underwood (FRB) "Optimal Rules for Cartel Managers in a Stochastic Market Setting: Specific Applications to Copper and Tea Markets"
- 2. Masanao Aoki (UCLA) "Policy Models of Agricultural Commodity Trades"
- 3. Gordon Rausser and Richard Howitt (Harvard Business School) "Optimal Stochastic Control and Empirical Externality Policy"

### Room 2 Estimation II

Chairman: John Taylor

- 1. P.A.B.V. Swamy and Peter Tinsley (FRB) "Linear Prediction and Estimation Methods for Regression Models with Stationary Stochastic Coefficients"
- 2. Jerry Mendel (UCLA) "Optimal Estimators of White Disburbances"
- Rafael Juantorena (LSU) "Problems and Solutions of Applying the Kalman Filter to Economic Model Estimates"

### 4:00-5:30

Room 1 Open discussion of problems in the application of control theory to economics and of work in progress.

## Friday, May 28 9:00-10:30

# Room 1 Estimation III and Foreign Assistance Chairman: Kenneth Garbade

- 1. Yaakov Bar-Shalom and D. Stengel (Systems Control, Inc.) "A Sensitivity Approach to a Class of Multistage Decision Problems with Uncertain Parameters"
- 2. Donald Sant (Princeton) "Generalized Least Squares Applied to Time Varying Parameters Models"
- 3. David Peterson (MIT) "Validity Tests and Detection of Bad Data"

# Room 2 Macroeconomics IV

Chairman: Pierre Nepomiastchy

1. James Berry and Arthur Havenner (FRB) "Multi-Period Optimal Control of the SSRC-MIT-Penn Quarterly

- Econometric Model: Fixed Rules versus Activism in the Conduct of Monetary Policy"
- 2. L. Lin and L. C. Suen (Notre Dame) "The Dynamic Relationship between Monetary Base, Interest Rate, and Money Supply: An Investigation of Their Lead-Lag Structures"
- 4. Tej K. Kaul (Birla Institute, India) "Spectral and Frequency Domain Analysis of International Short-Term Capital Movements with a Special Reference to Kalman Filtering Theory and Its Applications"

### 11:00-12:30

# Room 1 Methods of Deterministic and Stochastic Control 11 Chairman: Arthur Havenner

- P. A. Frick (Oregon State) "On the Identification and Control of Systems Subject to Multiplicative Random Disturbances"
- 2. Brian Arthur (The Population Council) "Stochastic Control for Linear Discrete-Time Distributed-Lag Models
- 3. Rick Ashley (UC at San Diego) "Optimal Control of Macroeconomic Models with Semi-Quadratic Loss Function"