CONTENTS

INTRODUCTORY REMARKS, by Shirley Kallek ................................................................. xi

SECTION 1. MODELING SEASONAL ECONOMIC DATA, I

Models for X-11 and X-11 Forecast Procedures for Preliminary and Revised Seasonal Adjustments, by Kenneth F. Wallis ................................................................. 3
  Invited Comments by John Geweke ................................................................. 12
  Adi Raveh ................................................................. 14

Comparative Study of the X-11 and BAYSEA Procedures of Seasonal Adjustment, by Hirotsugu Akaike and Makio Ishiguro ................................................................. 17
  Invited Comments by Estela Bee Dagum ............................................................. 31
  David F. Findley ................................................................. 36
  Contributed Comments by Svend Hylleberg .......................................................... 46
  Response by Hirotsugu Akaike and Makio Ishiguro .................................................. 47
  Contributed Comments by Adi Raveh ................................................................. 51
  Response by Hirotsugu Akaike and Makio Ishiguro .................................................. 53

SECTION 2. MODELING SEASONAL ECONOMIC DATA, II

Modeling Time Series When Calendar Effects Are Present, by William P. Cleveland and Michael R. Grupe ................................................................. 57
  Invited Comments by Allan H. Young ................................................................. 68
  Charles I. Plosser ................................................................. 72

Modeling Considerations in the Seasonal Adjustment of Economic Time Series, by Steven C. Hilmer, William R. Bell, and George C. Tiao ................................................................. 74
  Invited Comments by J. P. Burman ................................................................. 101
  William S. Cleveland ................................................................. 106
  Contributed Comments by Agustin Maravall ...................................................... 120
  Response by Steven C. Hilmer, William R. Bell, and George C. Tiao ...................... 123

SECTION 3. KEYNOTE ADDRESS

Theory and Practice in Time Series Analysis, by James Durbin ......................................... 127

SECTION 4. MODELING UNIVARIATE ECONOMIC TIME SERIES

Model Checking in Time Series Analysis, by Paul Newbold .............................................. 133
  Invited Comments by Johannes Ledolter ............................................................. 144
  David A. Pierce ................................................................. 150

Robust Methods for ARIMA Models, by R. Douglas Martin, Alexander Samarov, and Walter Vandaele ................................................................. 153
  Invited Comments by Harry V. Roberts ............................................................. 170
  Theodore W. Anderson ................................................................. 172
  Response by R. Douglas Martin, Alexander Samarov, and Walter Vandaele ................. 173
  Contributed Comments by Turkan K. Gardener ..................................................... 174
  Enrique de Alba ................................................................. 175
  Robert F. Engle and Dennis F. Kraft ................................................................. 176
SECTION 5. MODELING MULTIPLE ECONOMIC TIME SERIES, I

Extensions and Examples of the Signal Extraction Approach to Regression, by Craig F. Ansley and William E. Wecker .................................................. 181
Invited Comments by Arthur P. Dempster and Andrew B. Jonas ........................................ 193
Will Gersch ................................................................................. 195

Structural Econometric Modeling and Time Series Analysis: An Integrated Approach, by Franz C. Palm .................................................. 199
Invited Comments by Carl F. Christ ........................................... 234
Christopher A. Sims ............................................................. 236
Response by Franz C. Palm .................................................. 238

SECTION 6. MODELING MULTIPLE ECONOMIC TIME SERIES, II

Multivariate ARIMA Modeling and Municipal Finance, by George W. Downs and David M. Rocke .......... 243
Invited Comments by David A. Freedman .................................. 253
Gary Fromm ................................................................................. 254
Response by George W. Downs and David M. Rocke ............. 256
Reply by Gary Fromm .......................................................... 258

SECTION 7. MODELING BUSINESS CYCLE AND EXPECTATIONS DATA

A Use of Index Models in Macroeconomic Forecasting, by Robert B. Litterman ......................................... 261
Invited Comments by Marc Nerlove ........................................ 275
Thomas Rothenberg .............................................................. 277

A Time Series Analysis of Popular Expectations Data, by G. S. Maddala, Raymond P. H. Fishe, and Kajal Lahiri .......................................................... 278
Invited Comments by Sanford J. Grossman .......................... 287
Peter K. Schöinfeld .............................................................. 289

SECTION 8. MODELING AND FORECASTING ECONOMIC VARIABLES

Multiperiod Forecast Error Variances of Inflation Estimated From ARCH Models, by Robert F. Engle and Dennis F. Kraft .......................................................... 293
Invited Comments by Wayne A. Fuller ................................. 303
Emanuel Parzen ................................................................. 306
Response by Robert F. Engle and Dennis F. Kraft ............... 307

Forecasting White Noise, by Clive W. J. Granger ............... 308
Invited Comments by Agustín Maravall .............................. 315
Donald G. Watts ................................................................. 326

SECTION 9. MODELING AND ANALYZING PRELIMINARY AND REVISED ECONOMIC DATA

Irregular Data Revisions, by Andrew C. Harvey, C. R. McKenzie, D. P. C. Blake, and M. J. Desai ........... 329
Invited Comments by E. Philip Howrey .............................. 340
Mark W. Watson ................................................................. 344
Contributed Comments by Geoffrey H. Moore .................. 346
Response by Andrew C. Harvey, C. R. McKenzie, D. P. C. Blake, and M. J. Desai .................. 347

SECTION 10. OVERVIEW AND DISCUSSION

Overview and Implications for the Future, by Arnold Zellner .................................................. 351
SECTION 11. OTHER CONTRIBUTED COMMENTS

Comments on the Papers by J. B. Grubman and E. T. H. Shih, George W. Downs and David M. Rocke, Robert B. Litterman, and Clive W. J. Granger, by Herman Wold ................................................................. 363

APPENDIX. DESCRIPTIONS OF TIME SERIES PROVIDED TO AUTHORS ........................................... 375

INDEX .................................................................................................................................................. 393