

# FIFTEENTH ANNUAL SYMPOSIUM OF THE SOCIETY FOR NONLINEAR DYNAMICS AND ECONOMETRICS

PARIS, 15 – 16 MARCH, 2007

ÉCOLE NATIONALE DE LA STATISTIQUE ET DE L'ADMINISTRATION ÉCONOMIQUE<sup>(\*)</sup>



















(\*) THE NATIONAL SCHOOL OF ECONOMICS AND STATISTICS

## THURSDAY, MARCH 15

### 8:15 – 8:40 REGISTRATION, COFFEE/TEA (ENTRANCE HALL OF ENSAE)

#### 8:45 – 8:55 WELCOME (LECTURE HALL 1)

#### 9:00 – 10:00 Session 1: Complex Asset Price Dynamics (Lecture Hall 1)

Chair: Cees Diks (CeNDEF, University of Amsterdam)

Exchange Rate Dynamics and Stock Price Fluctuations Frank H. Westerhoff (University of Osnabrück) Roberto Dieci (University of Bologna)

Rational and Near-Rational Bubbles Without Drift *Kevin J. Lansing* (Federal Reserve Bank of San Francisco)

### SESSION 2: REGIME SWITCHING MODELS FOR BUSINESS CYCLES I (LECTURE HALL 2)

Chair: James Morley (Washington University in St. Louis)

Asymmetric Impacts of International Business Cycles on the UK-A Bayesian LSTVAR Approach

Deborah Gefang (University of Leicester) Rodney Strachan (University of Queensland)

International Business Cycles: An Unobserved Components Approach Sinchan Mitra (Discover Financial Services) *Tara M. Sinclair* (George Washington University)

## SESSION 3: NONLINEAR MODELS OF FIRM BEHAVIOUR (LECTURE ROOM 13)

Chair: Thomas Lux (University of Kiel)

Heterogeneous Firms, Productivity and Poverty Traps Levon Barseghyan (Cornell University) *Riccardo DiCecio* (Federal Reserve Bank of St. Louis)

Dominant Firms, Barriers to Entry Capital and Antitrust Policy *Mika Kato* (Howard University) Willi Semmler (New School for Social Research)

### 10:00 – 10:30 COFFEE/TEA (ENTRANCE HALL OF ENSAE)

#### 10:30 – 11:30 Session 4: New Keynesian Modelling (Lecture Room 13)

Chair: David Goldbaum (Rutgers University)

Dynamic Predictor Selection in a New Keynesian Model with Heterogeneous Expectations *William A. Branch* (University of California, Irvine)
Bruce McGough (Oregon State University)

Period Analysis and Rational Expectations: Pitfalls and Remedies Toichiro Asada (Chuo University) Peter Flaschel (Bielefeld University)

Christian Proano (Bielefeld University)

# SESSION 5: MACROECONOMIC NEWS ANNOUNCEMENTS AND HIGH-FREQUENCY DATA IN FINANCIAL MARKETS (LECTURE HALL 2) [SESSION ENDS AT 11:45]

Chair: Bruce Mizrach (Rutgers University)

News, No-News and Jumps in the US Treasury Market Mardi Dungey (University of Cambridge)
Michael McKenzie (Royal Melbourne Institute of Technology)
Vanessa Smith (University of Cambridge)

News, Announcements, and Stock Market Volatility Dynamics

Jose Gonzalo Rangel (Stern School of Business, New York University)

On Intraday Time-Reversibility of Return Processes Stefan Klössner (Saarland University)

## SESSION 6: TESTING AND FORECASTING (LECTURE HALL 1) [SESSION ENDS AT 11:45]

Chair: Dick van Dijk (Erasmus University Rotterdam)

Rank-based entropy tests for serial independence

Cees Diks (CeNDEF, University of Amsterdam)

Valentyn Panchenko (University of New South Wales)

Simple, Robust and Powerful Tests of the Breaking Trend Hypothesis David Harvey (University of Nottingham)
Stephen Leybourne (University of Nottingham)
Robert Taylor (University of Nottingham)

A Bootstrap-based Nonparametric Forecast Density Sebastiano Manzan (University of Leicester) Dawit Zerom (University of Alberta)

#### 11:30 – 13:00 **LUNCH (INSEE RESTAURANT)**

#### 13:00 – 14:30 Session 7: Heterogeneous Expectations and Learning I (Lecture Room 13)

Chair: Frank H. Westerhoff (University of Osnabrück)

Evolutionary and Adaptive Learning in Complex Markets *Cars Hommes* (CeNDEF, University of Amsterdam)

Equilibrium Return and Agents' Survival in a Multiperiod Asset Market: Analytic Support of a Simulation Model

*Mikhail Anufriev* (CeNDEF, University of Amsterdam) Pietro Dindo (CeNDEF, University of Amsterdam)

Heterogeneous Beliefs in Financial Markets: Persistent Endogenous Noise and Informationally Efficient Markets

David Goldbaum (Rutgers University)

#### SESSION 8: COMMODITY PRICES AND MODELLING JUMPS (LECTURE HALL 2)

Chair: Oleg Korenok (Virginia Commonwealth University)

Testing the Dynamics of Sticky Prices: The Wholesale Gasoline Market Reconsidered Christopher Douglas (Michigan State University)

Ana Maria Herrera (Michigan State University)

Modelling Electricity Prices by the Potential Jump-Diffusion Svetlana Borovkova (Free University of Amsterdam) Ferry J. Permana (Delft University of Technology)

Do Commodity Prices and Volatility Jump? Stanislav Radchenko (University of NC at Charlotte)

# SESSION 9: RECENT DEVELOPMENTS IN THRESHOLD AND SMOOTH TRANSITION MODELLING (LECTURE HALL 1)

Chair: Walter Enders (University of Alabama)

Weighted STARs

Ralf Becker (University of Manchester)
Denise Osborn (University of Manchester)

Systematic Sampling of a Nonlinear Model: Evidence on Speeds of Adjustment in Index Futures Markets

Ivan Paya (Lancaster University)
David Peel (Lancaster University)

A Smoothed Least Squares Estimator For Threshold Regression Models Oliver Linton (London School of Economics) Myung Hwan Seo (London School of Economics)

#### 14:30 – 15:00 COFFEE/TEA (ENTRANCE HALL OF ENSAE)

# 15:00 – 17:00 SESSION 10: KEYNESIAN MACRO DYNAMICS (LECTURE ROOM 13) [ORGANIZED BY PETER FLASCHEL]

Chair: Peter Flaschel (Bielefeld University)

How to Model and Estimate Animal Spirits in Macrodynamics

Reiner Franke (University of Kiel)

Parameter Estimation for Stochastic Models of Interacting Agents: An Approximate ML Approach

Thomas Lux (University of Kiel)

Causal Analysis in Macroeconomics: Methods and Applications

Pu Chen (Erfurt University)

Chihying Hsiao (University of Technology Sydney)

Peter Flaschel (Bielefeld University)

Willi Semmler (New School for Social Research)

Semi-Structural Two Country Modelling: Theoretical Formulation, Estimation and Analysis

Peter Flaschel (Bielefeld University)

Christian Proaño (Bielefeld University)

#### SESSION 11: MULTIVARIATE NONLINEAR TIME SERIES MODELS (LECTURE HALL 1)

Chair: Philip Rothman (East Carolina University)

Threshold Cointegration and the Taylor Rule of U.S. Monetary Policy

Walter Enders (University of Alabama)

Junsoo Lee (University of Alabama)

Mark C. Strazicich (Appalachian State University)

Threshold Effects in Cointegrating Relationships

Jean-Yves Pitarakis (University of Southampton)

Jesus Gonzalo (Universidad Carlos III de Madrid)

Estimation and Testing in a Three Regime Vector Error Correction Model

Jürgen Gaul (University of Bonn)

Nonlinear Vector Autoregressions with Asymmetric Lag Structures

John Keating (University of Kansas)

Ming Chien Lo (St. Cloud State University)

#### SESSION 12: INTEREST RATE DYNAMICS (LECTURE HALL 2)

Chair: Christian Dahl (University of Aarhus)

Nonlinearity in the British Interest Rate Transmission Mechanism

Ana-Maria Fuertes (Cass Business School, City University London)

S.A. Heffernan (Cass Business School, City University London)

Elena Kalotychou (Cass Business School, City University London)

Estimating the Dynamics of Interest Rates in the Japanese Economy

Khalid Ben Nowman (University of Westminster)

Trino-Manuel Niguez (University of Westminster)

Evaluating Structural Models for the US Short Rate Using EMM and Particle Filters

Drew Creal (University of Washington)

Ying Gu (University of Washington)

Eric Zivot (University of Washington)

Threshold Estimation of Jump-Diffusion Models and Interest Rate Modeling

Cecilia Mancini (Università di Firenze)

Roberto Renò (Università di Siena)

#### 20:00 – 23:00 CONFERENCE DINNER – LOUVRE MUSEUM

Dinner speech: Jean-Philippe Bouchaud (Capital Fund Management)

"Physicists in Finance: From Cond-Mat to Hedge Funds"

## FRIDAY, MARCH 16

# 9:00 – 10:00 SESSION 13: MACROECONOMETRIC MODELLING OF SEARCH AND MATCHING (LECTURE ROOM 13)

Chair: Kevin J. Lansing (Federal Reserve Bank of San Francisco)

East German Unemployment from a Macroeconomic Perspective *Jens Rubart* (Deutsche Bundesbank)
Willi Semmler (New School for Social Research)

The Global Dynamics of DGE Models with Search and Matching *Ekkehard Ernst* (OECD)

Willi Semmler (New School of Social Research)

#### SESSION 14: REGIME SWITCHING MODELS FOR BUSINESS CYCLES II (LECTURE HALL 2)

Chair: Tara M. Sinclair (George Washington University)

Multivariate Markov Switching With Weighted Regime Determination: Giving France More Weight than Finland Michael Dueker (Federal Reserve Bank of St. Louis) Martin Sola (Birkbeck College and Universidad Torcuato DiTella)

What Caused the 'Great Moderation'? International Evidence from a Regime Switching Model With Time-Varying Transition Probabilities

\*Penelope Smith\* (University of Melbourne)

Peter Summers (Texas Tech University)

# SESSION 15: STOCK RETURN PREDICTABILITY AND ASSET ALLOCATION (LECTURE HALL 1) Chair: Gerald P. Dwyer, Jr. (Federal Reserve Bank of Atlanta)

Macroeconomic Fundamentals and Stock Return Predictability Ryan A. Compton (University of Manitoba) James Morley (Washington University in St. Louis)

Small Caps in International Equity Portfolios: the Effects of Variance Risk Massimo Guidolin (Manchester Business School) *Giovanna Nicodano* (University of Turin)

10:00 – 10:30 COFFEE/TEA (ENTRANCE HALL OF ENSAE)

# 10:30 – 11:30 SESSION 16: ADVANCES IN MACRO AND FINANCE (LECTURE HALL 1) [ORGANIZED BY WILLI SEMMLER; SESSION ENDS AT 11:45]

Chair: Willi Semmler (New School for Social Research)

Computational Aspects of Prospect Theory with Asset Pricing Applications Enrico De Giorgi (University of Zurich and University of Lugano) Thorsten Hens (University of Zurich and Swiss Banking Institute) János Mayer (University of Zurich)

Portfolio Optimization when Risk Factors are Conditionally Varying Heavy Tails Toker Doganoglu (University of Munich) Christoph Hartz (University of Munich) Stefan Mittnik (University of Munich)

Modelling CPPI and CPDO Structures Salih N. Neftci (Graduate School, CUNY)

#### SESSION 17: JUMPS IN MACROECONOMIC TIME SERIES (LECTURE HALL 2)

Chair: Svetlana Borovkova (Free University of Amsterdam)

A Multistage Adaptive Particle Filter
Thomas King (Federal Reserve Board of Governors) *James Morley* (Washington University in St. Louis)

Jump-Diffusion Estimation in Macroeconomics Olaf Posch (University of Hamburg)

# SESSION 18: TIME-VARYING BUSINESS CYCLES CHARACTERISTICS (LECTURE ROOM 13)

Chair: Michael Dueker (Federal Reserve Bank of St. Louis)

Extracting Business Cycles Using Semi-Parametric Time-Varying Spectra with Applications to U.S. Macroeconomic Time Series
Siem Jan Koopman (Vrije Universiteit Amsterdam)
Soon Yip Wong (Vrije Universiteit Amsterdam)

Whatever Happened to the Business Cycle? A Bayesian Analysis Michael Owyang (Federal Reserve Bank of St. Louis) Kristie M. Engemann (Federal Reserve Bank of St. Louis)

11:30 – 13:00 **LUNCH (INSEE RESTAURANT)** 

#### 13:00 – 14:30 Session 19: Heterogeneous Expectations and Learning II (Lecture Room 13)

Chair: Cars Hommes (CeNDEF, University of Amsterdam)

Informational Differences and Learning in an Asset Market with

**Boundedly Rational Agents** 

Cees Diks (CeNDEF, University of Amsterdam)

Pietro Dindo (CeNDEF, University of Amsterdam)

**Expectation Formation and Macroeconomic Dynamics** 

Marji Lines (University of Udine)

Frank H. Westerhoff (University of Osnabrück)

#### An Experiment on Learning Equilibria

Peter Heemeijer (CeNDEF, University of Amsterdam)

Cars Hommes (CeNDEF, University of Amsterdam)

Joep Sonnemans (CREED, University of Amsterdam)

Jan Tuinstra (CeNDEF, University of Amsterdam)

#### SESSION 20: LONG MEMORY AND STRUCTURAL BREAKS (LECTURE HALL 1)

Chair: Mark Jensen (Federal Reserve Bank of Atlanta)

Nonlinear Models with Strongly Dependent Processes and Applications to

Forward Premia and Real Exchange Rates

Richard Baillie (Michigan State University & Queen Mary, University of London)

George Kapetanios (Queen Mary, University of London)

Which is the Best for the US Inflation Rate: A Structural Changes Model or a Long Memory Process?

Lanouar Charfeddine (Université Paris II)

Dominique Guégan (École Normale Supérieure)

Apparent Long Memory in a Time Series and the Role of Trends: A Moving Mean

Filtering Alternative to the Fractionally Integrated Model

Richard Ashley (Virginia Tech)

Douglas Patterson (Virginia Tech)

## SESSION 21: MARKET MICROSTRUCTURE (LECTURE HALL 2)

[ORGANIZED BY JEAN-PHILIPPE BOUCHAUD]

Chair: Jean-Philippe Bouchaud (Capital Fund Management)

Price Impact of a Limit Order

Rob Almgren (Bank of America)

So You Are Making Money in Financial Markets. Should You Tell Your Friends How?

Damien Challet (Institute for Scientific Interchange)

Relation Between Spread, Impact and Volatility in Order-Driven Markets Jean-Philippe Bouchaud (Capital Fund Management)

14:30 – 15:00 COFFEE/TEA (ENTRANCE HALL OF ENSAE)

#### 15:00 – 16:30 **Session 22: Complexity (Lecture Room 13)**

Chair: Willi Semmler (New School for Social Research)

Asymptotic Methods for Deterministic Dynamical Systems in Economics *Rodney C. Wolff* (Queensland University of Technology)

Stable Finite State Markov Sunspots

\*Bruce McGough\* (Oregon State University)

George Evans (University of Oregon)

Computational and Dynamic Complexity in Economics

J. Barkley Rosser, Jr. (James Madison University)

#### SESSION 23: EXCHANGE RATES AND INFLATION (LECTURE HALL 2)

Chair: Richard Baillie (Michigan State University)

Purchasing Power Parity and the Euro

Gerald P. Dwyer, Jr. (Federal Reserve Bank of Atlanta)

Thomas Flavin (National University of Ireland)

James R. Lothian (Fordham University)

Exchange Rate Pass-Through to Trade Prices: the Role of Non-linearities and Asymmetries *Matthieu Bussiere* (European Central Bank)

International Evidence on the Efficacy of New-Keynesian Models of Inflation Persistence Oleg Korenok (Virginia Commonwealth University)

Stanislav Radchenko (University of NC at Charlotte)

Norman R. Swanson (Rutgers University)

#### SESSION 24: VOLATILITY MODELLING AND DEPENDENCE (LECTURE HALL 1)

Chair: Stefan Mittnik (University of Munich)

The Limiting Properties of the QMLE in a General Class of Asymmetric Volatility

\*Christian M. Dahl\* (University of Aarhus)\*

Emma M. Iglesias (Michigan State University)

Estimation and Asymptotic Inference in the First Order AR-ARCH Model

Theis Lange (University of Copenhagen)

Anders Rahbek (University of Copenhagen)

Søren Tolver Jensen (University of Copenhagen)

Copula-Based Analysis of Nonlinear Dependence for Indexes Co-movement in German Equity Market

Wei Sun (University of Karlsruhe)

Svetlozar Rachev (University of Karlsruhe)

Frank J. Fabozzi (Yale School of Management)

#### 16:30 –17:00 COFFEE/TEA (ENTRANCE HALL OF ENSAE)

#### 17:00 – 18:00 Session 25: Craig Hiemstra Memorial Lecture (Lecture Hall 1)

Chair: Thorsten Hens (University of Zurich and Swiss Banking Institute)

Efficiency Wages and Stochastic Endogenous Unemployment Business Cycles Jean-Michel Grandmont (CREST-GRECSTA)