

## CURRICULUM VITAE ET STUDIORUM

### Giorgio Calzolari

Italian, born in Ferrara (6 September 1946).

Professor of Econometrics from 1990. At the University of Firenze, Department of Statistics, from 1991.

President of SIDE, *Società Italiana di Econometria*, 2012.

#### Main previous appointment

Research staff member (econometric team), IBM Scientific Center, Pisa (1971-90).

#### Other previous appointments

Director of the summer econometric courses for doctoral students (CIDE, *Centro Interuniversitario di Econometria*, 1999-2005),

Part time Professor at CEIBS, China Europe International Business School, Jiaotong University, Shanghai, MBA Program (1996 and 1998);

Director of the Computer Center, Faculty of Economics, University of Firenze (1992-98).

Professor of Econometrics, University of Messina, Faculty of Political Science (1990-91).

Part time Professor of Econometrics, Universities of Perugia (1983-84), Padova (1985-87), Firenze (1988-90) and Messina (1992-93).

Part time Professor of Computer Science, *Istituto Agronomico per l'Oltremare, Ministero degli Affari Esteri*, Firenze (1975-78).

Officer of the *Aeronautica Militare Italiana* (1970-71).

Research staff member, Laboratories *Robert Bosch GmbH*, Stuttgart, (1969-70).

#### Editorial and advisory panels

Chairman of the Econometrics Programme Committee of the *European Meeting of the Econometric Society* 1989 (ESEM'89, München).

Associate Editor of the *Journal of Financial Econometrics* (2001-2012), *Bulletin of Economic Research* (from 2000) and of the *International Journal of Forecasting* (1987-1995).

Secretary of the Local Programme Committee of the 49-th Session of the *International Statistical Institute* (ISI) 1993 (Firenze).

Member elected of the *International Statistical Institute* (ISI) (from 1993).

Member of the European Standing Committee of the *Econometric Society* (1988-91).

Member of the Programme Committee of the *European Meeting of the Econometric Society* 1987 (Copenhagen), 1993 (Uppsala), 1994 (Maastricht), 1996 (Istanbul), and of the *7th World Congress of the Econometric Society* 1995 (Tokyo).

Co-organizer of the *IBM Europe Institute* seminar on *Econometric Modeling* (Oberlech, July 1986).

Referee of *Annales d'Économie et de Statistique*, *Computational Statistics & Data Analysis*, *Econometrica*, *Econometric Reviews*, *Econometrics Journal*, *Econometric Theory*, *Empirical Economics*, *International Economic Review*, *Journal of Applied Econometrics*, *Journal of Business & Economic Statistics*, *Journal of Econometrics*, *Journal of Economic Dynamics and Control*, *Journal of the Italian Statistical Society*, *Journal of the Royal Statistical Society B*, *Metron*, *Research in Economics*, *Scandinavian Journal of Statistics*, *Statistica*.

Session Chairman (*European Meeting of the Econometric Society*, *World Congress of the Econometric Society*, *International Symposium on Forecasting*, *International Statistical Institute*, *Società Italiana di Statistica*).

Reviewer of research projects, National Science Foundation (Washington D.C., 1984).

Member of the Scientific Commissions *Metodi Statistici ed Econometria* (1990-93), and *Nuove Tecnologie Informatiche in Statistica* (1993-96) of the Italian Statistical Society (SIS).

Co-organizer of the CIDE and SIS Seminars *Modelli Dinamici di Breve e Lungo Periodo* (Firenze, November 1992) and *Modelli Non Lineari e Reti Neurali* (Bologna, January 1995).

## Education

*Laurea con lode*, Electrical Engineering, University of Bologna, 1969.

*Maturità Classica*, Ferrara, 1964.

## Visiting

Universität Dortmund, Fachbereich Statistik (July 1998). Stockholm School of Economics, Department of Economic Statistics (June 1998). University of Wyoming, Laramie, Department of Economics (December 1990 and February-March 1998). University of Tilburg, CENTER (February 1990). University of Birmingham, Department of Economics (February 1990). University of Warwick, Department of Economics (Summer Workshop 1985). University of Bonn, Department of Economics (June-September 1979).

## Lectures and seminars

University of Trieste (2001, 2010). University of Genova (2009). University of Verona (2009). University of Copenhagen (2008). ECARES-ULB (Bruxelles, 2007). Ente Einaudi (Roma, 2000). University of Salerno (2000). European University Institute (Firenze, 1994, 1999). Stockholm School of Economics (1998). University of Dortmund (1998). Rheinisch Westfälisches Institut für Wirtschaftsforschung (Essen, 1998). Jiaotong University-CEIBS (Shanghai, 1996, 1998). University of Wyoming (Laramie, 1990, 1998). University of Udine (1997). University of Valencia (1995). University of Trento (1992). University of Tilburg-CENTER (1990). University of Birmingham (1990). University of Napoli Federico II (1990). University of Padova (1984, 1990). Seminari CIDE (Università Cattolica, Milano, 1987, 1988). *Séminaire Malinvaud*, INSEE (Paris, 1987). University of Venezia (1987). Banca d'Italia (Roma, 1987). University of Warwick (1985). Annual Meeting of the Swedish Econometricians (Kristianstadt, 1983). Michigan State University (East Lansing, 1983). University of Bonn (1979). Sogesta (Urbino, 1978). University of Modena (1977). Prometeia (Bologna, 1977).

## Author of software packages

Indirect Estimation (1996-2008):

variance reduction in indirect inference using control variates, constrained estimation, with application to stochastic volatility and conditionally heteroskedastic factor models.

Stochastic Simulation of Tobit models and ARCH-GARCH models (1989-96):

Monte Carlo simulation, computational performances of estimators (convergence speed), simulation approach to small sample behaviour of estimators (for personal and mainframe computers).

Stochastic Simulation of Macroeconometric Models (1976-88):

Monte Carlo simulation of large scale nonlinear macroeconometric models, estimation of simultaneous equations, simulation approach to small sample behaviour of estimators (instrumental variables and maximum likelihood), multipliers, forecasts and related confidence intervals (for mainframe computers, adapted to PC).

Interactive Management of Time Series (1973-82):

data handling and transformation, regression analysis and construction of macroeconometric models (for mainframe computers, adapted to PC).

## Applied econometric work

Estimation, simulation and validation of macroeconometric models:

Il Modellaccio (University of Ancona). Italian model of Project Link (University of Bologna and Prometeia). ISPE model (*Istituto di Studi per la Programmazione Economica*, Roma). Mini-DMS and Micro-DMS models of INSEE (Paris). German models of Project Link, Model-5 and Model-10 (University of Bonn). IBM/UK quarterly model. COMET (a linkage model of the EEC countries). Model Link (the linkage import/ export matrix).

## PUBLICATIONS

### (A) Book

- [1] Calzolari, G. (1987): *La Varianza delle Previsioni nei Modelli Econometrici*. Padova: CLEUP Editore.

### (B) Journals printed in Italy

- [5] Calzolari, G., F. Di Iorio, and G. Fiorentini (2001): "Indirect Inference and Variance Reduction using Control Variates", *Metron* 59, 39-53.
- [4] Calzolari, G., and G. Fiorentini (1993): "Estimating Variances and Covariances in a Censored Regression Model", *Statistica* 53, 323-339.
- [3] Bianchi, C., G. Calzolari, P. Corsi, and L. Panattoni (1985): "Asymptotic Properties of Dynamic Multipliers in Nonlinear Econometric Models", *Economic Notes* 14, 97-117.
- [2] Calzolari, G. (1983): "Sull'Affidabilità Previsiva dei Modelli Econometrici: Valutazione A Priori degli Errori di Previsione", *Note di Informatica* 3, 15-28.
- [1] Bianchi, C., G. Calzolari e F. Sartori (1982): "Stime 2SLS con Componenti Principali di un Modello Non Lineare dell'Economia Italiana", *Note Economiche* 2, 114-137.

### (C) Journals printed in other countries

- [32] Calzolari, G., and L. Magazzini (2011, forthcoming): "Autocorrelation and Masked Heterogeneity in Panel Data Models Estimated by Maximum Likelihood", *Empirical Economics* (in press; DOI: 10.1007/s00181-011-0487-7).
- [31] Lombardi, M. J., and G. Calzolari (2009): "Indirect Estimation of  $\alpha$ -Stable Stochastic Volatility Models", *Computational Statistics and Data Analysis* 53, 2298-2308.
- [30] Sentana, E., G. Calzolari, and G. Fiorentini (2008): "Indirect Estimation of Large Conditionally Heteroskedastic Factor Models, with an Application to the Dow 30 Stocks", *Journal of Econometrics* 146, 10-25.
- [29] Lombardi, M. J., and G. Calzolari (2008): "Indirect Estimation of  $\alpha$ -Stable Distributions and Processes", *Econometrics Journal* 11, 193-208.
- [28] Di Iorio, F., and G. Calzolari (2006): "Discontinuities in Indirect Estimation: an Application to EAR Models", *Computational Statistics and Data Analysis* 50, 2124-2136.
- [27] Calzolari, G., G. Fiorentini, and E. Sentana (2004): "Constrained Indirect Estimation", *Review of Economic Studies* 71, 945-973.
- [26] Fiorentini, G., E. Sentana, and G. Calzolari (2004): "On the Validity of the Jarque-Bera Normality Test in Conditionally Heteroskedastic Dynamic Regression Models", *Economics Letters* 83, 307-312.
- [25] Fiorentini, G., E. Sentana, and G. Calzolari (2003): "Maximum Likelihood Estimation and Inference in Multivariate Conditionally Heteroscedastic Dynamic Regression Models with Student  $t$  Innovations, ", *Journal of Business & Economic Statistics* 21, 532-546.
- [24] Calzolari, G., and G. Fiorentini (1998): "A Tobit Model with GARCH Errors", *Econometric Reviews* 17, 85-104.
- [23] Calzolari, G., F. Di Iorio, and G. Fiorentini (1998): "Control Variates for Variance Reduction in Indirect Inference: Interest Rate Models in Continuous Time", *Econometrics Journal* 1, C100-C112.
- [22] Fiorentini, G., G. Calzolari, and L. Panattoni (1996): "Analytic Derivatives and the Computation of GARCH Estimates", *Journal of Applied Econometrics* 11, 399-417.
- [21] Calzolari, G., and G. Fiorentini (1993): "Alternative Covariance Estimators of the Standard Tobit Model", *Economics Letters* 42, 5-13.
- [20] Calzolari, G., and L. Sampoli (1993): "A Curious Result on Exact FIML and Instrumental Variables", *Econometric Theory* 9, 296-309.

- [19] Calzolari, G., and L. Panattoni (1990): “Mode Predictors in Nonlinear Systems with Identities”, *International Journal of Forecasting* 6, 317-326.
- [18] Sterbenz, F. P., and G. Calzolari (1990): “Alternative Specifications of the Error Process in the Stochastic Simulation of Econometric Models”, *Journal of Applied Econometrics* 5, 137-150.
- [17] Calzolari, G., and L. Panattoni (1988): “Alternative Estimators of FIML Covariance Matrix: A Monte Carlo Study”, *Econometrica* 56, 701-714.
- [16] Calzolari, G. (1987): “Forecast Variance in Dynamic Simulation of Simultaneous Equation Models”, *Econometrica* 55, 1473-1476.
- [15] Calzolari, G., L. Panattoni, and C. Weihs (1987): “Computational Efficiency of FIML Estimation”, *Journal of Econometrics* 36, 299-310.
- [14] Bianchi, C., J. L. Brillet, and G. Calzolari (1987): “Measuring Forecast Uncertainty: A Review with Evaluation Based on a Macro Model of the French Economy”, *International Journal of Forecasting* 3, 211-227.
- [13] Weihs, C., G. Calzolari, and L. Panattoni (1987): “The Behavior of Trust-Region Methods in FIML-Estimation”, *Computing* 38, 89-100.
- [12] Calzolari, G., and F. P. Sterbenz (1986): “Control Variates to Estimate the Reduced Form Variances in Econometric Models”, *Econometrica* 54, 1483-1490.
- [11] Bianchi, C., J. L. Brillet et G. Calzolari (1984): “Analyse et Mesure de l’Incertitude en Prévision d’un Modèle Econométrique. Application au Modèle Mini-DMS”, *Annales de l’INSEE* 54, 31-62.
- [10] Calzolari, G. (1983): “Asymptotic Distribution of Power Spectra and Peak Frequencies in the Stochastic Response of Econometric Models”, *Journal of Economic Dynamics and Control* 5, 235-247.
- [9] Calzolari, G. (1983): “Asymptotic Standard Errors of Point Elasticities Calculated from Simultaneous Equation Systems”, *Economics Letters* 11, 237-244.
- [8] Bianchi, C., G. Calzolari, and P. Corsi (1981): “Estimating Asymptotic Standard Errors and Inconsistencies of Impact Multipliers in Nonlinear Econometric Models”, *Journal of Econometrics* 16, 277-294.
- [7] Calzolari, G. (1981): “A Note on the Variance of Ex-Post Forecasts in Econometric Models”, *Econometrica* 49, 1593-1595.
- [6] Bianchi, C., and G. Calzolari (1980): “The One-Period Forecast Errors in Nonlinear Econometric Models”, *International Economic Review* 21, 201-208.  
Reprinted in *Macroeconometric Modelling*, ed. by K. F. Wallis (1994). Cheltenham: Edward Elgar Publishing Ltd., *The International Library of Critical Writings in Econometrics*, Vol. 2, 183-190.
- [5] Calzolari, G. (1979): “Antithetic Variates to Estimate the Simulation Bias in Non-Linear Models”, *Economics Letters* 4, 323-328.
- [4] Bianchi, C., G. Calzolari, and P. Corsi (1979): “On the Stability of the Klein-I Model”, *Economics Letters* 4, 33-35.
- [3] Bianchi, C., G. Calzolari, and P. Corsi (1979): “A Monte Carlo Approach to Compute the Asymptotic Standard Errors of Dynamic Multipliers”, *Economics Letters* 2, 161-164.
- [2] Bianchi, C., G. Calzolari, and P. Corsi (1979): “A Note on the Numerical Results by Goldberger, Nagar and Odeh”, *Econometrica* 47, 505-506.
- [1] Bianchi, C., G. Calzolari, and P. Corsi (1978): “A Program for Stochastic Simulation of Econometric Models”, *Econometrica* 46, 235-236.

**(D) Book chapters, essays in collective volumes, conference proceedings**

- [27] Calzolari, G., and A. Di Pino (2009): “Individual Wage and Reservation Wage: Efficient Estimation of a Simultaneous Equation Model with Endogenous Limited Dependent Variables”, in *Proceedings of Scientific Meeting*

of the Italian Statistical Society: *Statistical Methods for the Analysis of Large Data-Sets*. Pescara: University G. D'Annunzio, September 23-25, 343-346. ISBN 978-88-6129-425-7.

- [26] Otranto, E., G. Calzolari, and F. Di Iorio (2005): "Indirect Estimation of Markov Switching Models with Endogenous Switching", in *S.Co. 2005: Modelli Complessi e Metodi Computazionali Intensivi per la Stima e la Previsione*, a cura di C. Provasi. Padova: CLEUP Editrice, 227-232.
- [25] Lombardi, M. J., G. Calzolari, and G. M. Gallo (2003): "Indirect Inference for  $\alpha$ -Stable Distributions", in *S.Co. 2003: Modelli Complessi e Metodi Computazionali Intensivi per la Stima e la Previsione*, Atti del Convegno, Treviso 4-6 settembre. Venezia: Università Ca' Foscari, Dipartimento di Statistica, 278-283.
- [24] Calzolari, G., and L. Neri (2002): "Imputation of Continuous Variables Missing at Random using the Method of Simulated Scores", in *Compstat 2002, Proceedings in Computational Statistics, 15th Symposium held in Berlin*, ed. by W. Härdle and B. Rönz. Heidelberg: Physika Verlag, 389-394.
- [23] Calzolari, G., L. Magazzini, and F. Mealli (2001): "Simulation-Based Estimation of Tobit Model with Random Effects", in *Econometric Studies, a Festschrift in Honour of Joachim Frohn*, ed. by R. Friedmann, L. Knüppel, and H. Lütkepohl. Münster: LIT Verlag, 349-369.
- [22] Calzolari, G., G. Fiorentini, and E. Sentana (2001): "Indirect Inference Estimation of Conditionally Heteroskedastic Factor Models", in *Modelli Complessi e Metodi Computazionali Intensivi per la Stima e la Previsione*, a cura di C. Provasi. Padova: CLEUP Editrice, 63-68.
- [21] Calzolari, G. (1994): "Presentazione", in *Software Sperimentale per la Statistica: Una Raccolta di Programmi Didattico-Applicativi*, a cura della Società Italiana di Statistica. Firenze: Centro Duplicazione Offset, 5-6.
- [20] Calzolari, G. (1992): "Stima delle Equazioni Simultanee Non-Lineari: Una Rassegna", in *Atti della XXXVI Riunione Scientifica della Società Italiana di Statistica*. Roma: CISU Centro d'informazione e stampa universitaria, Vol. 1, 447-458.
- [19] Bianchi, G., J. L. Brillet, and G. Calzolari (1988): "A Trade-off Criterion for Evaluating Effectiveness and Reliability of Alternative Policy Actions", in *Atti del Dodicesimo Convegno A.M.A.S.E.S.* Palermo, 14-16 Settembre, 185-217.
- [18] Calzolari, G., and L. Panattoni (1988): "Finite Sample Performance of the Robust Wald Test in Simultaneous Equation Systems", in *Advances in Econometrics*, Vol. 7, ed. by G. F. Rhodes, Jr., and T. B. Fomby. Greenwich, CO: JAI Press Inc., 163-191.
- [17] Calzolari, G. e L. Panattoni (1988): "Il Problema della Coerenza delle Previsioni nei Modelli Econometrici Non Lineari", in *Atti della XXXIV Riunione Scientifica della Società Italiana di Statistica*. Siena: Nuova Immagine Editrice, Vol. 2/1, 271-278.
- [16] Calzolari, G., and L. Panattoni (1987): "Gradient Methods in FIML Estimation of Econometric Models", in *Developments of Control Theory for Economic Analysis*, ed. by C. Carraro, and D. Sartore. Dordrecht: Martinus Nijhoff, Kluwer Academic Publishers, 143-153.
- [15] Bianchi, C., and G. Calzolari (1983): "Standard Errors of Forecasts in Dynamic Simulation of Nonlinear Econometric Models: Some Empirical Results", in *Time Series Analysis: Theory and Practice 3*, ed. by O. D. Anderson. Amsterdam: North-Holland Publishing Company, 177-198.
- [14] Bianchi, C., and G. Calzolari (1982): "Evaluating Forecast Uncertainty Due to Errors in Estimated Coefficients: Empirical Comparison of Alternative Methods", in *Evaluating the Reliability of Macro-Economic Models*, ed. by G. C. Chow, and P. Corsi. New York: John Wiley & Sons, Inc., 251-277.
- [13] Bianchi, C., G. Calzolari, and P. Corsi (1981): "Standard Errors of Multipliers and Forecasts from Structural Coefficients with Block-Diagonal Covariance Matrix", in *Dynamic Modelling and Control of National Economies (IFAC)*, ed. by J. M. L. Janssen, L. F. Pau, and A. J. Straszak. Oxford: Pergamon Press, 311-316.
- [12] Bianchi, C., and G. Calzolari (1981): "A Simulation Approach to Some Dynamic Properties of Econometric Models", in *Mathematical Programming and its Economic Application*, ed. by G. Castellani, and P. Mazzoleni. Milano: Franco Angeli Editore, 607-621.
- [11] Bianchi, C., and G. Calzolari (1980): "Simulation of a Nonlinear Econometric Model", in *Simulation of Systems*

'79, ed. by L. Dekker, G. Savastano, and G. C. Vansteenkiste. Amsterdam: North-Holland Publishing Company, 105-113.

- [10] Bianchi, C., G. Calzolari, and P. Corsi (1980): "A Package for Analytic Simulation of Econometric Models", in *Optimization Techniques, Proceedings of the 9th IFIP Conference on Optimization Techniques, Warsaw, September 4-8, 1979*, ed. by K. Iracki, K. Malanowski, and S. Walukiewicz. Berlin: Springer Verlag, Part 2, 404-413.
- [9] Bianchi, C., G. Calzolari, and P. Corsi (1979): "Some Results on the Stochastic Simulation of a Nonlinear Model of the Italian Economy", in *Models and Decision Making in National Economies*, ed. by J. M. L. Janssen, L. F. Pau, and A. Straszak. Amsterdam: North-Holland Publishing Company, 411-418.
- [8] Ranuzzi, P., C. Bianchi, and G. Calzolari (1979): "A Bilateral Linkage Model for the EEC Economies", in *Models and Decision Making in National Economies*, ed. by J. M. L. Janssen, L. F. Pau, and A. Straszak. Amsterdam: North-Holland Publishing Company, 171-178.
- [7] Bianchi, C., G. Calzolari, and E. M. Cleur (1978): "Spectral Analysis of Stochastic and Analytic Simulation Results for a Nonlinear Model for the Italian Economy", in *Compstat 1978, Proceedings in Computational Statistics*, ed. by L. C. A. Corsten, and J. Hermans. Vienna: Physica Verlag, 348-354.
- [6] Calzolari, G., and P. Corsi (1977): "Stochastic Simulation as a Validation Tool for Econometric Models", in *Models for Regional Planning and Policy-Making*, ed. by A. Straszak, and B. V. Wagle. Peterlee: IBM UKSC 0097, 359-369.
- [5] Bianchi, C., G. Calzolari, P. Corsi, F. Sartori e I. Specioso (1977): "Aggiornamento del Modello al 1974 e Nuove Simulazioni", in *Il Modellaccio*, a cura di Giorgio Fuà. Milano: Franco Angeli Editore, Vol. 4, 162-188.
- [4] Bianchi, C., G. Calzolari, and P. Corsi (1976): "Simulation Properties of Alternative Methods of Estimation: an Application to a Model of the Italian Economy", in *Compstat 1976, Proceedings in Computational Statistics*, ed. by J. Gordesch, and P. Naeve. Vienna: Physica Verlag, 407-415.
- [3] Bianchi, C., G. Calzolari, and P. Corsi (1976): "Divergences in the Results of Stochastic and Deterministic Simulation of an Italian Non-Linear Econometric Model", in *Simulation of Systems*, ed. by L. Dekker. Amsterdam: North-Holland Publishing Company, 653-661.
- [2] Bianchi, C., G. Calzolari, T. A. Ciriani, P. Corsi, E. Cleur, G. C. Romagnoli e B. Sitzia (1976): "Analisi e Simulazione Stocastica di un Modello Aggregato dell'Economia Italiana 1952-1971", in *Teoria dei Sistemi ed Economia*, a cura della Segreteria del G.E.S., prefazione di S. Lombardini e A. Ruberti. Bologna: Il Mulino, 193-219.
- [1] Calzolari, G. (1974): "Interactive Management for Time Series", in *Compstat 1974, Proceedings in Computational Statistics*, ed. by G. Bruckmann, F. Ferschl and L. Schmetterer. Vienna: Physica Verlag, 468-478.

#### **(E) Working papers of universities and research institutes**

- [28] Calzolari, G., and L. Magazzini (2011): "Moment Conditions and Neglected Endogeneity in Panel Data Models". Università di Verona, Dipartimento di Scienze Economiche, Working Paper 2011/02, presented at the *fourth Italian Congress of Econometrics and Empirical Economics*. Università di Pisa, January 19-21.
- [27] Magazzini, L., and G. Calzolari (2010): "Negative Variance Estimates in Panel Data Models". Università di Verona, Dipartimento di Scienze Economiche, Working Paper 2010/15.
- [26] Calzolari, G., and L. Neri (2010): "The Method of Simulated Scores for Estimating Multinormal Regression Models with Missing Values". Università di Firenze, Dipartimento di Statistica "G. Parenti", Working Paper 2010/01.
- [25] Calzolari, G., and L. Magazzini (2009): "Poor Identification and Estimation Problems in Panel Data Models with Random Effects and Autocorrelated Errors". Università di Verona, Dipartimento di Scienze Economiche, Working Paper 2009/53, presented at the *third Italian Congress of Econometrics and Empirical Economics*. Ancona: Università Politecnica delle Marche, January 30-31.
- [24] Sentana, E., G. Calzolari, and G. Fiorentini (2007): "Indirect Estimation of Large Conditionally Heteroskedastic Factor Models, with an Application to the Dow 30 Stocks". Rimini Center for Economic Analysis, Working

Paper 40-07.

- [23] Lombardi, M. J., and G. Calzolari (2006): “Indirect Estimation of  $\alpha$ -Stable Stochastic Volatility Models”. Università di Firenze, Dipartimento di Statistica “G. Parenti”, Working Paper 2006/07.
- [22] Lombardi, M. J., and G. Calzolari (2004): “Indirect Estimation of  $\alpha$ -Stable Distributions and Processes”. Università di Firenze, Dipartimento di Statistica “G. Parenti”, Working Paper 2004/07.
- [21] Calzolari, G., and L. Neri (2002): “A Method of Simulated Scores for Imputation of Continuous Variables Missing at Random”. Università di Firenze, Quaderni del Dipartimento di Statistica “G. Parenti”, 49/2002, presented at the *European Meeting of the Econometric Society*. Venezia: Università Ca’ Foscari, August 25-28.
- [20] Calzolari, G., F. Mealli, and C. Rampichini (2001): “Alternative Simulation-Based Estimators of Logit Models with Random-Effects”. Università di Firenze, Quaderni del Dipartimento di Statistica “G. Parenti”, 48/2001, presented at the *European Meeting of the Econometric Society*. Universidade de Santiago de Compostela: August 29-September 1, 1999.
- [19] Calzolari, G., G. Fiorentini, and E. Sentana (2001): “Constrained Indirect Inference Estimation”. London School of Economics, Financial Markets Group, discussion paper No. 384.
- [18] Fiorentini, G., E. Sentana, and G. Calzolari (2000): “The Score of Conditionally Heteroskedastic Dynamic Regression Models with Student-t Innovations, and an LM Test for Multivariate Normality”. Madrid: CEMFI, Working Paper No. 0007.
- [17] Calzolari, G., F. Di Iorio, and G. Fiorentini (1999): “Indirect Estimation of Just-Identified Models with Control Variates”. Università di Firenze, Quaderni del Dipartimento di Statistica “G. Parenti”, 46/1999.
- [16] Weihs, C., G. Calzolari, and M. C. Röhl (1999): “Variance Reduction with Monte Carlo Estimates of Error Rates in Multivariate Classification”. Universität Dortmund: Technical Report 44/1999, SFB 475.
- [15] Calzolari, G., F. Di Iorio, and G. Fiorentini (1999): “Indirect Inference and Variance Reduction using Control Variates”. Venezia: Università Ca’ Foscari, Dipartimento di Statistica, *Modelli Complessi e Metodi Computazionali Intensivi per la Stima e la Previsione* 229-234.
- [14] Calzolari, G., F. Di Iorio, and G. Fiorentini (1996): “Control Variates for Variance Reduction in Indirect Inference: Interest Rate Models in Continuous Time”. Shanghai: Jiaotong University, China Europe International Business School, Working Paper No. 006, presented at the *European Conferences of the Econom[etric] Community EC<sup>2</sup>*, Firenze, 12-14 December.
- [13] Calzolari, G., and G. Fiorentini (1994): “Conditional Heteroskedasticity in Nonlinear Simultaneous Equations”. Florence: European University Institute, Working Paper ECO No. 94/44, presented at the *European Meeting of the Econometric Society*, Maastricht, University of Limburg, August 29-September 2.
- [12] Calzolari, G., G. Fiorentini, and L. Panattoni (1993): “Alternative Estimators of the Covariance Matrix in GARCH Models”. Università di Messina: Facoltà di Scienze Politiche, Istituto di Economia, Statistica e Analisi del Territorio, Quaderno No. 11, presented at the *European Meeting of the Econometric Society*, Uppsala, August 22-26.
- [11] Calzolari, G., and G. Fiorentini (1992): “Alternative Methods for GARCH Estimation”, Università di Firenze: Dipartimento Statistico, Working Paper No. 44, presented at the *European Meeting of the Econometric Society*, Bruxelles, August 24-28.
- [10] Bianchi, C., G. Calzolari, and F. P. Sterbenz (1991): “Simulation of Interest Rate Options Using ARCH”. Università di Messina: Facoltà di Scienze Politiche, Istituto di Economia, Statistica e Analisi del Territorio, Quaderno No. 10, presented at the *European Meeting of the Econometric Society*, Cambridge, U.K., September 2-6.
- [9] Sterbenz, F. P., and G. Calzolari (1987): “The Impact of Structural Error Specifications on the Simulation of Nonlinear Econometric Models”. Columbus: The Ohio State University, College of Business, WPS 87-37, presented at the *European Meeting of the Econometric Society*, Copenhagen, August 24-28.
- [8] Bianchi, C. e G. Calzolari (1987): “Varianza delle Previsioni e dei Parametri della Forma Ridotta dei Modelli Simultanei: Metodi di Calcolo Analitici e Metodi Monte Carlo”. Milano: Università Cattolica del Sacro Cuore,

Istituto di Matematica Generale, Finanziaria ed Economica, Quaderno No. 3.

- [7] Brillet, J. L., G. Calzolari, and L. Panattoni (1986): "Coherent Optimal Prediction with Large Nonlinear Systems: An Example Based on a French Model". Paris: INSEE, Service des Programmes, presented at the *European Meeting of the Econometric Society*, Budapest, September 1-5.
- [6] Bianchi, C., J. L. Brillet, and G. Calzolari (1986): "Forecasts and Constraints on Policy Actions: The Reliability of Alternative Instruments". Paris: INSEE, Service des Programmes, presented at *The Sixth International Symposium on Forecasting*, Paris, INSEAD, June 15-18.
- [5] Bianchi, C., J. L. Brillet, and G. Calzolari (1985): "Effectiveness versus Reliability of Policy Actions under Government Budget Constraint: The Case of France". Paris: INSEE, Service des Programmes, presented at *The Fifth World Congress of the Econometric Society*, M.I.T., Cambridge, MA, August 17-24.
- [4] Bianchi, C., G. Calzolari, and P. Corsi (1979): "The Asymptotic Distribution of Impact Multipliers for a Non-Linear Structural Econometric Model", in *Seminari di Econometria e di Matematica Applicata*. Università degli Studi di Modena: Istituto Statistico-Matematico, Facoltà di Economia e Commercio, 1-24.
- [3] Calzolari, G. (1979): "Stochastic Simulation Experiments on Model5 of Bonn University". Universität Bonn: Institut für Gesellschafts- und Wirtschaftswissenschaften, Wirtschaftstheoretische Abteilung, paper No. 102.
- [2] Calzolari, G. (1979): "The Asymptotic Distribution of Power Spectra in Dynamic Econometric Models". Universität Bonn: Institut für Gesellschafts- und Wirtschaftswissenschaften, Wirtschaftstheoretische Abteilung, paper No. 101.
- [1] Calzolari, G. (1979): "The Deterministic Simulation Bias in the Klein-Goldberger Model". Universität Bonn: Institut für Gesellschafts- und Wirtschaftswissenschaften, Wirtschaftstheoretische Abteilung, paper No. 100.

#### **(F) Software: IBM Technical disclosure bulletin**

- [5] Bianchi, C., and G. Calzolari (1979): "A Condensed Version of the O.E.C.D. Foreign Trade by Commodities Tapes", *IBM Technical Disclosure Bulletin* 22, 1944-1946.
- [4] Bianchi, C., G. Calzolari, and P. Corsi (1978): "Stochastic Simulation: a Package for Monte Carlo Experiments on Econometric Models", *IBM Technical Disclosure Bulletin* 20, 3972-3975.
- [3] Bianchi, C., G. Calzolari, and P. Corsi (1976): "Utilizing a Program Loaded into the User Program Area, to Load Another Module in the Same User Program Area", *IBM Technical Disclosure Bulletin* 19, 1303-1305.
- [2] Bianchi, C., G. Calzolari, and P. Corsi (1976): "User Defined Functions and Operators", *IBM Technical Disclosure Bulletin* 19, 1300-1302.
- [1] Bianchi, C., G. Calzolari, and P. Corsi (1974): "Interactive Management of Time Series", *IBM Technical Disclosure Bulletin* 17, 1653-1657.

#### **(G) IBM Technical reports**

- [11] Calzolari, G., and L. Panattoni (1985): "Small Sample Performance of Tests in Econometric Models: The Cost of Robustness". Pisa: *IBM Technical Report* G513-4075, presented at *The Fifth World Congress of the Econometric Society*, M.I.T., Cambridge, MA, August 17-24.
- [10] Bianchi, C., G. Calzolari, and P. Corsi (1981): "Alternative Estimates of the Klein-I Model". Pisa: *IBM Technical Report* G513-3584.
- [9] Bianchi, C., G. Calzolari, and P. Corsi (1979): "On the Restricted Reduced Form of the Klein-I Model". Pisa: *IBM Technical Report* G513-3575.
- [8] Bianchi, C., G. Calzolari, and R. Doret (1978): "Van der Giessen's Reordering Algorithm in the Program for Stochastic Simulation of Econometric Models". Pisa: *IBM Technical Report* Z513-5101.
- [7] Bianchi, C., G. Calzolari, and P. Corsi (1978): "Stochastic Simulation of Econometric Models: Installation Procedures and User's Instructions". Pisa: *IBM Technical Report* G513-3568.

- [6] Bianchi, C., G. Calzolari, and P. Lischi (1978): “A Manageable Support for the O.E.C.D. Data on Foreign Trade by Commodities”. Pisa: *IBM Technical Report* G513-3567.
- [5] Bianchi, C., G. Calzolari, P. Corsi, and B. Sitzia (1976): “Stochastic Simulation of an Aggregated Model of the Italian Economy: Methodological and Empirical Aspects”. Pisa: *IBM Technical Report* G513-3545.
- [4] Calzolari, G., T. A. Ciriani, and P. Corsi (1976): “Generation and Testing of Pseudo-Random Numbers with Assigned Statistical Properties to be Used in the Stochastic Simulation of Econometric Models”. Pisa: *IBM Technical Report* G513-3544.
- [3] Bianchi, C., G. Calzolari e P. Corsi (1975): “DMS/2, Un Sistema per la Soluzione e Simulazione Interattiva di Modelli Econometrici”. Pisa: *Rapporto Tecnico IBM* G513-3538.
- [2] Bianchi, C., G. Calzolari, and P. Corsi (1974): “Interactive Management of Time Series”. Pisa: *IBM Technical Report* G513-3530.
- [1] Calzolari, G. (1973): “Un Linguaggio per la Gestione dell’Archivio delle Serie Storiche”. Pisa: *Nota Tecnica IBM* G513-3704.

**(H) Other papers presented at conferences**

- [24] Calzolari, G., and A. Di Pino (2011): “Simultaneous Equation Models with Endogenous Limited Dependent Variables: Efficiency of Alternative Estimators”, presented at the *fourth Italian Congress of Econometrics and Empirical Economics*. Università di Pisa, January 19-21.
- [23] Calzolari, G., and L. Magazzini (2008): “Estimating Tobit Models for Panel Data with Autocorrelated Errors”, presented at the *European Meeting of the Econometric Society*. Milano, Università Bocconi, August 27-31.
- [22] Magazzini, L., and G. Calzolari (2007): “Modello Tobit a Effetti Casuali: Metodi di Stima Basati sulla Simulazione”, presented at the 4° *Convegno Italiano degli Utenti di Stata*. Roma: September 24-25.
- [21] Fiorentini, G., E. Sentana, and G. Calzolari (2003): “The Relative Efficiency of Pseudo Maximum Likelihood Estimation and Inference in Conditionally Heteroskedastic Dynamic Regression Models”, presented at the *European Meeting of the Econometric Society*. Stockholm University: August 20-24.
- [20] Di Iorio, F., and G. Calzolari (2003): “Relative Efficiency of Indirect Inference for ARFIMA Models”, presented at the *European Meeting of the Econometric Society*. Stockholm University: August 20-24.
- [19] Calzolari, G., G. Fiorentini, and E. Sentana (1999): “Constrained EMM Estimation”, presented at the *European Meeting of the Econometric Society*. Universidade de Santiago de Compostela: August 29-September 1.
- [18] Calzolari, G., F. Mealli, and C. Rampichini (1999): “Indirect Estimation of Logit Multilevel Models”, presented at the *2nd International Amsterdam Conference on Multilevel Analysis*. Amsterdam: August 30-31.
- [17] Calzolari, G., G. Fiorentini, and E. Sentana (1998): “Indirect Inference Estimation of Conditionally Heteroskedastic Factor Models”, presented at *ASSET*. Bologna, October 23-25.
- [16] Calzolari, G., F. Di Iorio, and G. Fiorentini (1998): “Indirect Estimation of Continuous Time Interest Rate Models”, presented at the *Workshop on China’s Financial Markets*. Shanghai: Jiaotong University-CEIBS, August 19-20.
- [15] Calzolari, G., F. Mealli, and C. Rampichini (1998): “Indirect Estimation of Logit Models with Random-Effects”, presented at the *European Meeting of the Econometric Society*. Berlin: Humboldt Universität, August 29-September 2.
- [14] Calzolari, G., and G. Fiorentini (1996): “Indirect Inference for Censored Regression Models with Conditional Heteroskedasticity”, presented at the *European Meeting of the Econometric Society*. Istanbul: Bogazici University, August 25-29.
- [13] Calzolari, G., and L. Sampoli (1989): “Instrumental Variables Interpretations of FIML and Nonlinear FIML”, presented at the *European Meeting of the Econometric Society*. Ludwig Maximilians Universität München, September 4-8.

- [12] Calzolari, G., and L. Panattoni (1988): “Coherent Forecast with Nonlinear Econometric Models”, presented at *The Eighth International Symposium on Forecasting*. Universiteit van Amsterdam and Vrije Universiteit Amsterdam, June 12-15.
- [11] Bianchi, C., J. L. Brillet, and G. Calzolari (1985): “Measuring Forecast Uncertainty in a Macro Model of the French Economy”, presented at *The Fifth International Symposium on Forecasting*. Montreal: McGill University, June 9-12.
- [10] Calzolari, G., and L. Panattoni (1984): “A Simulation Study on FIML Covariance Matrix”, presented at the *European Meeting of the Econometric Society*. Universidad Autonoma de Madrid, September 3-7.
- [9] Calzolari, G., and L. Panattoni (1984): “Evaluating Forecast Uncertainty in Econometric Models: The Effect of Alternative Estimators of Maximum Likelihood Covariance Matrix”, presented at *The Fourth International Symposium on Forecasting*. London Business School, July 8-11.
- [8] Bianchi, C., J. L. Brillet, and G. Calzolari (1983): “Analysis and Measurement of the Uncertainty in Mini-DMS Model for the French Economy”, presented at the *European Meeting of the Econometric Society*. Università di Pisa, August 29-September 2.
- [7] Calzolari, G., and L. Panattoni (1983): “Hessian and Approximated Hessian Matrices in Maximum Likelihood Estimation: A Monte Carlo Study”, presented at the *European Meeting of the Econometric Society*. Università di Pisa, August 29-September 2.
- [6] Bianchi, C., and G. Calzolari (1983): “Confidence Intervals of Forecasts from Nonlinear Econometric Models”, presented at *The Third International Symposium on Forecasting*. Philadelphia: The Wharton School, June 5-8.
- [5] Bianchi, C., G. Calzolari, P. Corsi, and L. Panattoni (1982): “Uncertainty of Policy Recommendations for Non-linear Econometric Models: Some Empirical Results”, presented at the *1982 Conference on Economic Dynamics and Control, “Decision Making Under Uncertainty”*. Washington DC: Federal Reserve Board, June 9-11.
- [4] Bianchi, C., G. Calzolari, P. Corsi, and L. Panattoni (1980): “Significance of the Characteristic Roots in Linearized Econometric Models”, presented at the *Economics and Control Conference*. Princeton University, June 2-4.
- [3] Bianchi, C. e G. Calzolari (1978): “La Varianza dell’Errore di Previsione nei Modelli Econometrici: Applicazione ad un Modello Nonlineare dell’Economia Italiana”, presentato al *IV Convegno su Teoria dei Sistemi ed Economia*. Udine: C.I.S.M., 23-25 Ottobre.
- [2] Bianchi, C., G. Calzolari, E. M. Cleur, G. Gambetta, A. Stagni, and F. Sterbenz (1978): “Stochastic Simulation and Dynamic Properties of the New Version of the Italian Model”, presented at the *Annual Meeting of Project Link*. Athens: Center of Planning and Economic Research, October 2-7.
- [1] Bianchi, C., G. Calzolari, and P. Corsi (1976): “Monte Carlo Methods in Econometrics: a Package for the Stochastic Simulation”, presented at the *Congrès Européen des Statisticiens*. Université Scientifique et Médicale de Grenoble, September 6-10.