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Present Position: Full Professor of Political Economy at the Faculty of Economics of the Università di Siena (Italy) since 2006.
Previous Positions: Associate Professor of Political Economy at the Faculty of Economics of the Università di Siena (Italy) 1998-2006, Research Fellow at the Law Schoot of the Università di Siena (Italy) 1984-1998.
Fields of interest: Econometrics, Macroeconomics, Control Theory and Scientometrics.

Academic Degrees
1989 Ph. D. in Economics at the University of Texas at Austin (USA) with a dissertation entitled "Time-Varying Parameters in Adaptive Control", supervisor Prof. D. Kendrick.
1980 B. A. in Economic Sciences at the Faculty of Economic and Banking Sciences at the Università di Siena with a thesis entitled "La Modificazione della Scala di Priorità delle Funzioni dell'Impresa: Una Verifica per l'Italia (1963-1977)", supervisor Prof. M. Amendola.

Teaching Experience
1989: Econometrics, Microeconomics and Statistics - University of Texas at Austin. 1994/96: Regional Economics at the Law School of the Università di Siena.
1996/97: Economic Policy and Regional Economics at the Law School of the Università di Siena.
1997/98: Econometrics and Regional Economics at the Faculty of Government of the Università di Siena.
1998/99: Macroeconomics at the Faculty of Economics and Econometrics at the Faculty of Government of the Università di Siena.
1999/00: Macroeconomics and Econometrics I at the Faculty of Economics and Econometrics at the Faculty of Government of the Università di Siena.
2001/03: Macroeconomics and Econometrics II at the Faculty of Economics.
2003/06, 2007/09: Macroeconomics and Econometrics II (or Applied Econometrics) at the Faculty of Economics.
1999/00, 2001/06, 2007/09: Econometrics in the Doctoral Program in Political Economy at the Università di Siena.
2009/15, 2016-present: Macroeconomics in LT Economics and Banking and Econometrics in LM Finance in the School of Economics and Management at the Università di Siena and Econometrics in the Doctoral Program in Political Economy at the same university.

Research Activity
1989-present: Referee of *Computational Economics*, *Journal of Economic Dynamics and Control*, *Economic Notes*, *Studi e Note di Economia*, Quaderni del Dipartimento di Economia Politica dell'Università di Siena, *Journal of Structural Change and Economic Dynamics* and *Sankhya*.

1984-present: His publications cover the following areas: flexible functional forms, control theory (optimal stochastic control and robust control), time-varying parameters, sustainable growth under uncertainty, sustainability of public debt, exact tests in econometrics, global optimization of functions, rational expectations models; assessment of scientific research and topics in Finance such as the impact of macroeconomic news on the Italian stock market and Gamma Variance processes.
1996-2014: Member of the Society of Computational Economics.
2008: Member of the American Economic Association and European Economic Asociation.
2000-2001. 2006-2007: Visiting Scholar at the University of Texas at Austin.
1999: Research project “Controlling a system with rational expectations” partially funded by PAR 1999 (University of Sienna).
2000: Research project “Global optmimization with applications in insurance, economics, finance and statistics” partially funded by PAR 2000 (Università di Siena).
2004: Research project “Controlling a system with time-varying parameters vs robust control” partially funded by PAR 2004 (Università di Siena).
2005-06: Guest Editor for the Special Issue of *Computational Economics* entitled “Stochastic Optimization*”*.
2006-08: member of the Sienna Research Unit at PRIN 2005 research project “La valutazione della ricerca economica in una prospettiva storica: misure e argomenti a confronto”
2012-14: Scientific research supervisor for Silvia Tiezzi, project number 298094 (Allegro) entitled “Consumer Behavior and Energy Taxation: Exploiting Psychological Biases in Designing a Green Tax Reform”, duration 24 months (start date April 1st, 2012), financed by EU with call identifier FP7-PEOPLE-2011-IOF Marie Curie Action: "International Outgoing Fellowships for Career Development”.
1999-present: supervisor for several Ph.D. dissertations in the Doctoral Program in Political Economy at the Università di Siena.
2018-20: Guest Editor for the Special Issue of *Computational Economics* entitled “Optimal Experimentation in Economics*”.*
2016-present: Associate Editor of *Computational Economics.*

Conferences
1989: 6° International symposium of IFAC, Edimburgh, 27-29 June.
1990: 6° World Congress of the Econometric Society, Barcellona, 22-28 August.
1996: 2° International Conference on Computing in Economics and Finance, Geneva (Switzerland), 26-28 June.
1998: 4° International Conference on Computing in Economics and Finance, Cambridge (UK), 29/6-1/7.
2002: 8° International Conference on Computing in Economics and Finance, Aix-en- Provence (FR), 27-29 June (member of the organizing committee).
2004: 10° International Conference on Computing in Economics and Finance, Amsterdam (NL), 8- 10 July.
2006: 12° International Conference on Computing in Economics and Finance, Limassol (Cyprus), 22-24 June.

2008: 14° International Conference on Computing in Economics and Finance, Paris (France), 26-28 June.

2009: Convegno "INNOVAZIONE E SOCIETÀ 2009: Metodi e politiche per la valutazione dei servizi" promosso dal gruppo della Società Italiana di Statistica "Statistica per la Valutazione e la Qualità nei Servizi", Facoltà di Economia dell'Università degli Studi di Brescia, Brescia 24-26 June;.

2009: 15° International Conference on Computating in Economics and Finance, Sydney (Australia), 15-17 July;

2010: Workshop in honor of Steve Turnovsky, Institute of Advanced Studies, Vienna (Austria), 20- 22 May.

2012: 18° International Conference on Computing in Economics and Finance, Praga (Repubblica Ceca), 27-29 June.

2013: 19° International Conference on Computing in Economics and Finance, Vancouver, BC (Canada), 10-12 July.

Publications

1) "A Simple Introduction to Flexible Functional Forms and Consumer Behavior Theory," Quaderni del Dipartimento di Economia dell'Università di Siena, n. 64, 1987.

2) "Flexible Functional Forms and the Simultaneous Estimation of Embodied and Disembodied Technical Progress," *Economic Notes*, 16, 102-120, 1987.

3) "The Stochastic Parameter Problem: A Survey of The Literature," *Economic Notes*, 17, 112-136, 1988.

4) "Adaptive Control in the Presence of Time-Varying Parameters," 6° International symposium of IFAC, Preprints vol. II, 739-744, 1989.

5) Time-Varying Parameters in Adaptive Control, Center for Economic Research, University of Texas at Austin (USA), 1989.

6) "Adaptive Control in the Presence of Time-Varying Parameters," Discussion Papers of the Center for Economic Research, Dept. of Economics, University of Texas, Austin, Tx 78712, 90-12, Oct.1990 (Rev. 1995), published in *Journal of Economic Dynamics and Control*, 22, 39-47, 1997.

7) "A Note on Flexible Least Squares," *Journal of Economic Dynamics and Control*, 14, 175-182, 1990.

8) "Value Theory in Institutional Economics," *Economic Notes*, 19, 167-177, 1990.

9) "A Comparison of Different Algorithms Estimating the Hyperstructural Parameters of a Linear Regression," Quaderni del Dipartimento di Economia dell'Università di Siena, n. 192, Gennaio 1996.

10) "The Independence of Tests for Seasonal Effects in Linear Regression Model," Discussion Papers of the Center for Economic Research, Dept. of Economics, University of Texas, Austin, Tx 78712, 92-09, Sept.1992.

11) "Sustainable Growth: A Stochastic Approach," Quaderni della Fondazione Eni Enrico Mattei, 1992 (Rev. 1994 with title "Stochastic Sustainability"), published in G. Chichilninsky, J. Heal e A. Vercelli (ed.) "Sustainability: Dynamics and Uncertainty," Dordrecht, Kluwer ed., Chap. 7, pp. 195-215, 1998.

12) "Politiche Economiche Stocastiche: La Sostenibilità del Debito Pubblico Riconsiderata," *Note*

Economiche, 23, 188-213, 1993.
13) “Stochastic Sustainability in the Presence of Unknown Parameters,” Quaderni della Fondazione Eni Enrico Mattei, 1995, published in G. Chichilninsky, J. Heal e A. Vercelli (ed.) “Sustainability: Dynamics and Uncertainty,” Dordrecht, Kluwer ed., Chap. 9, pp. 254-275, 1998.
14) “Time-Varying Parameters: A Critical Introduction,” *Structural Change and Economic Dynamics*, 6, 237-260, 1995.
15) “An Exact Test for Seasonal Effects in Linear Regression Models,” Quaderni dell’Istituto di Economia e Statistica della Facoltà di Giurisprudenza dell’Università di Siena, Dicembre 1995.
16) “An Exact Test for the Reduced Form Parameters of a System of Simultaneous Equations,” Quaderni dell’Istituto di Economia e Statistica della Facoltà di Giurisprudenza dell’Università di Siena, Dicembre 1995.
17) The Rational Expectations Hypothesis, Time-Varying Parameters and Adaptive Control: A Promising Combination?, Quaderni dell’Istituto di Economia e Statistica della Facoltà di Giurisprudenza dell’Università di Siena, Dicembre 1995, pp. 140.
18) “The Nonconvexities Problem: A Simple Computational Solution,” *Computational Economics*, 12, 203-222, 1998
19) “A note on global optimization in adaptive control, econometrics and macroeconomics,” *Journal of Economic Dynamics and Control*, 26, 1739-1764, 2002.
20) Adaptive Control of Linear Systems with Time-Varying Parameters, Collana del Dipartimento di Economia Politica, n. 11, 2003.
21) *The rational expectation hypothesis, time-varying parameters and adaptive control: A promising combination?*, Dordrecht, Springer, 2004.
22) Time-varying parameters and the rational expectations hypothesis, Collana del Dipartimento di Economia Politica, n. 12, 2004.
23) Tucci, M.P., “Understanding the difference between robust control and optimal control in a linear discrete-time system with time-varying parameters,” *Computational Economics*, 27, 2006, 533-558.
24) “Expected Optimal Feedback with Time-Varying Parameters,” Quaderni del Dipartimento di Economia dell’Università di Siena, n. 497, 2007 forthcoming on *Journal of Economic Dynamics and Control*, Special Issue on CEF2008.
25) “The Parameter Set in an Adaptive Control Monte Carlo Experiment: Some Considerations,” with D.A. Kendrick and H.M. Amman, Quaderni del Dipartimento di Economia dell’Università di Siena, n. 507, 2007.
26) “Solving the Beck and Wieland Model with Optimal Experimentation in DualPC” , 2008, con H.M. Amman e D.A. Kendrick, *Automatica* 44(6), 1504-1510, ISSN: 0005- 1098.
27) “Duali: Software for Solving Stochastic Control Problems in Economics” with H.M. Amman and D.A. Kendrick, 2008, chapter in Erricos J. Kontoghiorghes, Berc Rustem and Peter Winker (eds) *Computational Methods in Financial Engineering: Essays in Honor of Manfred Gilli*, Springer-Verlag, Berlin, pp. 393-419.
28) “Learning about Learning in Dynamic Models,” with H.M. Amman and D.A. Kendrick, 2008, *Discussion Paper* Series 08-20, T. C. Koopmans Research Institute, Utrecht School of Economics, forthcoming in K.L. Judd and K. Schmedders (Eds.), *Handbook of Computational Economics*, Elsevier, Amsterdam, the Netherlands.

29) ”How Robust is Robust Control in the Time Domain?”, 2009, *Quaderni del Dipartimento di Economia Politica*, 569, September.
30) “The Parameter Set in an Adaptive Control Monte Carlo Experiment: Some Considerations,” 2010, with D.A. Kendrick and H.M. Amman, *Journal of Economic Dynamics and Control*, 34, 1531-1549, ISSN: 0165-1889.
31) “L'R-Factor: un nuovo modo di valutare la ricerca scientifica”, 2010, with S. Fontani and S. Ferrini, *Studi e Note di Economia*, 1, 103-140, ISSN: 1590-0401.
32) “Evaluating research activity: impact factor vs. research factor”, 2011, with Ferrini S., *EJASA: Decision Support Systems and Services Evaluation*, 2 (1), 25-53.
33) “Expected optimal feedback with time-varying parameters”, 2013, with H.M. Amman and D.A. Kendrick, *Computational Economics* 42 (3), pp. 351-71.
34) “Macroeconomic news and Italian equity market”, 2013, with R. Mastronardi and M. Patanè, *Investment Management and Financial Innovations* 10(2), pp. 132-41.
35) “Learning about Learning in Dynamic Models,” with H.M. Amman and D.A. Kendrick, 2013, in K. Schmedders and K.L. Judd (Eds.), *Handbook of Computational Economics*, vol. 3, Elsevier, Amsterdam, the Netherlands, ISBN: 9780444529800.
36) “A note on the estimation of a Gamma-Variance process: Learning from a failure”,with G.P. Cervellera, 2014, *Quaderni del Dipartimento di Economia Politica*, 702, October.
37) “A note on the estimation of a Gamma-Variance process: Learning from a failure”, 2017, with G.P. Cervellera in *Computational Economics*, **49**, (3), 363-385.
38) “The DUAL Approach in an Infinite Horizon Model”, 2017, with H.M. Amman in *Quaderni del Dipartimento di Economia Politica*, 766, December .
39) “How active is active learning: value function method vs an approximation method”, 2018, with H.M. Amman in *Quaderni del Dipartimento di Economia Politica*, 788, October.
40) “Oil price shocks and their impact on the Indian economy: evidence from sign restricted SVAR model”, 2018, with C. Jayakumar and A.S. Kumar in *The ICFAI Journal of Applied Economics*, 17(1), 58-65.
41) “The usual robust control framework in discrete time: some interesting results”, 2019, in *Quaderni del Dipartimento di Economia Politica*, 815, December.
42) “How Active is Active Learning: Value Function Method Versus an Approximation Method”, 2020, with H.M. Amman in *Computational Economics*, **56** (3), 675-693.
43) “Approximating the value function for optimal experimentation”, 2020, with H.M. Amman and D.A. Kendrick in *Macroeconomic Dynamics* , 24(5), 1073-1086.
44) “How Robust is Robust Control in Discrete Time?”, 2021, in *Computational Economics*, 58 (2), 279-309.
2022 The Dual Approch in an Infinite Horizon Model with a Time-Varying Parameter. In QUADERNI DEL DIPARTIMENTO DI ECONOMIA POLITICA vol. 889
Amman, Hans M.; Tucci, Marco P.
2023 Approximating an Infinite Horizon Model in the Presence of Optimal Experimentation. DOI: 10.5539/ijef.v15n2p70. In INTERNATIONAL JOURNAL OF ECONOMICS AND FINANCE vol. 15 (2)

Amman, H. M.; Tucci, M. P.
2023 A Critical Introduction to the Usual Robust Control Framework in Macroeconomics Marco P. Tucci, in Computational Economics, https://doi.org/10.1007/s10614-023-10454-8