

## CURRICULUM VITAE: Kumaraswamy (Vela) Velupillai

### Current Appointments:

Professor of Economics  
Department of Economics & CIFREM<sup>1</sup>  
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Date & place of birth: September 25, 1947; Colombo, Sri Lanka  
Citizenship: Swedish  
Languages: Tamil, Sinhalese, English, Italian, Japanese, Swedish (and some German & Spanish).

### Academic

1979-80: Ph.D. King's College, Cambridge University (1973-76), England.  
[Thesis: "Aspects of the Structural Dynamics of Capitalist Economies"; Supervisors: Professor Lord Kaldor & Professor Richard M Goodwin]  
1973: M.Soc.Sc. University of Lund, Lund, Sweden [Thesis: "Some Cybernetic Approaches to Macroeconomics"]  
1970: B.E. Kyoto University, Kyoto, Japan  
1966: (Japanese Lang., & Gen.Sc.) Chiba University, Chiba, Japan  
1965: High School Royal College, Colombo, Ceylon

### Scholarships/Fellowships and other awards

- Various Academic and Sports awards at primary, middle and high schools
- Japanese Government ('*Mombusho*': Ministry of Education) Scholarship for Undergraduate Education in Japan, 1965-1970.
- Swedish Government (University) award ('*Doktorand Stipendium*') for doctoral studies at Lund and Cambridge Universities, 1973-75.
- C.O.R.E Research Fellowship, 1977-78.
- Fitzwilliam College, Cambridge, Elected to a Teaching Fellowship, 1981 (declined)
- US National Science Foundation/Ford Foundation Visiting Professorship at the People's University, Beijing, China, 1988.
- Invited to give the Fourth *Arne Ryde Lectures*, University of Lund, Lund, Sweden, 1994.
- *Honorary Professor of Economics*, Queen's University of Belfast, 1998-2003.
- Central Bank of Uruguay Distinguished Invited Lecturer, 1998, Montevideo, Uruguay.

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<sup>1</sup> *The Interdepartmental Centre for Research Training in Economics and Management..*

- Visiting Fellow, Peterhouse, Cambridge, Lent & Easter Terms, 2001.
- Japan Society for the Promotion of the Sciences, Visiting Professor at Kyoto University, 2003-4 (declined).
- Elected *Foreign Corresponding Member*, Brazilian Academy of Philosophy, April, 2006.
- Elected Official Fellow, Girton College, Cambridge, September, 2006.
- Invited to give the *Herbert Simon Lectures*, National Chengchi University, Taipei, Republic of China, December, 2008.
- Awarded the '2009 Nord-Sud Fondazione Pescarabruzzo Award' for the Social Sciences.
- Nominated and appointed an 'Honorary Professor' at the University of Technology Sydney, for the academic year, 2009/2010.

### **Main Past Academic and Professional Appointments**

[Since 1999, Standing Senior Visiting Professor at the *Madras School of Economics*, Madras, India]

#### 2006-2008

Fellow, College Lecturer & Director of Studies in Economics  
Girton College, Cambridge

#### 2001-2008

*John E. Cairnes Professor of Economics* (tenured), Department of Economics, National University of Ireland, Galway, Republic of Ireland

#### 1995-1998

Professor of Economics (tenured) Department of Economics, Queen's University of Belfast

#### 1994-95

Senior Research Fellow, Statistics Norway, Oslo, Norway.

#### 1993 (Sep-Dec)

Visiting Professor at the Central European University, Prague

#### 1993 (July-Aug)

Consultant, International Economics and Socio-Economic Data Division, The World Bank, Washington D.C.

#### 1991-93

Associate Director, Center for Computable Economics and Adjunct (Full) Professor (appointed for the period 1993-1998, but resigned in 1993), Department of Economics, UCLA.

#### 1986-90:

Professor (tenured) of Macroeconomics Aalborg University; and Visiting Professorships at the *Institute d'Etudes Politiques de Paris*, UCLA, Universities of Copenhagen and Modena.

#### 1981-85:

Professor of Economics at the European University Institute, Florence; Consultant to UN-ESCAP (1981) on Development Planning and to the UNDP (1982).

#### 1980-81:

Director of Studies (Economics), Peterhouse, Cambridge; Research Associate (Economics), Energy Research Group, Cavendish Lab., Cambridge University.

1975-79:

Research positions at Imperial College, London; and at the University of Lund and the Universite Catholique de Louvain (C.O.R.E)

### **Editorial Activities**

- Associate Editor (1987), Journal of Economic Dynamics and Control (JEDC) and from, January 1, 1991, JEDC Book Review Editor, North-Holland Publishers; resigned in 1997.
- Associate Editor *Journal of Computational Economics*, Kluwer Academic Publishers, 1991-1997 (resigned).
- From February, 2002: Series Editor (jointly with Francesco Luna of the IMF), Routledge Series on *Experimental and Computable Economics*.
- 2002: Invited Editor for a Special Issue of *Metroeconomica* on ‘*Computability, Constructivity and Complexity in Economics*’.
- From 2004: Member, Editorial Board Springer Series on *Complexity*
- From 2006: Series Editor, Routledge Major Works Series on *New Trends & Frontiers in Economic Theory*
- From 2009: Member, Board of Advisory Editors, *Economia Politica/ Journal of Analytical and institutional Economics*, Il Mulino, Bologna.

### **Ph. D, MA/MSc & BA Thesis/Dissertation guidance/supervision:**

Supervision to completion of PhD dissertations in: Cambridge (2), Florence (3), Modena (3) Aalborg (1), and UCLA (5), NUI Galway (1).

Supervision to completion scores of dissertations in Italy, Ireland and the UK at MA/MSc and Undergraduate levels.

Ph.D Examiner at Universities in Australia (University of Technology, Sydney), Denmark (Aalborg University), France (Institute d’Etudes Politiques de Paris), Italy (European University Institute, Fiesole; University of Modena), Malaysia (University of Malaya), Sweden (University of Lund), UK (University of Wales, Cardiff; Cambridge University) and USA (UCLA), Spain (University of Alcala).

### **Referee work (since 1978):**

For: *Econometrica*, *Economic Journal*, *Journal of Economic Dynamics and Control*, *Journal of Economic Behavior and Organization*, *Cambridge Journal of Economics*, *Journal of Economic Theory*, *Zeitschrift für Nationalökonomie*, *Taiwan Journal of Political Economy*, *Journal of Econometrics*, *Journal of Evolutionary Economics*, *Journal of Economic Surveys*, *The Scottish Journal of Political Economy*, *Metroeconomica*, *Journal of Macroeconomics*, *Computational Economics*, *European Journal of the History of Economic Thought*, *Structural Change and Economic Dynamics*, *Economic Issues*, *Mind & Society*.

Referee/Reviewer of Book Manuscripts and Essays for Books for various leading publishers.

### **Invited Lectures/Seminars:**

Universities of Mannheim (1985) and Frankfurt (1993) in Germany; Aarhus in Denmark (1985); Siena, Bergamo (1986), Trento, Pisa (Scuola Normale) (1982), Bologna, John Hopkins (Bologna) (1986), Modena, Einaudi Foundation (Turin), Enrico Mattei Foundation (Milan) (1996), Venice in Italy (1999); the O.F.C.E. in Paris (2000); University of Inner Mongolia in the Peoples' Republic of China (1988), Institute of Advanced Study in Vienna, Austria (1989); The Chinese Academy of Science in Beijing and Taipei; National Chengchi and National Chung Cheng Universities, in Taiwan (1992, 1996); the Hungarian Academy of Sciences (1993); the Universities of California (Irvine) (1990), South Carolina (1991), University of Southern California and James Madison University (2005), in the US (1992); University of Strathclyde (1981), Exeter University (1997) and Cambridge University in the UK (1994); University of Malaya (1996), the Malaysian Institute of Economic Research and the Economic Planning Unit, in Malaysia (1996); University of Gothenburg in Sweden (1994); Di Tella Institute in Buenos Aires, Argentina (1993); Marga Institute in Colombo, Sri Lanka (2000); UNAM in Mexico City (1997, 1998) and the National University of Ireland in Galway (1999).

### **Teaching Experience**

I have taught at the undergraduate and postgraduate levels in Cambridge (UK), European University Institute, Florence (Fiesole), University of Lund (in Swedish), University of Modena (Italy), Universities of Copenhagen and Aalborg (Denmark), UCLA, Beijing, Central European University, Prague, the Queen's University of Belfast, Madras School of Economics, University of Trento (in Italian) and the National University of Ireland, Galway.

#### At the undergraduate level:

- (a). Capital and Time (Cambridge).
- (b). Principles of Economics (Aalborg – in Swedish).
- (c). Macroeconomics (UCLA, Aalborg – in Swedish, Beijing, Queen's).
- (d). Capital Theory (Lund).
- (e). Growth Theory (Lund).
- (f). History of Economic Theory (UCLA, Aalborg and Trento (in Italian) for the academic year 1999-2000).
- (g). Computational Economics (UCLA).
- (h). Development Economics (Queen's University, Belfast).
- (i). Quantitative Methods in Economics (Queen's University, Belfast)
- (j). The Pure Theory of International Trade (Trento - in Italian, academic year 1999-2000.)
- (k). International Monetary Economics (Trento - in Italian, academic year, 1999-2000 and 2000-1).

#### At the postgraduate level:

- (a). Trade Cycle Theory (Aalborg, UCLA, Copenhagen, Modena and Beijing).
- (b). Macroeconomics (UCLA, Beijing, Prague, Madras and Galway.)
- (c). Estimation Theory (Florence).
- (d). Computable Economics (UCLA).
- (e). History of Economic Theory (UCLA).
- (f). Public Finance (Copenhagen)

### **Graduate and Staff Seminars:**

At UCLA I organised the weekly seminar series on Computable Economics, 1990-93.

## **PUBLICATIONS**

### **Books and Monographs:**

1. Growth Cycles and Multisectoral Economics: the Goodwin Tradition (Ed. K. Velupillai and G. Ricci), Lecture Notes in Economic and Mathematical Systems, #309, Springer-Verlag, Heidelberg and New York, 1988.
2. Nonlinear and Mutisectoral Macrodynamics: Essays in Honor of Richard Goodwin. (ed. K. Velupillai)  
Macmillan, London, 1989.
3. Recent Developments in Business Cycle Theory. (ed. K. Velupillai, N. Thygesen, and S. Zambelli), Proceedings of the IEA held in Rungsted Kyst, June 7-11, 1989  
Macmillan, London, 1991.
4. Nonlinearities, Disequilibria and Simulation (ed. K. Velupillai)  
Macmillan, London, 1992.
5. Inflation, Institutions and Information; Essays in Honour of Axel Leijonhufvud (ed. by K. Vela Velupillai and Daniel Vaz)  
Macmillan, London, 1996.
6. Computable Economics (The Fourth Arne Ryde Lectures)  
Oxford University Press, January, 2000.
7. Macroeconomic Theory and Economic Policy: Essays in Honour of Jean-Paul Fitoussi (ed. by K. Vela Velupillai)  
Routledge, London, April, 2004.
8. Computability, Complexity and Constructivity in Economic Analysis (ed. by K. Vela Velupillai)  
Blackwell's Publishers, Oxford, March, 2005

### **Books in preparation:**

1. **Lectures on Computable Economics**  
[In preparation for *Oxford University Press*, Oxford]
2. **Models of Simon**  
[In preparation for *Routledge*, London]
3. **Computable Foundations for Economics**  
(Manuscript Completed)  
[To be published by *Routledge*, London, 2008]
4. *Routledge Major Works Series: Experimental Economics*  
(Edited jointly with Luigi Mittone and with the assistance of Stephen Kinsella)

### **Articles in [Refereed] International Journals:**

1. "Cobb-Douglas or the Wicksell Production Function: A Comment", *Economy and History*, Vol. XVI, 1973.
2. "A Note on the Origins of the Correspondence Principle", *Swedish Journal of Economics*, Vol. 75, pp. 302-304, 1973.
3. "Irving Fisher on 'Switches of Techniques': A Historical Note", *Quarterly Journal of Economics*, Vol. LXXXIX, No. 4, November, pp. 679-680, 1975. [Reprinted in: Pioneers in Economics – Piero Sraffa (1898-1983) edited by Mark Blaug, Edward Elgar Publishing Limited, Aldershot, 1992]
4. "Respecifying the Weighting Matrix of a Quadratic Objective Function", (with B. Rustem and J.H Westcott), *Automatica*, Vol. 14, November, pp. 567-582, 1978.
5. "Some Stability Properties of Goodwin's Growth Cycle", *Zeitschrift für Nationalökonomie*, Vol. 38 #3-4, pp. 245-257, 1979.
6. "When Workers Save - and Invest: Some Kaldorian Dynamics", *Zeitschrift für Nationalökonomie*, Vol. 42, #3, pp. 247-258, 1982.
7. "Linear and Nonlinear Dynamics in Economics: The Contributions of Richard Goodwin", *Economic Notes*, Vol. 11, #3, pp. 73-92, 1983.
8. "A Neo-Cambridge Model of Income Distribution and Unemployment", *Journal of Post Keynesian Economics*, Vol. V, #3, Spring, pp. 454-473, 1983.
9. "A Note on Lindahl's Theory of Distribution", (with G. Chiodi), *Kyklos*, Vol. 36, Fasc.1, pp. 103-111, 1983.
10. "Cooperation Between Politicians and Econometricians and the Search for Optimal Economic Policy", (with B. Rustem), *Journal of Policy Modeling*, Vol. 6, #3, 1984.
11. "On Rationalizing Expectations Using Rank-One Updates of the Kalman Filter" (with B. Rustem), *Journal of Economic Dynamics and Control*, Vol. 10, pp. 119-124, 1986.
12. "Objective Functions and the Complexity of Policy Design", (with B. Rustem), *Journal of Economic Dynamics and Control*, Vol. 11, No. 2, June, pp. 185-192, 1987.
13. "Some Swedish Stepping Stones to Modern Macroeconomics", *Eastern Economic Journal*, Vol. XIV, January-March, 1988.
14. "The Existence of the Standard System: Sraffa's Constructive Proof", *Political Economy – Studies in the Surplus Approach*, Vol. 5, No. 1, pp. 3-12, 1989.
15. "Rationality, Computability and Complexity", (with B. Rustem), *Journal of Economic Dynamics and Control*, Vol. 14, No. 2, May, pp. 419-432, 1990.

16. "On Leif Johansen's Model of Economic Growth",  
*Journal of Economic Behaviour and Organization*, Vol.22, pp.153-159, 1993.
17. "The Computable Approach to Economics",  
*Taiwan Journal of Political Economy*, Vol. 1, No. 1, Sep., pp. 53-110, 1995.
18. "Irving Fisher on a 'Fundamental Theorem' in Neo-Austrian Capital Theory",  
*Journal of Institutional and Theoretical Economics/Zeitschrift für die Gesamte Staatswissenschaft*, Vol. 151, No.3, Sep., pp. 556-564, 1995.
19. "The Unfashionable Elegance of Tsuru's Unorthodox Economics",  
*The Journal of Economic Issues*, Vol. XXIX, No. 4, December, pp. 1213-1230, 1995.
20. "The Computable Alternative in the Formalization of Economics: A Counterfactual Essay",  
*Kyklos*, Vol. 49, Fasc.3, pp. 252-72. 1996.
21. "The Economy as a Structurally Complex, Evolving Dynamical System: Goodwin's Contours" (jointly with L. F. Punzo).  
*Economic Notes*, Vol. 25, No. 2, p. 179-205, 1996.
22. "An 'Unfinished' Essay on Interesting Dynamics",  
*Taiwan Journal of Political Economy*, Vol. 2, No. 2, Sep., pp. 21-57, 1996.
23. "Expository Notes on Computability and Complexity in (Arithmetical) Games",  
*Journal of Economic Dynamics and Control*, Vol.21, No.6, pp. 955-79, June, 1997.
24. "The Vintage Economist",  
*The Journal of Economic Behaviour and Organisation*, Vol.37, No.1, Sep., pp. 1-31, 1998.
25. "Richard Goodwin: 1913-1996"  
*The Economic Journal*, Vol. 108, September, 1998, pp.1436-1449.  
[Awarded the Anbar Prize for Excellence in Writing]
26. "Comportamiento Adaptable"  
*Revista De Economia (Segunda Epoca)*, Volumen V, Número 2, Noviembre, pp. 3-32, 1998
27. "Undecidability, Computation Universality and Minimality in Economic Dynamics",  
*The Journal of Economic Surveys*, December, 1999  
[Reprinted in: Surveys in Economic Dynamics edited by Donald A. R. George, Les Oxley and Simon Potter, Chapter 6, pp. 149-174; Blackwell Publishers, Oxford, 2000]
28. "Disequilibrium, Nonmaximum Macrodynamics"  
*Economic Systems Research*, Vol.11, No.2, June, pp. 113-126, 1999.
29. "The Wisdom and Wit of Sen's Contribution to Capital Theory: Some Sketches",  
*Review of Development and Change*, Vol.V, No.1, January-June, pp. 1-23, 2000.
30. "Effectivity and Constructivity in Economic Theory"  
*The Journal of Economic Behavior and Organization*, Vol.49, Issue, 3, pp. 307-325, November, 2002.

31. “Constructivity, Computability and Computers in Economic Theory: Some Cautionary Notes”,  
*Metroeconomica*, Vol. 55, Issue 2-3, pp. 121-140, May 2004.
32. “Computation and Economic Dynamics: Resurrecting the *Icarus* Tradition”,  
*Metroeconomica*, Vol. 55, Issue 2-3, pp. 239-64, May, 2004.
33. “The Unreasonable *Ineffectiveness* of Mathematics in Economics”,  
*Cambridge Journal of Economics*, Vol. 29, Issue 6, pp. pp. 849-872, November, 2005.
34. “The Algorithmic Foundations of Computable General Equilibrium Theory”,  
*Applied Mathematics and Computation*, Vol. 179, #1, August, pp. 360-9, 2006.
35. “A Disequilibrium Macrodynamics Model of Fluctuations”,  
*Journal of Macroeconomics*, Vol. 28, Issue 4, December, pp. 752-767, 2006.
36. “Variations on the Theme of *Conning* in Mathematical Economics”,  
*Journal of Economic Surveys*, Vol. 21, No. 3., pp. 466-505, July, 2007.  
[Reprinted in: Issues in Heterodox Economics edited by Donald A. George, Chapter 4, pp. 53-93; Blackwell Publishing, Oxford, 2008.]
37. “Japanese Contributions to Non-Linear Cycle Theory in the 1950s”,  
*Japanese Economic Review*, Vol. 59, No. 1, March, pp. 54-74, 2008.
38. “Sraffa’s Constructive Mathematical Economics”,  
*Journal of Economic Methodology*, Vol. 15, No.4, December, pp. 325-348, 2008.
39. “Taming the Incomputable, Reconstructing the Nonconstructive and Deciding the Undecidable in Mathematical Economics”,  
Forthcoming: *New Mathematics and Natural Computation*, 2008  
[A Special Issue of the Journal will be devoted to this paper, with invited comments from a panel of distinguished economists and mathematicians]
40. “The Mathematization of Macroeconomics”,  
Forthcoming: *Economia Politica [Journal of Analytical and Institutional Economics]*, Vol. XXV, Issue 3, August, pp. 283-316, 2008.
41. “Uncomputability and Undecidability in Economic Theory”,  
Forthcoming in: *Applied Mathematics and Computation*, 2009.
42. “Macroeconomics – A Clarifying Note”  
Forthcoming in: *Economia Politica [Journal of Analytical and Institutional Economics]*, Vol. XXVI, Issue 1, April, pp. 129-131, 2009.
43. “Equality, Absurdity Subjectivity: Thomas Nagel’s Passion for Exact Philosophical Enquiry”,  
Forthcoming in: *Economia Politica [Journal of Analytical and Institutional Economics]*, Vol. XXVI, Issue 1, April, pp.15-19, 2009.



## Review Articles & Review Notes

1. "A Review Essay on: 'Studies in Business-Cycle Theory' by R.E. Lucas, Jr.", (jointly with J.-P. Fitoussi), *Journal of Money, Credit, and Banking*, 19, #1, 1987.
2. "Money, the Labour Market and Growth in Disequilibrium Macrodynamics – A Review Note", *Zeitschrift für Nationalökonomie*, Vol. 78, #1, January, 2003, pp.83-96.
3. "Microeconomics at the Frontiers: From the Cradle to the Towers – A Review Article of Hirschleifer and Bowles", *Journal of Economic Behaviour and Organization*, (Forthcoming).

## Recently Completed Papers Published (or to be Published) in Edited Volumes in 2007 -8

1. *The Impossibility of an Effective Theory of Policy in a Complex Economy*, in: **Complexity Hints for Policy**, edited by David Colander and Massimo Salzano, Springer-Verlag, Berlin and New York, March, 2007.
2. "Demystifying Induction and Falsification: Trans-Popperian Suggestions", Invited Paper presented at the *Popper Centennial* hosted by the Government of Austria and the Irish Academy of Sciences, September, 2002. Published in: **Popper and Economic Methodology: Contemporary Challenges** edited by Tom Boylan and Pascal O’Gorman, Chapter 8, pp. 143-163, Routledge, London, 2007.
3. "Hicksian Visions and Vignettes on (Non-Linear) Trade Cycle Theories", Invited Lecture, Presented at the Hicks Centennial, held at the University of Bologna, 10-11, October, 2004; **DP #7**, November, 2004, Department of Economics, University of Trento; Revised version titled: *A Perspective on a Hicksian Non-Linear Theory of the Trade Cycle*, in: **Markets, Money and Capital: Hicksian Economics for the 21<sup>st</sup> Century**, Chapter 18, pp. 328-345, edited by Roberto Scazzieri, Amartya Sen & Stefano Zamagni, Cambridge University Press, Cambridge, 2008.
4. "Sraffa's Economics in Non-Classical Mathematical Modes", in: **Sraffa or Alternative Economics** edited by Guglielmo Chiodi and Leonardo Ditta, Chapter 14, pp. 275-94, Palgrave Macmillan, London, 2008.
5. "A Computable Economist's Perspective on Computational Complexity", in: **The Handbook of Complexity Research**, Chapter 4, pp. 36-83, Edited by: J. Barkley Rosser, Jr., Edward Elgar Publishing Ltd, 2009.
6. "A Stochastic Complexity Perspective of Induction in Economics and Inference in Dynamics", in: **Festschrift in Honour of Jorma Rissanen on the Occasion of his 75<sup>th</sup> Birthday**, Chapter 15, pp. 251-273, edited by Peter Grünwald, Petri Myllymäki, Ion Tabus, Marcelo Weinberger & Bin Yu, Tampere University of Technology, Tampere, Finland, 2008.

### **Invited Lectures, 2008**

1. “*Nonlinear, Evolutionary and Adaptive Dynamics in Behavioural Economics – Celebrating Richard Day’s Contributions*”.  
Invited **Laudatio Lecture** at the **Conference in Honour of Richard Day**, Max Planck Institute, Jena, May, 16, 2008.
2. “*Decision Theory and Choice – Computable Foundations for a Complexity Approach*”,  
Invited Plenary Lecture to be presented at the Conference on **Decision Theory and Choice: a Complexity Approach**, in Memory of Massimo Salzano, Department of Economic Sciences and Statistics, University of Salerno, June 19/20, 2008.
3. “*The Emerging Algorithmic Sciences: Statistics, Economics and Game Theory*”, Invited Lecture to be presented at the **Workshop on Information Theoretic Methods in Science and Engineering**, Tampere, Finland, August, 18/19, 2008 [Postponed, due to ill-health, for delivery in 2009].
4. “*Uncomputability and Undecidability in Economic Theory*”,  
Invited Lecture at the **8<sup>th</sup> Unconventional Computing Symposium**, Vienna, 27-30, August, 2008.

### **In Preparation / Recently Completed Manuscripts**

1. “*Reappraising Fix-Point Formalizations of Rational Expectations Equilibria*”, **WP #96**, Department of Economics, NUI Galway, September, 2005. (Accepted for publication, subject to substantial revisions, by the *Zeitschrift für Nationalökonomie*).
2. “*The Emergence of the Non-Linear Theory of the Business Cycle: 1928-1953*”, Trento, February, 2008.
3. “*Popper’s Brouwerian Fallacies*”, Trento, April, 2009.

### **Reviews in International Journals:**

1. Review of L.L. Pasinetti's ‘Lectures on the Theory of Production’, *Journal of Economic Studies*, 7, #1, 1980.
2. Review of R. Pindyck (ed.), ‘The Production and Pricing of Energy Resources’, *Energy Economics*, 2, #4, 1980.
3. Review of G. Gandolfo's ‘Qualitative Analysis and Econometric Estimation of Continuous Time Dynamic Models’, *Economic Journal*, 92, 1982.
4. Review of J.-P. Fitoussi and E.S. Phelps, ‘The Slump in Europe’, in *Zeitschrift für Nationalökonomie*, 1990.
5. Review of R.M. Goodwin's ‘Chaotic Economic Dynamics’, in the *Journal of Economic Behaviour and Organization*, 1992.
6. Review of S. Lombardini, ‘Growth and Development’, *Journal of Economic Dynamics and Control*, 1997.

7. Review of I. J. Ahluwalia and I.M.D Little (ed.), 'India's Economic Reforms and Development: Essays for Manmohan Singh', *The Economic Journal*, November, 1999.
8. Review of, D.Conniffe (ed.), 'Roy Geary, 1896-1983: Irish Statistician', *Zeitschrift für Nationalökonomie*, 2000
9. Review of S.N. Afriat, 'The Market: Equilibrium, Stability, Mythology', *Zeitschrift für Nationalökonomie*, Vol. 81, No. 3, pp.277-281, 2004.

### **Contributions in Collected Essays, Festschrifts, etc:**

1. "On the Definition and Detection of Structural Change", (with B. Rustem), in: M. Hoffman (ed.), Stochastic Differential Equations and Optimal Control Theory, Springer-Verlag, Heidelberg, 1980.
2. "Energy Planning", (with Richard Eden), Crown Agents Journal, Feb., 1980.
3. "Multisectoral Models and Joint Production", (with Lionello F. Punzo), in: Mathematical Methods in Economics, Chapter 4, pp. 57-92, edited by Frederick Van Der Ploeg; John Wiley & Sons, Chichester, 1984.
4. "On Rationalizing Expectations Using Rank-One Updates of the Kalman Filter"(with B. Rustem), in H.A. Barker and P.C. Young (eds.), Identification and System Parameter Estimation - 1985, Pergamon Press, Oxford.
5. "The Knight and His Utility Function", in W. Maihofer (ed.), Noi si Mura, Office for Official Publications of the European Communities, 1986.
6. "Constructing Objective Functions and the Complexity of the Policy Design Process", (with B. Rustem), in B. Martos, L.F. Pau and M. Zierman (eds.), Dynamic Modeling and Control of National Economies, Pergamon Press, Oxford, 1986.
7. "Keynes og 'Stockholm-Skolen'" (in Danish) SamfundsØkonomen, 4, 1986.
8. "Johan Åkerman", in J. Eatwell, M. Milgate and P. Newman (eds.), The New Palgrave, Macmillan, London, 1987.
9. "Gustav Åkerman", in J. Eatwell, M. Milgate and P. Newman (eds.), The New Palgrave, Macmillan, London, 1987.
10. "The (Nonlinear) Life and Economic Times of Richard M. Goodwin", in K. Velupillai (ed.), Nonlinear and Multisectoral Macrodynamics: Essays in Honour of Richard Goodwin, Macmillan, London, 1989.
11. "Introduction" to Recent Developments in Business Cycle Theory, in Business Cycles: Theories, Evidence and Analysis, ed. by N. Thygesen, K. Velupillai and S. Zambelli, Macmillan, London, 1991.
12. "Introduction" to Nonlinearities, Disequilibria and Simulation, ed. by K. Velupillai, Macmillan, London, 1992.

13. "Exploring 'The Original Kalecki Model T': Simplifications and Generalizations", in: The Harcourt Festschrift, ed. by P.Arestis, et. al., Routledge, London, 1997.
14. "Perplexed in the Tangled Roots of the *Busy Beaver's* Ways" Forthcoming in: Agent-Based Economics: Theory, Languages and Experiments edited by Francesco Luna, Alessandro Perrone and Pietro Terna, Routledge, 2008/9.
15. "Rational Expectations Equilibria: A Recursion Theoretic Tutorial", in: Macroeconomic Theory and Economic Policy – Essays in Honour of Jean-Paul Fitoussi, edited by K. Vela Velupillai, Routledge, London, 2004.
16. "The Consummate Macroeconomist: Jean-Paul Fitoussi", in: Macroeconomic Theory and Economic Policy – Essays in Honour of Jean-Paul Fitoussi, edited by K. Vela Velupillai, Routledge, London, 2004.
17. "Preface and Summary", to Macroeconomic Theory and Economic Policy: Essays in Honour of Jean-Paul Fitoussi, Edited by K. Vela Velupillai, Routledge, London, April, 2004.
18. "Introduction and Summary", to the Metroeconomica Special Issue on *Computability, Constructivity and Complexity in Economics*, Metroeconomica, Vol. 55, Issue 2-3, pp. 115-20, May, 2004
19. "A Primer on the Tools and Concepts of Computable Economics", in: Computability, Complexity and Constructivity in Economic Analysis, (ed. by K. Vela Velupillai), Blackwell's Publishers, Oxford (March, 2005)

### **Contributions to Conferences and Symposia, etc:**

1. "A New Approach to the Bargaining Problem", (with B. Rustem), Presented at the **CIME** Conference held in Udine, Italy, March, 1978; published in M. Aoki and A. Marzollo (eds.), New Trends in Dynamic System Theory and Economics, Academic Press, London, 1979.
2. "Growth Cycles in Distributive Shares, Output and Employment", (with J.-P.Fitoussi), Invited presentation at the Conference on Macrodynamics, held at O.F.C.E, Paris, France, September, 1983; published in J-P. Fitoussi and P.A. Nuet (eds.), MacroDynamique et Disequilibres, Economica, Paris,1987.
3. Comments on: "Un modele post-Keynesian de Development", by P.-A. Nuet and R. Topol, given at the Conference on Macrodynamics, held at O.F.C.E, Paris, France, September, 1983; published in J-P. Fitoussi and P.-A. Nuet (eds.), Macro-Dynamique et Disequilibres, Economica, Paris, 1987.
4. "What Have We Learned in the Path from Gödel and Turing to Artificial Intelligence", Invited Lecture at the Symposium on Knowledge and Organization held in Karlstad, Sweden, June, 1987; published in Åke E. Andersson, D. Batten and C. Karlsson (eds.), Knowledge and Industrial Organization, Springer-Verlag, Heidelberg, 1989.

5. "Hammond's 'Consequentialists' and Harsanyi's 'New Solutions'", presented at the I.C.O.S. Conference, Milano, January, 1985. [I understand this was published in an Italian Translation of the Proceedings of the above conference, edited by Lorenzo Sacconi, in 1987; however, I have neither been informed about it nor have ever received a copy of the alleged publication].
6. "Recursive Parameter Estimation Using the Kalman Filter - An Application to Analyse Time-Varying Parameters and Structural Change", (with B. Rustem and J.H. Westcott), presented at the European Meeting of the Econometric Society, Helsinki, August, 1976. Discussion Paper #11; Department of Computing and Control, Imperial College of Science and Technology, 1976.
7. "On Detecting Time Varying Structures", (with B. Rustem), presented at the NBER Conference, Austin, Texas, May 1978. LSE Econometrics Discussion Paper A9, January, 1979.
8. "Constructing Objective Functions for Macroeconomic Decision Models: A Formalization of Ragnar Frisch's Approach", (with B. Rustem), presented at the 5th World Congress of the Econometric Society, MIT, Boston, 1985; Revised, June 1988. Discussion Paper #69, Programme of Research Into Optimal Policy Evaluation, Imperial College of Science and Technology.
9. "Gunnar Myrdal - The Universal Social Scientist (1898-1987)", presented at the Colloque Myrdal, Montreal, Jan., 1989; in: *G. Dostaler et. al. [ed.] Gunnar Myrdal et son Oeuvre*, Economica, Paris, 1990.
10. "The Political Arithmetics of the Stockholm School", Invited Presentation at the Conference to Commemorate the 50<sup>th</sup> Anniversary of Bertil Ohlin's EJ Article of 1937, Saltsjöbaden, Sweden; in L. Jonung (ed.), The Stockholm School of Economics Revisited, Cambridge Univ. Press, 1991.
11. Comments on: "On Formal Dynamics: From Lundberg to Chaos Analysis", by W.J. Baumol, Invited Commentator at the Conference to Commemorate the 50<sup>th</sup> Anniversary of Bertil Ohlin's EJ Article of 1937, Saltsjöbaden, Sweden; in L. Jonung (ed.), The Stockholm School of Economics Revisited, Cambridge University Press, 1991.
12. "Contribution to the Panel Discussion on the 'Relevance of the Works of the 'Stockholm School' for Modern Macroeconomics'", Invited Contributor at the Conference to Commemorate the 50<sup>th</sup> Anniversary of Bertil Ohlin's EJ Article of 1937, Saltsjöbaden, Sweden; in L. Jonung (ed.), The Stockholm School of Economics Revisited, Cambridge Univ. Press, 1991.
13. "Theories of the Trade Cycle: Analytical and Conceptual Perspectives and Perplexities", Plenary Lecture at the *International Economics Association Conference on Business Cycles*, held in Ryngsted Kyst, Denmark, June, 1989; in Business Cycles: Theories, Evidence and Analysis, ed. by N. Thygesen, K. Velupillai and S. Zambelli, Macmillan, London, 1991.
14. "Implicit Nonlinearities in Frisch on 'Propagation and Impulse' Mechanisms in the Analysis of Business Cycles", Invited Presentation at the Conference in Honour of Björn Thalberg, held in Elsinore, Denmark, June, 1990; published in Nonlinearities, Disequilibria and Simulation, [ed. by K. Velupillai] Macmillan, London, 1992.

15. "Björn Thalberg - Teacher, Mentor, Friend", Invited Presentation at the Conference in Honour of Björn Thalberg, held in Elsinore, Denmark, June, 1990; in Nonlinearities Disequilibria and Simulation, ed. by K. Velupillai, Macmillan, London, 1992.
16. Comments on Goodwin's "A Chaotic Reformulation of Multiplier-Accelerator Models", Invited Discussant's Comments at the Conference in Honour of Björn Thalberg, held in Elsinore, Denmark, June, 1990; in Nonlinearities, Disequilibria and Simulation, ed. by K. Velupillai, Macmillan, London, 1992.
17. Comments on Lance Taylor's "Growth and Adjustment in Developing Countries: A Gap Model Approach", Invited Discussant's Comments at the Conference in Honour of Björn Thalberg, held in Elsinore, Denmark, June, 1990; in Nonlinearities, Disequilibria and Simulation, ed. by K. Velupillai, Macmillan, London, 1992.
18. "Macroeconomic Perspectives", (with J-P. Fitoussi), Invited Presentation at the Conference in Honour of Don Patinkin, held in the Hebrew University of Jerusalem, September, 1990; in: Monetary Theory and Thought: The Patinkin Festschrift, ed. by H. Barkai, S. Fischer and N.Liviatan, Macmillan, London, 1993.
19. "Coordinating the Not-Too Rational: Leijonhufvud's Macroeconomic Methodologies" (with Lionello Punzo), Invited Presentation at the Conference in Honour of Axel Leijonhufvud, held at the Central Bank of Uruguay, Montevideo, Uruguay, September, 1993; in: the Leijonhufvud Festschrift, ed. by D.Vaz and K.Velupillai, Macmillan, London, 1996.
20. "Design and Anarchy in Research and Development: The Case of Computer Science", Invited Presentation at the *2nd Congress of the Americas*, February 27-March 1, 1997 at UDLA, Puebla, Mexico.
21. "Diophantine Decision Problems in Economics", Invited Plenary Lecture at the *VII Coloquio Nacional de Economía Matemática y Econometría*, UNAM, Mexico City, Mexico, 6-10 October, 1997.
22. "New Tools for Making Economics an *Inductive Science*" (Invited presentation at the Conference in honour of Robert W.Clower held in the department of economics at the University of Trento, May, 1996). In: Money, Markets and Method: Essays in Honour of Robert W.Clower, edited by Peter Howitt, Elisabetta de Antoni and Axel Leijonhufvud., Edward Elgar, Cheltenham, April, 1999.
23. "Hayek and Pareto on Mechanisms for Decentralization", Invited presentation at a Conference on Decentralization held at the University of California at Irvine in February, 1999 and organised by the department of economics at UCI and the Institute of Mathematical Behavioral Sciences.
24. "Undecidable Economic Dynamics" Invited Paper, presented at the Society for Computational Economics annual conference held in Barcelona, July, 2000.
25. Using Ideas & Producing Ideas in Computable Endogenous Growth, **WP #97**, Department of Economics, NUI Galway & **DP #16**, Department of Economics, University of Trento, September, 2005; Presented at the 2<sup>nd</sup> Annual Conference on Growth & Development, held at the Indian Statistical Institute, Delhi, India, January 10-12, 2006.

26. “*Computable Foundations for the Mathematics of Experimental Economics: Some Perplexities*”, Presented at the Experimental Economics Workshop on *Methodological Perplexities in Experimental Economics*, organized by CEEL, University of Trento & ALEX, Università del Piemonte Orientale, Trento, 29-30, May, 2006.
27. “*Are there Computable Foundations for Artificial Economics: the Case of Agent-Based Economic Models*”, Invited **Keynote Lecture** delivered at the Conference on Artificial Economics, Aalborg University, Aalborg, Denmark, 14-15, September, 2006.
28. “The Role of Computational Intelligence in Human Problem Solving: The Herbert Simon Tradition”, **The Herbert Simon Lectures**, to be delivered at the National Chengchi University, Taipei, Taiwan. (in preparation)

### **Additional Papers:**

1. "A Note on the Scientific Contributions of Professor Nicholas Georgescu-Roegen", (with J-P. Fitoussi), mimeo, Florence, March, 1983.
2. "Economic Systems and Their Regulation", (with Richard Goodwin), EUI working paper #35, Florence.
3. "Nicky Kaldor - The Lord of Kings", mimeo, Aalborg, October, 1987.
4. "Constructive Foundations for Economics", (with John McCall), mimeo, UCLA, September, 1989; revised, May, 1991.
5. The Economics of Production-Based Indicators and the Purchasing Power of Currencies for International Economic Comparison, IECSE, The World Bank, March, 1994 (with the collaboration of Stefano Zambelli).
6. “Revisiting Jevons’s *Principles of Science*: Induction Resurrected”, Trento and Galway, 2002.
7. “Buddhism and the *Zeitgeist*”, Galway & Trento, June, 2005.
8. “From the Foundations of Mathematics to the *IT* Revolution: In Praise of Fostering Anarchy in Research”, Galway & Trento, September, 2005.

### **Obituaries for ‘Broadsheets’**

*Richard Goodwin*, in The Independent, London, 9 August, 1996.

*Herbert Simon*, in The Independent, London, 13 February, 2001.

*Jack Hirshleifer*, in The Independent, London, 20 October, 2005.

[The Independent has commissioned me to write two more *Obituaries* on distinguished living economists, for their archives.]

### **Organising Conferences, Summer Schools, Workshops, etc.**

- a). Organized invited sessions at the Society for Economic Dynamics, Western Economic Society, Southern Economic Society meetings and various IFAC/IFORS sessions, since the early 80s, for many years till the mid 90s.
- b). Initiated and helped coordinate the organization of the first 'Summer School' in Computable Economics in Aalborg, Denmark (August, 1992).
- c). Co-organiser (with Niels Thygesen) of an IEA-conference on Business Cycles in Copenhagen, Denmark in 1989.
- d). The main organiser of an international conference in honour of Björn Thalberg, held in Elsinore, Denmark in 1991.
- e). Organised a conference in honour of Axel Leijonhufvud, sponsored by the Central Bank of Uruguay, in Montevideo, in September 1993.
- f). Director and Principal Lecturer (10 Three-hour Lectures), *Summer School in Computable Economics*, University of Trento, Italy, September- October, 2000.
- g). Principal organizer of a Special Workshop on *Computability, Constructivity and Complexity in Economics*, held at the University of Trento, Italy, 6-7, October, 2002.
- h). Principal organizer of a Workshop on Computable Economics, held in Galway, Ireland, March 20-24, 2005.
- i). Organized, jointly with Professor Stefano Zambelli, a 2-day Tutorial Workshop on Agent-Based Modelling in Economics and Finance, May 19-20, 2008, under the auspices of CIFREM/Department of Economics, University of Trento, Italy [Distinguished Lecturer: Professor Shu-Heng Chen, National Chengchi University, Taipei, Republic of China].
- j). Organized, jointly with Professor Stefano Zambelli, a 2-day Tutorial Workshop on Nonlinear Dynamics in Economic Modelling, March, 13-14, 2009, under the auspices of CIFREM/Department of Economics, University of Trento, Italy.
- j). I have been organizing several 'mini' Workshops at NUI Galway and at the University of Trento during recent years. The topics of the Workshops have been: Computational Complexity in Economics, Computable Endogenous Growth Theory, Computational Economic Dynamics, Computable Macroeconomics and Agent-Based Modelling in Economics and Finance (May, 2008).
- k). Over the years, since about 1981, I have been a member of the scientific committee or the organizing committee of various conferences, symposia, workshops, etc., in Denmark, Sweden, Italy and England.

### **Committee Work**

Member of various appointment, evaluation and promotion committees at Universities in Denmark, India, Italy, Mexico, Sweden, and the UK .



### **Arne Ryde Lectures**

I gave the fourth *Arne Ryde Lectures* at the University of Lund, Sweden in May 1994. The title of the series of lectures was: Computable Economics.

### **Inaugural Lecture**

My *Inaugural Lecture* at Queen's University was given on 16 January 1995. The title of the lecture was: *Theories of the Trade Cycle: From Pigou to Prescott*.

### **Lectio Magistralis**

I gave the annual, invited, *Lectio Magistralis* at the Faculty of Economics, University of Trento, in October, 2006. The title of the lecture was: *Varieties of Mathematics in Economics*.