

# CURRICULUM VITAE

**Name :** Rose-Anne Dana

**Current Position** Professor Emeritus of Mathematics  
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## 1 Professional experience

1970-1973 Teaching assistant of Mathematics and research assistant of Economics at University of California, Berkeley

1973-1993 Maître de Conférences of Mathematics at University P. M. Curie (P6)

1993-1996 Professor of Mathematics at University Toulouse I

1996-2012 Professor of Mathematics at University Paris-Dauphine

## 2 Research interest

- Economics of uncertainty, theory of decision
- Financial Economics, risk measures, Behavioral finance
- Microeconomics of insurance, theory of incentives
- Growth Theory, chaos, cycles
- General Equilibrium and financial markets Equilibrium.

### 3 Books

- "Marchés Financiers en temps Continu, Valorisation et Equilibre" with M. Jeanblanc-Piqué. Economica editor. First version: september 1994. Second version: september 1998.
- A revised version has been translated into english under the title "Financial Markets in continuous time" and published by Springer Finance Textbooks 2003 and republished in 2007.
- "Dynamic Optimization in Economics" with C. Le Van, Kluwers Editor 2003.

### 4 Published articles

1. "Evaluation of development programs in a stationary stochastic economy with bounded primary resources", *Mathematical models in economics*, J. and M.W. Los eds. North Holland, 1974.
2. "Propriétés dynamiques d'une version discrète d'un modèle de croissance cyclique" with P. Malgrange, *Cahiers du Séminaire d'Econométrie, 1981*
3. "The dynamics of a discrete version of a growth cycle model" with P. Malgrange, *Analysing the structure of Econometric models*, J.P. Ancot edited by Martinus Nijhoff, 1983.
4. "Dynamic Complexity in Duopoly Games" with L. Montrucchio, *Journal of Economic Theory*, **40**, n°1,40-56, 1986 and in the book *Non linear Economic Dynamics* edited by J.M. Grandmont, Academic Press, 1987.
5. "On Rational Dynamic Strategies in Infinite Horizon Models Where Agents Discount the Future", with L. Montrucchio, *Journal of Economic Behavior and Organisation*, **8**, 1987. Special issue on n on linear Economic Dynamics.
6. "Production prices and general equilibrium prices", with M. Florenzano, C. Le Van and D. Lévy, *Journal of Mathematical Economics*, **18**, 1989.

7. "Asymptotic properties of a Léontief economy", with M. Florenzano, C. Le Van and D. Lévy, *Journal of Dynamics and Control*, **13**, 1989.
8. "On the structure of Pareto-optima in an infinite horizon economy where agents have recursive preferences", with C. Le Van, *Journal of Optimisation Theory and Applications*, **69**, n°2, 269-292, 1990.
9. "A note on the Bellman's equation of the "overtaking criterion"", with C. Le Van, *Journal of Optimisation Theory and Applications*, **67**, n°2, 587-600, 1990.
10. "Optimal growth and Pareto-optimality", with C. Le Van, *Journal of Mathematical Economics*, **20**, 1991.
11. "Equilibria of a stationary economy with recursive preferences", with C. Le Van, *Journal of Optimisation Theory and Applications*, **71**, n°2, 289-313, 1991.
12. "On existence of an Arrow-Radner equilibrium in the case of complete markets. A remark", with M. Pontier *Mathematics of Operation Research*, **17**, n°1, 1992.
13. "Discrete time stationary dynamical games", with L. Montrucchio, in *General Equilibrium, Growth and Trade, II. The Legacy of L. McKenzie*, edited by Becker R., M. Boldrin, R. Jones and W. Thomson, Academic Press, 1993.
14. "Existence, Uniqueness and Determinacy of Arrow-Debreu Equilibria in Finance Models", *Journal of Mathematical Economics*, **22**, 563-579, 1993.
15. "Existence and Uniqueness of Equilibria when preferences are additively separable and gross substitute", *Econometrica*, **61**, 953-957, 1993.
16. "On the Bellman's equation of the overtaking criterion, and addendum", with C. Le Van, *Journal of Optimisation Theory and Applications*, **78**, n°3, 605-612, 1994.
17. "An extension of Milleron Mitjushin and Polterovich's result", *Journal of Mathematical Economics*, **22**, 259-269, 1995.

18. "Existence of Equilibrium in  $L^p$  space, a Duality Approach", with C. Le Van . *Journal of Mathematical Economics*, **25**, 263-280, 1995.
19. "General equilibrium in Asset Markets with and without Shortselling", with C. Le Van et F. Magnien, *Journal of Mathematical Analysis and Applications*, **206**,567-588, 1997.
20. "On different notions of Arbitrage and Existence of Equilibrium ", with C. Le Van et F. Magnien, *Journal of Economic theory* **87**,169-193, 1999.
21. "Uniqueness and local uniqueness of Equilibrium in C.A.P.M.", *Journal of Mathematical Economics*,**32**,167-175, 1999.
22. "Arbitrage and Existence of Equilibrium in Asset Markets, a Duality Approach", with C. Le Van, *Journal of Mathematical Economics* **34**, 397-413, 2000.
23. "Optimal Risk-Sharing Rules and Equilibria with Non-Additive Expected Utility" with Alain Chateauneuf et J.M. Tallon, *Journal of Mathematical Economics*, **34**,191-214,2000.
24. "Risk aversion and uniqueness of equilibrium. An application to financial markets" *Review of Economic Design* **6**, 155-173, 2001, in the honor of R. Radner, edited by Ischiishi.T. et Marshak T.
25. "On Equilibria When Agents Have Multiple Priors" dans *Annals of Operation Research*, **114**, 105-112, 2002, special issue on Stochastic Equilibrium.
26. Efficient Insurance Contracts Under epsilon-contaminated Utilities" with G. Carlier, N. Shahidi. *Geneva Papers*, **28**, 59-71, 2003.
27. "Pareto efficient Insurance Contracts when the insurer's cost function is discontinuous" with G. Carlier, *Economic Theory*, **21**, 871-893, 2003.
28. "Core of convex distortions of a probability on a non atomic space" with G. Carlier, *Journal of Economic Theory*, **113**, 199-222, 2003.
29. " Ambiguity, uncertainty aversion and equilibrium Welfare ". *Economic Theory*, **23-3**, 569- 587, 2004.

30. "Market Behavior when preferences are generated from Stochastic Dominance", *Journal of Mathematical Economics* **40**, 6, 619-639, September 2004.
31. "Existence and monotonicity of solutions to moral hazard problems", with G. Carlier. *Journal of Mathematical Economics*, **41**, 793-936, 2005.
32. "Rearrangement inequalities in non convex economic models", with G. Carlier. *Journal of Mathematical Economics* **41**, 483-503, 2005.
33. "A representation result for concave Schur concave functions" *Mathematical Finance*, **14**, 613-634, 2005.
34. "On the overtaking criterion", with C. Le Van, "A Handbook of Growth Theory", Dana, Le Van, Nishimura and Mitra editors, Kluwers, 2006.
35. "Law invariant concave utility functions and optimization problems with monotonicity and co monotonicity constraints", with G. Carlier. *Statistics and Decisions*, **24** , 1001-1026, 2006.
36. "Are call-spreads efficient", with G. Carlier, *Journal of Mathematical Economics* **43** , 2007.
37. "Optimal Risk Sharing with Background Risk", with M. Scarcini, *Journal of Economic Theory*, **133**, 132-176, 2007.
38. "Two-persons efficient risk-sharing and equilibria for concave law-invariant utilities", with G. Carlier, *Economic theory*, **36** , 189-223, 2008.
39. "Overlapping sets of priors and the existence of efficient allocations and equilibria for risk measures" with C. Le Van, *Mathematical Finance*, 20,3, 327-339, 2010.
40. "Optimal demand for contingent claims when agents have law invariant utilities", with G. Carlier, *Mathematical Finance*, **21,2**, 169-201, 2011
41. "Overlapping risk adjusted sets of priors and the existence of efficient allocations and equilibria with short-selling", with C. Le Van, *Journal of Economic Theory*, **145,6**, 2186-2202, 2010

42. "Comonotonicity, Efficient Risk-sharing and Equilibria in Markets with Short-selling for concave law-invariant utilities", *Journal of Mathematical Economics*, **47**, 328-335, 2011. Issue in the honor of A. Mas-Colell.
43. Pareto efficiency for the concave order and multivariate comonotonicity, with G. Carlier, Ceremade et A. Galichon, Ecole Polytechnique, *Journal of Economic Theory*, **147**,1 207-229, 2012.
44. "Intertemporal Equilibria with Knightian Uncertainty" with F. Riedel, *Journal of Economic Theory*, **148**,4, 1582-1605, 2013.
45. Pareto optima and equilibria when preferences are incompletely known with G. Carlier, *Journal of Economic Theory*, **148**,4, 1606-1623, 2013.

### **Recent Working paper**

1. Arbitrage, ambiguity and incomplete preferences with C Le Van.

### **Encyclopedia articles**

1. "Marchés Financiers en temps Continu," with M. Jeanblanc-Piqué. Encyclopédie de Finance et de Gestion. Edited by Economica.
2. "Pareto-optimality", Encyclopedia of Actuarial Science, Wiley, 2004.
3. "Financial Markets" with M. Jeanblanc-Piqué. Encyclopedia EOLSS, 2006

## **5 Editorial positions, expertises, refereeing**

1. Co-editor of the journal "Mathematics and Financial Economics" since 2007.
2. Associate-editor of the journal "Macroeconomics Dynamics" since 2000.
3. Associate-editor of the journal "Finance and Stochastics" from 2008 to 2011.

4. Guest editor with C Le Van (CNRS-CES), K. Nishimura and T. Mitra (University of Tokyo), of "A Handbook of Growth Theory" Springer. March 2006.
5. Reviewer for Axa grants
6. Reviewer for Italian public grants
7. Reviewer for Econometrica, Journal of Economic Theory, Journal of Mathematical Economics, Economic Theory, Finance and Stochastics, Mathematical Finance and for various handbooks

## **6 Seminar et recent workshops organization**

1. Organizer of the theory seminar of the chaire des particuliers face au risque at university Paris -Dauphine since 2007 and since 2010, with M. Bianchi.
2. Co-organizer, workshop "Dynamic and multivariate risk measures", Institut Henri Poincare, Paris, Oct 16-17, 2008 with A. Galichon.
3. Member of the scientific committee of the workshop "Paris Dauphine : Markets with frictions", H. Poincaré' Institute, 14-17 Sept, 2010
4. Session organizer at SAET congress 2011

## **7 Administration**

In charge of the doctoral school of Mathematics 2003-2009.