

## **CURRICULUM VITAE**

### **NAME:**

**MARILDA ANTONIA DE OLIVEIRA SOTOMAYOR**

### **EDUCATION**

- 1999            PRIVAT DOZEN in MATH. ECONOMICS, Universidade de São Paulo.  
1978/1981     Ph.D in MATHEMATICS, Pontificia Universidade Católica do Rio de Janeiro – PUC/RJ and Institute of Pure and Applied Mathematics - IMPA, (Mathematics)  
1970/1972     MASTER DEGREE in Mathematics - Institute of Pure and Applied Mathematics – IMPA.  
1964/1967     UNDERGRADUATE (Mathematics) - Universidade Federal do Rio de Janeiro.

### **PROFESSIONAL EXPERIENCE : Teaching and Research:**

- 2007/2010 - Distinguished Visiting Professor, Brown University  
2006 - Visiting Professor, Brown University.  
1997/2013 -    Professor of Mathematical Economics, Univ. of S. Paulo.  
1989, 1996/1997 - Visiting Researcher, University of Pittsburgh..  
1993/1996 -    Professor of Mathematical Economics, Institute of Industrial Economics, Universidade Federal do R.J. - UFRJ  
1992/1993-     Associate Professor of Mathematics, State University of R.J.  
1991/1994-     Professor of Mathematics, Pontificia Universidade Catolica do R.J.  
1985/1991 -    Associate Professor of Mathematics, Pont. Univ. Catolica do R.J.  
1981/1985-     Assistant Professor of Mathematics, Pont. Univ. Catolica do R.J.

### **VISITING POSITIONS**

#### **Research:**

- 1- Department of Economics, University of Pittsburgh, U.S.A. - 08/1989 to 12/1989, 08/1996 to 05/1997 and: 03/1985 to 07/1985, 01/1986 to 02/1986, 06/1986 to 07/1986, 06/1987 to 07/1987, 06/1988 to 07/1988, 08/1991, 08/1992.

2-Department of Mathematics , Univ. of California at Berkeley, U.S.A. - 01/1983 to 12/1984.

3- Laboratoire d'Econometrie de l'Ecole Polytechnique , France - 01/1985 to 03/1985.

4- Institut des Hautes Etudes Scientifiques, Paris, France -01/1985 to 03/1985 and 01/1990 to 07/1990.

5- Department of Economics, Universidad Autònoma de Barcelona, Spain, 02/1996.

### **MEMBERSHIP IN PROFESSIONAL SOCIETIES**

Econometric Society

Game Theory Society

Brazilian Society of Mathematics

Brazilian Society of Econometrics

### **PROFESSIONAL AWARDS**

2013 – **Merit Medal**, awarded by the *Order of the Economists of Brazil*

1991 – **Lanchester Prize 1990** for the book “Two-Sided Matching. A Study in game theoretic modeling and analysis” awarded by the *Operations Research Society of America* (with Alvin Roth).

2006- **Henrique Simonsen Prize**, awarded by the *Brasilian Review of Economics*.

1996 –**Adriano Romariz Duarte Prize**, awarded by the *Brasilian Review of Econometrics*.

2001 – **Haralambos Simeonides Prize**, awarded by the *National Association of Graduate Centers of Economics -ANPEC-BRAZIL* (with David Perez-Castrillo).

### **ACADEMIC DISTINCTIONS**

2003 – Fellow of the **Econometric Society**

1993 – Fellow of the **John Simon Guggenheim Foundation**

2012 – present - Council Member of the **Econometric Society**

2003/2009 - Council Member of the **Econometric Society**

1994/1997 – Council Member of the **Econometric Society**

2010 – Celebration of the 20<sup>th</sup> anniversary of the book: Two-sided Matching: A Study in

Game Theoretic Modeling and Analysis ( with Alvin Roth) in the meeting “Roth and Sotomayor. Twenty years after”, Duke University.

2012 - Opening Lecture, Brazilian Meeting of ANPEC

2014 – Nominating Committee for **Fellows of the Econometric Society**

2013 – Nominating Committee for **Officers of the Econometric Society**

2005 – Council Nominating Committee of the **Econometric Society**

1998 – Council Member of the **Game Theory Society**

1999 - Charter Member of the **Game Theory Society**

### **EDITORIAL WORK**

Associate Editor, **Econometrica**, 1990-1993.

Associate Editor, **International Journal of Game Theory**, since 2003.

Editor of the Special Issue in honor of David Gale, for the **International Journal of Game Theory**. – 2006, 2007.

Editor of the session on Game Theory for the encyclopedia: **Complex Systems and Sciences, Springer** – 2006-2008

### **SCIENTIFIC PRODUCTION**

#### **Articles**

1. A note on the multiple partners assignment game (2010), *Journal of Mathematical Economics*, v. 46, p. 388-392 (with Fagebaume, A. and Gale, D.)
2. "The College Admission Problem Revisited", 1989, *Econometrica*, vol 57, n.3, 559-570 (with Alvin Roth).
3. "Multi-Item Auctions", 1986, *Journal of Political Economy*, vol. 94, 863-872 ( with G. Demange and David Gale).
4. “Connecting the cooperative and competitive structures of the multiple-partners Assignment game”, (2007) *Journal of Economic Theory*, v. 134, 155-174.
5. " A simple selling and buying procedure", 2002, *Journal of Economic Theory*, v. 103, p. 461-474 (with Castrillo, David Perez.).

6. "Interior Points in the Core of Two-Sided Matching Markets", 1988, *Journal of Economic Theory*, vol. 45, 85-101 (with Alvin Roth).
7. "On Income Fluctuations and Capital Gains", 1984, *Journal of Economic Theory*, vol. 32, 14-35.
8. My encounters with David Gale (2009), *Games and Economic Behavior*, v. 66, p. 643-646.
9. Michael Maschler, a special friend (2008), *Games and Economic Behavior*, v. 64, p. 376-377.
10. "Core structure and comparative statics in a hybrid matching market", (2007), *Games and Economic Behavior*, v. 60, 357-380.
11. "A non-constructive elementary proof of the Existence of Stable Marriages.", 1996, *Games and Economic Behavior*, v. 13, p 135-7.
12. "Implementation in the many to many matching market", 2004, *Games and Economic Behavior*, v. 46, p. 199-212.
13. "A Further Note on the Stable Matching Problem", 1987, *Discrete Applied Mathematics*, vol. 16 217-222 (with G. Demange and David Gale).
14. "Some Remarks on the Stable Matching Problem", 1985, *Discrete Applied Mathematics*, vol. 11, 223-232 ( with David Gale).
15. "MS Machiavelli and the Stable Matching Problem", 1985, *American Mathematical Monthly*, n. 92, 261-268 (with David Gale).
16. A further note on the college admission game (2012), *International Journal of Game Theory*, v. 41, p. 179-193. 3.
17. The Pareto-stability concept is a natural solution concept for discrete matching markets with indifferences (2011), *International Journal of Game Theory* v. 40, p. 631-644.
18. Stability property of matchings is a natural solution concept in coalitional market games (2010), *International Journal of Game Theory* , v. 39, p. 237-248.
19. Adjusting prices in the multiple-partners assignment game (2009), *International Journal of Game Theory*, v. 38, p. 575-600
20. "The stability of the equilibrium outcomes in the admission games

- induced by stable matching rules” (2008), *International Journal of Game Theory*, (Special Issue in honor of David Gale, edit. M. Sotomayor) 36, 621-640
21. Preface of the Special Issue in honor of David Gale, “A collection of papers dedicated to David Gale on the occasion of his 85<sup>th</sup> birthday” (2008), *International Journal of Game Theory*, 36, 317-319.
  22. "Reaching the core of the marriage market through a non-revelation matching mechanism" (2003), *International Journal of Game Theory*, v. 32, n. 2, p. 241-251.
  23. "A Labor Market with heterogeneous firms and workers" (2002), *International Journal of Game Theory*, v. 31, n. 2, p. 269-283.
  24. "The lattice structure of the set of stable outcomes of the multiple partners assignment game" (1999), *International Journal of Game Theory*, Springer Verlag, v. 28, p. 567-583.
  25. "On Income Fluctuations and Capital Gains with a Convex Production Function" (1987), *Journal of Economic Dynamics and Control*, vol. 16, 285-312
  26. "An elementary non-constructive proof of the non-emptiness of the core of the housing market of Shapley and Scarf", (2005) *Mathematical Social Sciences*, 50, p.298-303.
  27. "Some further remark on the core structure of the assignment game", 2003, *Mathematical Social Science*, v. 46, p. 261-265.
  28. " Existence of stable outcomes and the lattice property for a unified matching market", 2000, *Mathematical Social Sciences*, v. 39, p. 119-132.
  29. "Three remarks on the stability of the many-to-many matching", 1999, *Mathematical Social Sciences*, v. 38, p. 55-70.
  30. Opening Lecture: Encounters with David Gale - (2013), *Review ANPEC*, v. 14, p. 01.
  31. Preface of the session of Game Theory (2008), *Encyclopedia of Complexity and Systems Science*, edit. by Robert Meyers.

32. Two-sided matching models (2009), *Encyclopedia of Complexity and Systems Science. New York: Springer, edited by Robert A. Meyers*, v. , p. (with O. Ozak).
33. The multiple partners game (1992), *Equilibrium and Dynamics: Essays in Honor of David Gale, edit. Mukul Majumdar*. ed.Estados Unidos: Palgrave Macmillan, v. , p. 322-354.
34. "Stable Outcomes in Discrete and Continuous Models of Two-Sided Matching: A Unified Treatment", 1996, *The Brazilian Review of Econometrics* , v. 16, n.2, 1-24 (with Alvin Roth).
35. "A dynamic Price-setting Mechanism for a Hybrid Matching Market", 2003, *Brazilian Review Of Econometrics, Rio de Janeiro*, v. 23, n. 2, p. 295-322.
36. "A dynamic market clearing price mechanism with multiple demands", 2005, *Brazilian Review of Econometrics*, v. 25, no 2, pp. 267–286 November 2005
37. "A simple buyer-seller market", 2000, *The Brazilian Review of Econometrics*, v. 18, n. 2, p. 171-214.
38. "Strategy structure of a simple buyer-seller market", 1999, *The Brazilian Review of Econometrics*, November, v. 19, n. 2.
39. "Admission Mechanisms of Candidates to Institutions. A Game-Theoretic Modeling and Analysis", 1996, *The Brazilian Review of Econometrics*, v.16, n.1, pp 25-63.
40. "A Selling Mechanism" (2003), *Revista Brasileira de Economia*, Rio de Janeiro, v. 57, n. 04, p. 931-952.( with Castrillo, David Peres).
41. "A simultaneous descending bid auction for multiple items and unitary demand", 2002, *Revista Brasileira de Economia*, v. 56, n. 3, p. 497-510.
42. "Comparative static results for a hybrid two-sided matching market" , 2004, *Brazilian Review of Economics*, Vol. 59, No 1, 2005, p. 81 -106.
43. "Introductory results to auction theory of identical multi-items and unitary demand, 2001, *Brazilian Journal Of Applied Economics*, v. 5, n. 1, p. 177-211, (with Kosbiau, Alexandre ).

44. "Good and bad strategies for a simple buyer-seller market", 2000, *Brazilian Journal of Applied Economics*, v. 4, n. 1, p. 5-21.

### **Working papers**

1. Modeling cooperative decision situations: the deviation function form and the equilibrium concept.
2. The time-sharing assignment models lending new insights to the theory of two-sided matching markets.
3. Reaching the core of the assignment game by dissolving blockings done with non-trading buyers.
4. The manipulability and non-manipulability of competitive equilibrium rules in many-to-many buyer-seller markets (with David Perez-Castrillo).
5. Buying and selling market clearing prices mechanisms with random matching rules (with David Perez-Castrillo)
6. Redesenho e análise do mercado de admissão aos centros de pós-graduação em economia no Brasil à luz da teoria dos jogos: um experimento natural em desenho de mercados. (com Felipe Bardella)

### **Books**

Two-Sided Matching: A Study in Game Theoretic Modeling and Analysis ( with Alvin Roth)- *Econometric Society Monographs*, 18, Cambridge University Press. 1st edition in 1990. 2nd and paper back edition in 1992; winner of the Lanchester Prize of 1990.

### **Chapter of Books**

- 1-Two-Sided Matching, 1992, (with Alvin Roth), published by Elsevier Sciences Publishers (North-Holland) in the Handbook of Game Theory with Economic Applications *edit. by R. Aumann and Sergiu Hart*.
2. The Multiple Partners Game, 1992, published in the book Dynamics and Equilibrium: Essays in Honor to David Gale, *edit. by M. Majumdar and published by Macmillian* - pp 322-336.
3. Two-Sided Matching, (with Omer) Encyclopedia of Complexity and Systems Science,

section: Game Theory, 2009, **edit. by Robert Meyers, Springer** .

### **ORGANIZATION OF CONFERENCES**

2014 – International Workshop on Game Theory and Economic Applications of the Game Theory Society, celebrating the 70<sup>th</sup> Birthday of Marilda Sotomayor (São Paulo School of Advanced Sciences on Game Theory and Economic Applications ), University of SaoPaulo, Brazil. Scientific organizer and chair of the Program Committee.

2010 - 2<sup>nd</sup> Brazilian Workshop of the Game Theory Society, in honor of John Nash on the occasion of the 60<sup>th</sup> anniversary of Nash Equilibrium (São Paulo School of Advanced Sciences on Game Theory), University of SaoPaulo, Brazil. Main organizer and chair of the Program Committee.

2006 GALE'S FEAST, one day of the International Conference on Game Theory at Stony Brook of 2007 in honor of David Gale. Scientific Organizer and chair of the Program Committee.

2007 International Conference on Game Theory and Applications to Economics, State University of Stony Brook, USA, Scientific Organizer and chair of the Program Committee.

2002 The First Brazilian Workshop of the Game Theory Society, Universidade de São Paulo, Brazil, main organizer and chair of the Program Committee.

2008 - Programme committee member of the 3<sup>rd</sup> World Congress of the Game Theory Society, Northwestern University.

2008 - Programme committee member of the Conference on General Equilibrium and Mathematical Economics, Brown University.

2002 Organizer of the Game Theory sessions of the Latin American Meeting of



Econometric Society, Brazil.

2002 Programme committee member of the Latin American Meeting of Econometric Society, São Paulo, Brazil .

2000 Cluster Chair of the International Symposium of Math. Programming - Atlanta, USA.

2000 Programme committee member of the World Congress of the Econometric Society, Seattle, USA.

1997 Programme committee member of the Latin American Meeting of Econometric Society, Santiago, Chile.

1996 Local organizer and programme committee member of the Latin American Meeting of Econometric Society, Rio de Janeiro, Brazil.

1996 Organizer of the Game Theory sessions of the Latin American Meeting of Econometric Society, Rio de Janeiro, Brazil .

1994 and 1995 Organizer of the Mathematical Economics Colloquium of UFRJ.

1993 Organizer of the Matching session of the Latin American Meeting of the Econometric Society, Tucuman, Argentina.

1992 - Organizer of the Matching session of the International Conference on Game Theory, Stony Brook, N.Y., USA.

1990 - Programme committee member of the 6th World Congress of the Econometric Society, Barcelona, Spain.

1985 and 1986 - Organizer of the Mathematics Colloquium of PUC/RJ.