

# JUAN PABLO TORRES-MARTÍNEZ

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A mathematician by education, Juan Pablo Torres-Martínez is a Full Professor at the University of Chile. He works in financial economics and game theory. With articles in *Econometrica*, *Economic Theory*, and the *Journal of Mathematical Economics*, his published research focuses on the analysis of financial markets and asset pricing from a general equilibrium perspective. Currently, he is also interested in topics in market design and matching markets. At the University of Chile, he served as Director of Research for the Faculty of Economics and Business and was Academic Director of the Ph.D. and the M.A. programs in Economics. Between 2002 and 2008, he was a faculty member at the Department of Economics of the Pontifical Catholic University of Rio de Janeiro. He holds a Ph.D. in Science from IMPA, Brazil. His dissertation about general equilibrium and rational bubbles in collateralized asset markets received the Haralambos Simeonides Prize from the Brazilian Association of Graduate Programs in Economics.

## CURRENT PROFESSIONAL POSITION

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Full Professor, Department of Economics, University of Chile

Since 05/2011

## RESEARCH INTERESTS

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Economic Theory, Financial Economics, Game Theory

## PUBLICATIONS IN ACADEMIC JOURNALS

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BRAITT, M., AND J.P. TORRES-MARTÍNEZ (2021): “Matching with externalities: the role of prudence and social connectedness in stability,” *Journal of Mathematical Economics*, volume 92, pages 95-102.

CONTRERAS, J.L., AND J.P. TORRES-MARTÍNEZ (2020): “The roommate problem with externalities,” *International Journal of Game Theory*, DOI: 10.1007/s00182-020-00743-z

MORENO-GARCÍA, E., AND J.P. TORRES-MARTÍNEZ (2020): “Information within coalitions: risk and ambiguity,” *Economic Theory*, volume 69, pages 125-147.

IRAOLA, M.A., F. SEPÚLVEDA, AND J.P. TORRES-MARTÍNEZ (2019): “Financial segmentation and collateralized debt in infinite-horizon economies,” *Journal of Mathematical Economics*, volume 80, pages 56-69.

FAIAS, M., AND J.P. TORRES-MARTÍNEZ (2017): “Credit market segmentation, essentiality of commodities, and supermodularity,” *Journal of Mathematical Economics*, volume 70, pages 115-122.

CEA-ECHENIQUE, S., C. HERVÉS-BELOSÓ, AND J.P. TORRES-MARTÍNEZ (2017): “Endogenous differential information,” *Economic Theory*, volume 63, pages 51-72. *Special Issue in honor of Bernard Cornet*.

CEA-ECHENIQUE, S., AND J.P. TORRES-MARTÍNEZ (2016): “Credit segmentation in general equilibrium,” *Journal of Mathematical Economics*, volume 62, pages 19-27.

CORREA, S., AND J.P. TORRES-MARTÍNEZ (2014): “Essential equilibria of large generalized games,” *Economic Theory*, volume 57, pages 479-513.

IRAOLA, M.A., AND J.P. TORRES-MARTÍNEZ (2014): “Equilibrium in collateralized asset markets: credit contractions and negative equity loans,” *Journal of Mathematical Economics*, volume 55, pages 113-122.

POBLETE-CAZENAVE, R., AND J.P. TORRES-MARTÍNEZ (2013): “Equilibrium with limited-recourse collateralized loans,” *Economic Theory*, volume 53, pages 181-211.

ARAUJO, A., M.R. PÁSCOA AND J.P. TORRES-MARTÍNEZ (2011): “Long-lived collateralized assets and bubbles,” *Journal of Mathematical Economics*, volume 47, pages 260-271. *Special Issue in honor of Andreu Mas-Colell*.

PÁSCOA, M.R., M. PETRASSI AND J.P. TORRES-MARTÍNEZ (2011): “Fiat money and the value of binding portfolio constraints,” *Economic Theory*, volume 46, pages 189-209.

SEGHIR, A., AND J.P. TORRES-MARTÍNEZ (2011): “On equilibrium existence with endogenous restricted financial participation,” *Journal of Mathematical Economics*, volume 47, pages 37-42.

FERREIRA, T.R.T., AND J.P. TORRES-MARTÍNEZ (2010): “The impossibility of effective enforcement mechanisms in collateralized credit markets,” *Journal of Mathematical Economics*, volume 46, pages 332-342.

FUGAROLAS-ALVAREZ-UDE, G., C. HERVÉS-BELOSÓ, E. MORENO-GARCÍA, AND J.P. TORRES-MARTÍNEZ (2009): “A market game approach to differential information economies,” *Economic Theory*, volume 38, pages 321-330. *Symposium on Equilibria with Asymmetric Information*.

PETRASSI, M., AND J.P. TORRES-MARTÍNEZ (2008): “Collateralized assets and asymmetric information,” *Journal of Mathematical Economics*, volume 44, pages 530-534.

SEGHIR, A., AND J.P. TORRES-MARTÍNEZ (2008): “Wealth transfers and the role of collateral when lifetimes are uncertain,” *Economic Theory*, volume 36, pages 471-502.

STEINERT, M., AND J.P. TORRES-MARTÍNEZ (2007): “General equilibrium in CLO markets,” *Journal of Mathematical Economics*, volume 43, pages 709-734.

ARAUJO, A., M.R. PÁSCOA, AND J.P. TORRES-MARTÍNEZ (2002): “Collateral avoids Ponzi schemes in incomplete markets,” *Econometrica*, volume 70, pages 1613-1638.

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## OTHER PUBLICATIONS

CEA-ECHENIQUE, S., AND J.P. TORRES-MARTÍNEZ (2018): “General equilibrium with endogenous trading constraints,” *PLoS ONE*, volume 13, article number: e0203814, <http://doi.org/10.1371/journal.pone.0203814>

MORENO-GARCÍA, E., AND J.P. TORRES-MARTÍNEZ (2012): “Equilibrium existence in infinite horizon economies,” *Portuguese Economic Journal*, volume 11, pages 127-145.

TORRES-MARTÍNEZ, J.P. (2012): “*Elementos de Economía Matemática*,” Monografías del IMCA (Monographs of the Institute of Mathematics and Related Sciences), Editorial Hozlo S.L.R., Lima, Perú. ISBN: 978-9972-242-45-8.

TORRES-MARTÍNEZ, J.P. (2006): “Fixed points as Nash equilibria,” *Fixed Point Theory and Applications*, volume 2006, article ID 36135, <http://doi.org/10.1155/FPTA/2006/36135>

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## RESEARCH GRANTS

*Preservation of natural resources and political turnover: a game theory approach* 04/2018–03/2022  
FONDECYT research grant 1180409, Chilean Government (Co-Investigator)  
Principal Investigator: Adriana Piazza Chifflet

*Ambigüedad y riesgo de crédito en mercados incompletos* 04/2015–03/2018  
FONDECYT research grant 1150207, Chilean Government (Principal Investigator)

*Restricciones a la participación financiera en mercados incompletos* 04/2012–03/2015  
FONDECYT research grant 1120294, Chilean Government (Principal Investigator)

*Mecanismos de recuperación de crédito: un análisis teórico* 04/2009–03/2012  
FONDECYT research grant 1090206, Chilean Government (Principal Investigator)

*Default enforcement mechanisms in addition to collateral repossession* 03/2008–04/2008  
CNPq Research Productivity Grant 309226/2007-4, Brazilian Government

*Gerações superpostas, default e informação assimétrica* 03/2005–02/2008  
CNPq Research Productivity Grant 307554/2004-0, Brazilian Government

*Equilíbrio, risco de crédito e especulação em mercados sequenciais* 03/2003–02/2005  
CNPq Research Productivity Grant 305109/2002-2, Brazilian Government

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## EDUCATION

Ph.D. in Science, IMPA, Brazil 03/2002

Dissertation title: “Infinite horizon incomplete markets: equilibrium, default and bubbles”

Supervised by Aloisio Araujo (primary advisor) and Mário R. Páscoa

M.Sc. in Mathematical Economics, IMPA, Brazil 08/1998

B.Sc. in Mathematics, University of Chile 06/1996

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## OTHER PROFESSIONAL POSITIONS

At the Faculty of Economics and Business of the University of Chile:

Member of the Faculty Appeals Committee (evaluation period 2017-2018) 2020

Academic Member of the Faculty Council (elected by peers) 09/2018–08/2020

Director of Research 03/2019–06/2020

Member of the Self-Evaluation Committee 05/2019–06/2020

Member of the Faculty Appeals Committee (evaluation period 2015-2016) 2018

Secretary of the Academic Assessment Committee 06/2013–05/2018

Member of the Academic Assessment Committee	05/2012–05/2018
Member of the Faculty Search Committee	08/2012–05/2015
Academic Member of the Faculty Council (elected by peers)	09/2010–08/2012
Member of the Graduate School Council	11/2010–12/2011
At the Department of Economics of the University of Chile:	
Member of the Department Council (elected by peers)	Since 10/2019
Academic Director, Ph.D. Program in Economics	01/2015–08/2016
Academic Director, M.A. Program in Economics	01/2015–08/2016
Member of the Academic Committee of the M.A. in Economic Analysis	01/2015–08/2016
Member of the Academic Committee of the M.A. in Public Policies	01/2015–08/2016
Member of the Department Council	03/2012–12/2013
Member of the Academic Committee of the M.A. in Economic Analysis	08/2011–12/2011
Member of the Academic Committee of the M.A. in Public Policies	04/2011–12/2011
Academic Director, Ph.D. Program in Economics	04/2009–12/2011
Academic Director, M.A. Program in Economics	04/2009–12/2011
Associate Professor	05/2008–04/2011
Member of the Area Committee on Economics and Administrative Sciences, CNA-Chile	10/2017–12/2019
Evaluator of the Ph.D. in Finance at Adolfo Ibañez University on behalf of CNA-Chile	09/2016
Deputy Director, Study Group of Economic and Business, Fondecyt, Chile	06/2015–05/2016
Member of the Study Group of Economic and Business, Fondecyt, Chile	06/2013–05/2015
Tenured Assistant Professor of Economics, Pontifical Catholic University of Rio de Janeiro	07/2004–04/2008
Researcher CNPq, Brazil (Brazilian research council)	03/2003–04/2008
Assistant Professor of Economics, Pontifical Catholic University of Rio de Janeiro	03/2002–07/2004
Visiting Assistant Professor, IMPA, Brazil	03/2002–12/2002
Mathematical Analyst, LeMans Seguros, Chile	07/1996–09/1996

#### AWARDS, FELLOWSHIPS AND SCHOLARSHIPS

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Best Undergraduate Teacher Award, University of Chile	2016
At the Faculty of Economics and Business of the University of Chile:	
Best Teaching Award (Economics), Undergraduate School of Economics and Business	2015
Best Teaching Award (Economics), Graduate School of Economics and Business	2012, 2015, 2017
Best Teaching Award, Ph.D. Program in Economics	2019
Best Teaching Award, M.A. Program in Economics	2010, 2012, 2015-I, 2015-II, 2016-I
At the Department of Economics of the University of Chile:	
Graduate Teaching Award (core courses)	2016, 2017
Graduate Teaching Award (elective courses)	2016, 2017
Graduate Teaching Award	2009, 2010, 2012, 2015
Coimbra Group Scholarship to visit the University of Salamanca	2013
First place, Fondecyt National Research Funding Competition in Economics and Business	2012
Summer postdoctoral fellowship, IMPA, Brazil	2009
Visiting research grant, University of Salamanca, Spain	2006, 2007
Visiting research grant, Xunta de Galicia - University of Vigo, Spain	2005
Haralambos Simeonidis Prize, ANPEC, Brazil	2002
(Brazilian National Award for Best Ph.D. Dissertation in Economics)	
Ph.D. fellowship, CNPq, Brazilian Government	1998–2002
M.Sc. fellowship, CNPq, Brazilian Government	1997–1998
B.Sc. scholarship, University of Chile	1993–1996
Bronze Medal, National Mathematical Olympiad, Chile	1992

#### FORMER GRADUATE STUDENTS AND COMMITTEES

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##### PH.D. IN ECONOMICS

At University of Chile: Haydée Fonseca Mairena (2019; co-advised with Matteo Triossi); José Luis Contreras Biekert (2014); Sebastián Cea-Echenique (2014). At Pontifical Catholic University of Rio de Janeiro: Myrian Petrassi (2008).

##### M.A. IN ECONOMICS

At University of Chile: Daniel Jaar Michea (2018); Diego Dabed Sitnisky (2017); Fabián Sepúlveda Cortés (2013); Sofía Correa Deisler (2012); Carlos Salazar Rivera (2011); Mario Giarda Ugalde (2011); Víctor Pérez Fernández (2011); Sergio Daga Mérida (2010); Sebastián Cea Echenique (2010); Rubén Poblete Cazenave (2010). At Pontifical Catholic University of Rio de Janeiro: Thiago Teixeira Ferreira (2007); João Bumachar Resende (2006); Mariano Steinert (2005); Renata Heinemann (2004; co-advised with Eduardo Loyo); Daniel Chrity (2004).

##### M.SC. IN MATHEMATICS AND APPLICATIONS

Carolina Gaspar Crespo (NOVA University of Lisbon, 2021; co-advised with Marta Faias).

#### COMMITTEE MEMBER

Diego Fica (M.A. in Economics, University of Chile, 2019); Mohit Karnani (M.A. in Economics, University of Chile, 2018); Daniel Vargas (M.A. in Economics, University of Chile, 2016); Loreto Ayala (M.A. in Economics, University of Chile, 2012); Rodrigo Raad (Ph.D. in Economics, EPGE/FGV, Brazil, 2011); Maikol Cerda Zavalla (M.A. in Economics, University of Chile, 2010); Rodrigo Novinski (Ph.D. in Science, IMPA, 2007); Jose Heleno Faro (Ph.D. in Science, IMPA, 2006); Rogerio Oliveira (Ph.D. in Economics, PUC-Rio, 2002); Renato Dias Gomes (M.A. in Economics, PUC-Rio, 2005).

#### TEACHING EXPERIENCE

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##### UNDERGRADUATE COURSES

At University of Chile: Advanced mathematics (2014, 2016-2020); Mathematical methods in economics (2010-2015); Linear algebra (2012); Consumer theory and general equilibrium (2008). At Pontifical Catholic University of Rio de Janeiro: Market structures and general equilibrium (2002-2004, 2007).

##### GRADUATE COURSES

At University of Chile: Advanced microeconomic theory (general equilibrium, social choice, mechanism design) (2013-2020); Microeconomic theory (consumer and producer theory, game theory) (2017); Dynamical systems and applications (2017); Game theory (2016); Mathematical economics (2016); Mathematical finance (2013); Consumer and producer theory (2012-2013); General equilibrium and market failures (2008-2010, 2012); General equilibrium theory (2011); Auction theory (2010); Methods in dynamic economics (2009-2010); Measure theory (2010); Mathematical economics and continuous time finance (2009). At Pontifical Catholic University of Rio de Janeiro: Mathematical methods in economics (2002-2008); Methods in dynamic economics (2005-2006); Continuous time finance (2003-2005); Game theory (2002-2004). At IMPA, Brazil: Mathematical economics and finance (2002); Advanced mathematical economics (2002).

##### SHORT COURSES

Introduction to general equilibrium theory with incomplete financial markets (Pontifical Catholic University of Valparaíso, 2018); Introduction to matching theory (University of Salamanca, Spain, 2015); Introduction to dynamic economics (IMCA, Perú, 2014); Topics in mathematical economics (IMCA, Perú, 2012); Real analysis and optimization for economists (International Summer School, Faculty of Economics, Universidad de los Andes, Colombia, 2011); Infinite horizon incomplete markets (IMPA, Brazil, 2009; University of Salamanca, Spain, 2005); Mathematical methods in economics (University of Chile, 2006).

#### OTHER PROFESSIONAL ACTIVITIES

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##### SCIENTIFIC COMMITTEES

Workshop on General Equilibrium: Theory and Applications, Brazil, 2019; 16th SAET Conference on Current Trends in Economics (session organizer); 16th International Meeting of the Association of Public Economic Theory, 2016; 2014 Latin American Meeting of the Econometric Society; XIII Latin-American Workshop in Economic Theory, Colombia, 2012; 2008 Latin American Meeting of the Econometric Society; Workshop in Economic Theory PUC-Rio, Brazil, 2008; XXIX Encontro Brasileiro de Econometria, Brazil, 2007; Workshop on Mathematical Economics (in honor of Aloisio Araujo on his 60th birthday), Brazil, 2006; XXV Encontro Brasileiro de Econometria, Brazil, 2003; Encontro Nacional ANPEC, Brazil, 2003.

##### REFEREEING

Referee for: Annals of Finance, Applied Mathematics - A Journal of Chinese Universities, Brazilian Journal of Economics, Brazilian Review of Econometrics, Computational Economics, Decisions in Economics and Finance, Economic Theory, Economics Bulletin, Estudios de Economía, Fixed Point Theory and Applications, Fuzzy Sets and Systems, Journal of Economic Dynamics and Control, Journal of Economic Theory, Journal of Optimization Theory and Applications, Journal of Mathematical Economics, Revista Brasileira de Economia de Empresas, Revista Colombiana de Matemáticas, Theoretical Economics. Grant reviewer for: CNPq-Brazil, Fondecyt-Chile, UCSC-Chile. Reviewer for Mathematical Reviews (MathSciNet).

##### ACADEMIC VISITS

Department of Economics and Economic History, University of Salamanca, Spain (2020, 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2007, 2006, 2005, 2004); New University of Lisbon, Portugal (2018, 2017, 2016, 2015); Faculty of Economics, Military University Nueva Granada, Colombia (2014); School of Business Administration, University of Miami, United States (2012); Faculty of Economics, Universidad de los Andes, Colombia (2012, 2011, 2010); Faculty of Economics, New University of Lisbon, Portugal (2011, 2005, 2004, 2003, 2002, 2001); Center for Economic Research, ITAM, México (2011, 2010, 2009); IMPA, Brazil (2009); Faculty of Economic and Business, University of Vigo, Spain (2007, 2004).

#### INVITED SEMINARS

Pontifical Catholic University of Valparaíso, Chile (2020); Diego Portales University, Chile (2020); New University of Lisbon, Portugal (2020); Málaga University, Spain (2020); Universidad de Talca, Chile (2018); Universidad Nacional de San Martín, Argentina (2017); University of Salamanca, Spain (2016, 2013, 2006); Universidad del Pacífico, Perú (2014); Military University Nueva Granada, Colombia (2014); Vigo University, Spain (2013, 2004, 2003); Pontifical Catholic University of Chile (2012, 2011, 2009); University of Santiago, Chile (2010, 2009); Universidad de los Andes, Colombia (2010); Universidad Adolfo Ibañez, Chile (2009); Central Bank of Chile (2009); IMPA, Brazil (2009); ITAM, México (2009); CEA-University of Chile (2008); XXIII Jornadas Anuales de Economía, Central Bank of Uruguay (invited paper, 2008); Colóquios Brasileiros de Matemática (2007, 2003); University of Chile (2007); Primeira Semana da Matemática Aplicada, UFRJ, Brazil (2006); São Paulo University, Brazil (2002); Getúlio Vargas Foundation, Rio de Janeiro, Brazil (2002); Federal University of Rio de Janeiro, Brazil (2002).

#### CONFERENCES (PAPERS PRESENTED BY A CO-AUTHOR OR BY MYSELF)

Encuentro de la Sociedad de Economía de Chile - SECHI (2019, 2018, 2016, 2014, 2013, 2012, 2011, 2010, 2009, 2008, 2007); SAET Conference on Current Trends in Economics (16th, 15th, 13th, VIII, VII, VI and V); UECE Lisbon Meeting (2016, 2013, 2011); European Workshop on General Equilibrium Theory (2016, 2014, 2013, 2006, 2004, 2002); 16th International Meeting of the Association of Public Economic Theory, 2016; Manchester Economic Theory Workshop, 2016; 11th World Congress of the Econometric Society, Montreal, 2015; Latin American Meeting of the Econometric Society (2014, 2012, 2008); IWGTS-2014; GEdays in York (2013); XIII Latin American Workshop in Economic Theory, Colombia, 2012; Second General Equilibrium Workshop in Rio de Janeiro, Brazil; Encontros Brasileiros de Econometria (XXIX, XXVII, XXVI, XXV); Taipei Workshop on Game Theory and Economic Theory, China; NBER Debreu Memorial Conference, U.C.Berkeley; SAET Conference in Honor to R. Aliprantis, Purdue University; XI Encontro de Novos Investigadores de Análise Económica, Spain.

#### ADDITIONAL INFORMATION

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Nationality: Chilean (Born on December, 1974).

Languages: Spanish, Portuguese, English.

Last updated: January, 2021