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EDUCATION

Habilitation à diriger les Recherches in Applied Mathematics: January 1999, Université Paris Dauphine.
Post-Doc, October 1993-May 1994, University of Chicago.
PhD in Applied Mathematics, January 1994, Université Paris Dauphine.

ACADEMIC CARRIER

Septembre 2006 - present: Professor, Ecole Polytechnique, Head of the Department of Applied Mathematics from September 2014 to August 2017. Since July 2016, Scientific Director of the *Risk Foundation*, Louis Bachelier Institute.
September 2005 - August 2006: Chair in Mathematical Finance, Tanaka Business School, Imperial College London. Part time (2 days a week).
September 2001 - August 2006: Professor of Applied Mathematics, Centre de Recherche en Economie et Statistique (CREST), Co-Head of *Laboratoire de Finance et Assurance.* Part time (3 days a week) as of Septembre 2005.
September 1999 - August 2001: Professor of Applied Mathematics, Université Paris I Panthéon-Sorbonne.
September 1994 - August 1999: Assistant Professor, Université Paris Dauphine.
April-June 2010: *The University of Toronto Dean's Distinguished Visitor Chair*, Fields Institute.
May - June 2004: Invited Professor, Pacific Institute of the Mathematical Sciences, University of British Columbia, Vancouver, Canada.
March - June 2001: Invited Professor, CIRANO Centre Inter-universitaire de Recherche en Analyse des Organisations), Montreal.
February - June 2000: Invited Professor, Princeton University.

DISTINCTIONS

- ERC Advanced Grant 2012.
- French Academy of Science Bachelier Prize 2012.
- Invited Session Speaker at the International Congress of Mathematics, August 2010, Hyderabad (India).
- *Best Young Researcher in Finance Award 2007* of the Europlace Institute of Finance.

- *Monetary Authority of Singapore (MAS) Visiting Professor*, National University of Singapore, January-February 2018, Singapore.
- *Van Eenam, Butcher, and Butcher Financial/Actuarial Faculty Lecture*, the University of Michigan, Department of Mathematics, April 2018, Ann Arbor.
- *Oxford University Visiting Man Chair*, One month within the period January July 2014.
- *Minerva Lectures at Columbia University*, October 2013, New York.
- *The University of Toronto Dean's Distinguished Visitor Chair*, Fields Institute, April-June 2010.

CHAIRES, RESEARCH GRANTS

- ERC Advanced Grant 2012 (May 2013-April 2018, 1.8 Million Euros).
- ANR Grant Pacman (Avril 2017–Mars 2020).
- ANR Grant Isotace (Janvier 2013–December 2016).
- Co-Head of the Chaire *Derivatives of the Future* with Nicole El Karoui, sponsored by *Fédération des Banques Françaises* from January 2008 to December 2012.
- Co-Head of the Chaire *Mutating Markets* with Nicole El Karoui and Monique Jeanblanc, sponsored by *Fédération des Banques Françaises* from January 2013 to December 2017.
- Vice-President of the Chaire *Finance and Sustainable Development: a quantitative approach* Dauphine-Ecole Polytechnique (President: Pierre-Louis Lions), sponsored by *EDF* and *Crédit Agricole*, since October 2006.

EDITORIAL ACTIVITIES AND INTERNATIONAL RESPONSABILITIES

- January 2012-December 2013: President of the *Bachelier Finance Society*, and Vice-President during the period January 2010-December 2011.
- Founder and Co-editor *Paris-Princeton Lectures in Mathematical Finance.*
- Co-Editor *Finance and Stochastics* since January 2007.
- Associate Editor *Mathematical Finance* (since Novembre 2003), *Journal of Optimization Theory and Applications* (since January 2014), *Stochastic Processes and their Applications* (since January 2016), *Stochastics: An International Journal on Probability and Stochastic Processes* (since January 2016), *Control and Calculus of Variations* (since June 2019), *Tunisian Journal of Mathematics* (since July 2019).
- Past Editorial Activities: *Annals of Applied Probability* (January 2013–December 2018), *Finance and Stochastics* (March 2000-December 2006), *Electronic Journal of Probability* (June 2004–December 2014), *SIAM Journal in Financial Mathematics* (January 2009–December 2015), *Mathematics and Financial Economics* (January 2007–December 2010), *Applied Mathematics Research eXpress (AMRX)* (January 2004-December 2007), *Journal of Financial Econometrics* (January 2001-December 2006).
- Member of the BIRS Scientific Advisory Board. Member of the Advisory Board of *Matheon*, Berlin, January 2010-December 2013.

TEACHING

September 2002 - August 2006: Director of the Master program MASEF (*Applied Mathe-*

matics to Economics and Finance), Université Paris Dauphine-ENSAE.
2000-2002: Member of the Jury of the *External Agregation in Mathematics.*
Undergraduate courses: analysis, linear algebra, optimization, probability, Mathematical Statistics, Statistics of ARMA time series.
Graduate courses: Stochastic calculus and finance (Ecole Polytechnique), Asset pricing (Ecole Polytechnique), Stochastic Control (Ecole Polytechnique), Probabilistic methods for PDEs, Introduction to mathematical finance (HEC), Market imperfection models,
PhD courses: Backward stochastic differential equations, Martingale optimal transport and model-free hedging, Path-dependent PDEs.
Executive Education: Optimization, Monte Carlo approximation, Stochastic calculus and stochastic control.

CONSULTING ACTIVITIES

January 2019 - March 2019: Banque de France, 1.5 days per week.
June 2016 - June 2019: Enedis, two days per month.
October 2009 - October 2011: Nomura, two days per month.
October 2004 - July 2006: EDF R&D, two days per month.
February 2005 - July 2005: SGAM AI, two days per month.
July 1994 - March 1996: Caisse Autonome de Refinancement, Caisse des Dépôts et Consignations, two days per month.
June 1997: Le Monde (Newspaper), Assisting the newspaper in appreciating the technical content of an offer from a US company of grading the different SICAV on the French market.
April 1997: Crédit Lyonnais, 2-days mini-lectures on Monte-Carlo methods.

PHD STUDENTS

- Presently , 3 PhD students:
  21. Leila Bassous (Stochastic control methods for systemic risk)
  20. Mehdi Talbi (Mean field optimal stopping)
  19. Bowen Sheng (Quadratic second order backward SDEs)
- Former PhD students :
  18. Heythem Farhat (martingale optimal transport, Defense in January 2021)
  17. Kaitong Hu (Moral hazard under partial information, completion in December 2019),
  16. Hadrien De March (Martingale optimal transport and robust hedging, June 2018). Presently founding a start-up.
  15. Gaoyue Guo (Martingale optimal transport and robust hedging, October 2016). Presently Post-Doc at *University of Michigan.*
  14. Zhenjie Ren (Viscosity solutions of path-dependent PDEs: theory and applications, October 2015). Presently Assistant Professor at *University Paris Dauphine.*
  13. Guillaume Royer (Some contributions to stochastic control in finance and Martingale optimal transport, December 2013). Presently Quant at *Bank of America Merill Lynch London.*
  12. Emilie Fabre (Ecole Polytechnique, February 2012), *Contributions to stochastic control and second order BSDEs in finance.* Presently Quant at *Société Générale.*

11. Xialou Tan (Ecole Polytechnique, December 2011), *Optimal transportation and application to financial mathematics.* Presently Associate Professor at the *Chinese University of Hong Kong.*

10. Dylan Possamaï (Ecole Polytechnique, December 2011), *Contributions to stochastic control and second order BSDEs.* Presently Professor at *ETH Zürich*, on leave from *Columbia University*, New York.

9. Gilles-Eduard Espinosa (Ecole Polytechnique, June 2010), *Stochastic Control Methods for Optimal Investment*; presently Quant at BNP Paribas.

8. Arash Fahim (Ecole Polytechnique, April 2010), *Probabillistic Methods for Nonlinear PDEs*; presently Associate Professor at *Florida State University.*

7. Arnaud Porchet (Université Paris Dauphine, February 2008), *Modeling competition on energy markets*, Arnaud is now at Citi Bank in London.

6. Romuald Elie (Université Paris Dauphine, December 2006), *Monte Carlo Methods for Backward stochastic differential equations*); Romuald is now Professor at *Université Marne-la-Vallée.*

5. Fabian Astic (Université Paris Dauphine, March 2007), *Modeling liquidity risk in financial markets*, Fabian is now Quant at Standard and Poors.

4. Imen BenTahar (Université Paris Dauphine, March 2005), *Risk measure and stochastic control in finance*, Imen is now Assistant Professor at *Université Paris Dauphine.*

3. Amina Zeghal (Université Paris Dauphine, January 2005), *Non-smooth utility maximization*, Amina is now Dean of *University of Dauphine Tunis.*

2. Moez Mrad (Université Paris 1, December 2003) *Monte Carlo Methods in finance*, Moez is now head of a Quant team at Crédit Agricole London.

1. Bruno Bouchard (Université Paris Dauphine, January 2001), *Stochastic Control and application to finance* ; Bruno is now *Professor at the Université Paris Dauphine.*

CONFERENCES AND SEMINARS ORGANIZATION (prior to 2014)

- Co-organizer of the Oberwalfach Workshop Stochastic Analysis in Finance and Insurance (with René Carmona and Martin Schweizer), May 59, 2014, Oberwalfach (Germany).
- Co-organizer of the Seventh European Summer School in Financial Mathematics, September 2014, Oxford University.
- Co-organizer of the Sixth European Summer School in Financial Mathematics, September 2013, Technical University Vienna.
- Co-Organizer (with Mathieu Rosenbaum) of the workshop *New Advances in Financial Mathematics*, Paris, April 9, 2013.
- Co-Organizer (with Martin Schweizer and Dmitry Kramkov) of the workshop *Stochastic Analysis and Finance*, Oberwalfach, ??, 2011.
- Co-organizer of the *Fifth European Summer School in Financial Mathematics*, Ecole Polytechnique Paris, 27-31 August 2012.
- Co-organizer of the *Fourth European Summer School in Financial Mathematics*, ETH Zurich, 5-9 September 2011.
- Main organizer of the *Third European Summer School in Financial Mathematics*, Paris, 23-28 September 2010.

- Main organizer of the *Second European Summer School in Financial Mathematics*, Paris, 24-29 September 2009.
- Main organizer of the *First European Summer School in Financial Mathematics*, Paris, 7-14 September 2008.
- Co-Organizer (with Henri Berestycki) of the *Chicago-Paris Workshop in Financial Mathematics*, Paris, 27 to 29 June 2008.
- Co-Organizer (with Rama Cont and Farid Ait-Sahalia) of the workshop *New Directions in Financial Mathematics*, Paris, 19 to 21 May 2008.
- Co-Organizer (with Martin Schweizer and Dmitry Kramkov) of the workshop *Stochastic Analysis and Finance*, Oberwalfach, January 27 to February 2, 2008.
- Co-Organizer (with Jaksa Cvitanic and Ali Lazrak) of the workshop *Optimization Problems in Financial Economics*, Banff International Research Station, Canada, 20 to 25 May 2006.
- Organizer of the workshop *Probabillistic Numerical Methods in Finance*, Isaac Newton Institute, Cambridge, England, 16 to 20 May 2005.
- Co-Organizer (with Mustapha Jazzar) of the CIMPA Summer School *Mathematical Methods for Finance*, Jordan University of Science and Technology, Irbid, Jordan, 7-18 September 2005.
- Co-Organizer (with Jaksa Cvitanic) of the workshop *Numerical Probabilistic Methods for High-Dimensional Problems in Finance*, AIM, Palo Alto, California, 5 to 8 December 2003.
- Co-Organizer (with Elyès Jouini) of the *Closing Conference of the Chaire Blaise Pascal held by Jose Scheinkman*, Paris 1-3 July 2003.
- Co-Organizer (with René Garcia and Eric Renault) of the *Workshop on Financial Mathematics and Econometrics*, Montreal 26-30 June 2001.
- Co-Organizer (with Elyès Jouini) of the *International Conference on Mathematical Finance*, Hammamet 14-18 June 1999.
- Up to June 2005, co-Organizer of the *Séminaire Bachelier*, weekly, Institut Henri Poincarré (www.bachelier-paris.com).

INVITED TALKS (prior to 2014)

International Congress of Mathematicians 2010, Invited Sessions Speaker *Mathematics for Science and Engineering*, Hyderabad, 19-28 August 2010.
SMAI Congress, 6th bi-annual meeting, Plenary Speaker, Seignosse, 27-31 May 2013.

• *Minicourse on Martingale Optimal Transport*, Berlin–Zurich Summer School, ETH Zurich, September 1–5, 2013.
• *Stochastic Analysis: in Honnor of the Sixtieth birthday of Terry Lyons*, University of Oxford, September 23–27, 2013.
• *Mini-course on path-dependent PDEs*, Columbia University, October 21 to November 1, 2013.
• *Colloquium at University of Southern California*, Martingale optimal transport and model-free hedging. December 16–20.
• *Workshop on Robust Techniques in Financial Economics*, March 24–25, 2014, ETH-Zurich.

• *French-Chinese Conference on Applied Mathematics*, June 2–5, 2014, Xiamen (China).
• *Seventh Colloquium on Backward SDEs*, June 23–27, 2014, Weihai (China).
• *Minicourse on Optimal Transportation and Hedging*, Institute for Mathematical Research, ETH Zurich, February-March 2013, 2014.
• *CIRM Workshop on Non-Stationarity and Risk Management*, Marseille, 21-25 January 2013.
• *Sixth Bachelier Colloquium on Stochastic Analysis and Finance*, Métabief, 13-19 January 2013.
• The First Asian Quantitative Finance Conference, Singapoor, 9-11 Jan 2013.
• *Stochastic Systems, Simulation, and Control*, Madrid 24-28 novembre 2012.
• *Stochastic Anaysis and Finance*, Kyoto 10-13 septembre 2012.
• *Perspectives in Analysis and Probability, Conference in Honor of Freddy Delbaen*, Zurich 24-28 septembre 2011.
• *Recent Advances in BSDEs*, Rennes 17-18 septembre 2011.
• *Probability, Control, and Finance, in Honor of Ioannis Karatzas*, Columbia University, New York, 4-8 juin 2012.
• *World Congress of the Bachelier Society*, Sydney, 19-22 juin 2012.
• *Controlled Deterministic and Stochastic Systems*, Iasi, Roumanie, 2-6 juillet 2012.
• *Optimal Stopping, Optimal Control, and Finance*, University of Warwick, 16-20 juillet 2012.
• *School on Mathematical Finance*, Tata Institute of Fundamental Research, Mumbai, 23-26 janvier 2012.
• *London Mathematical Society Short Course*, Backward Stochastic Differential Equations, Oxford Man Institute of Quantitative Finance, University of Oxford, 18-22 July 2011.
• *Sino-French Summer Institute: Stochastic Modelling and Applications*, Beijing, June 27 to July 1st 2011.
• *Stochastic Analysis, Probability and Statistics*, Columbia University, New York, June 23 2011.
• *VIth Colluquium on Backward Stochastic Differential Equations*, University of Southern California, Los Angeles, 8-10 June 2011.
• *The New Commodity Markets*, 13-15 June 2011, Oxford-Man Institute, University of Oxford.
• *Fifth Bachelier Colloquium*, Metabief, France, 17-21 janvier 2011.
• *Conférence de la Chaire Risques Financiers*, 10-13 janvier 2011.
• *International Research Forum in Finance*, Hong Kong Polytechnic University, 15-17 dcembre 2010.
• *Backward SDEs and Applications to Finance*, Tamerza (Tunisie) 25-28 octobre 2010.
• *Mathematical Finance and Related Issues*, Kyoto, 12-16 September 2010.
• Invited Session speaker at *34th Conference on Stochastic Processes and Their Applications*, Osaka, 6-10 September 2010.
• *Analysis, Stochastics, and Applications: A Conference in Honor of Walter Schechermayer*, University of Vienna, 12-16 June 2010.
• Stochastic Control and Finance Workshop, in Honor of Mark Davis, Imperial College London, 12-14 April 2010.

• Workshop on Computational Methods in Finance, Fields Institute, Toronto, March 22-24, 2010.
• Workshop on Foundations of Mathematical Finance, Fields Institute, Toronto, January 11-15, 2010
• Workshop on Fundamentals of Finance, Fields Institute, Toronto, January 11-15, 2010.
• New Directions in Financial Mathematics, IPAM, UCLA, January 2010.
• Plenary Speaker at the *World Congress of the Bachelier Society*, London, July 2008.
• Plenary Speaker at the *Canada-France Congress*, Montreal, June 2008.
• *Risk Day*, LSE Londres, 17 March 2008.
• Plenary Speaker at the *Congrès de la Société Mathématique de Tunisie*, Sousse, 17-21 March 2008.
• *Third Bachelier Colloquium*, Metabief France, 4-7 January 2008.
• *PDEs and Finance*, Stockholm, August 2007.
• *PDE Methods in Finance*, Marne-la-Vallée, September 2007.
• *Austrian-Slovak Mathematical Society Congress*, Slovakie, September 2007.
• AMAMEF Conference, 10-12 November, London, England.
• Journée EDSR, EDSPR et méthodes numériques probabilistes, 19 December, Marseille.
• Daiwa International Workshop on Financial Engineering, 21-26 July 2005, Tokyo et Kyoto, Japan.
• Workshop on Optimization in Finance, 5-8 July 2005, Coimbra, Portugal.
• Stochastic Modeling in Financial Mathematics, 1-3 June 2005, CRM Montral, Canada.
• Backward SDE's and applications, 30 May-June 1st 2005, Shanghai, China.
• Isaac Newton Institute program in Quantitative Finance, 25-29 April and 16-19 May 2005, Cambridge, England.
• Third Bachelier Colloquium, 8-14 January 2005, Metabief, France.
• Stochastic Finance 2004, 26-30 September 2004, Lisbon, Portugal.
• Dynamic Models in Economics and Finance, 16-18 September 2004, Urbino, Italy.
• World Congress of the Bernoulli Society, 26-30 July 2003, Barcelona, Spain, Organizer of the session "Mathematical Finance".
• Tutorial Day: Dynalic Games in Finance, Hec Montreal, 12 June 2004.
• Viscosity Solutions and Finance, 27 October 2003, Tours, France.
• 54th Session of the International Institute of Statistics, 13-20 August 2003, Berlin.
• The 25th Finnish Summer School on Probability Theory, Nagu, Finlande, 4-7 June 2003.
• XXXV èmes Journées de Statistique, Plenary conference, Lyon, 2-6 June 2003.
• Numerical Methods in Finance, CIRANO, Montreal, Canada, 4 April 2003.
• Stochastic control and applications to financial mathematics, Bedlewo, Poland, 3-7 June 2002.
• Workshop on incomplete markets, Carnegie Mellon University, Pittsburgh, 23-24 May 2002.
• Journées de l'ASU, Brussels, 13-17 May 2002.
• Workshop on Financial Mathematics and Econometrics, University of Chicago, 25 May 2002.
• Workshop on Stochastic analysis and financial applications, Rutsumeikan University, Japan, 6-9 March 2002.

• Mathematical models for risk management, Carnegie Mellon University, Pittsburgh, 25-27 August 2001.
• Joint Meeting of the AMS and SMF Conference, Lyon, 12-19 July 2001.
• Instructional Conference in Nonlinear PDES's, Edinburgh, 8-18 January 2001.
• Workshop for Young Researchers in Financial Mathematics, Berlin, 30 November to 2 December 2000.
• Probability Workshop, University of Pisa, 29 Septembre 2000.
• Dynamic Models in Economics and Finance, CIMPA Summer School, Beijing University, 20 August to 1st September 2000.
• Stochastic Analysis in Finance, Oberwalfach, 8-12 May 2000.
• Approximation and Optimization in the Caribbean, Guadeloupe, 29 March - 2 April 1999.
• Quantitative methods in Finance, Sydney, 7-14 December, 1998.
• Italian Probability Conference, Padova, 15-17 September 1998.
• Banach center symposium on stochastic systems, Warsaw, 1-14 June 1998.
• Stochastic Analysis in Finance, Oberwalfach, Septembre 1997.
• Econometric Society Winter Meeting, Gerzensee, January 1995.

BOOKS PUBLICATIONS

• *Stochastic Control Problems, Viscosity Solutions and Application to Finance*, Scuola Normale Superiore, Pisa (2002).
• OPTIMAL STOCHASTIC CONTROL, STOCHASTIC TARGET PROBLEMS, AND BACKWARD SDEs, Springer Fields monograph series.

PREPRINTS (available on www.cmap.polytechnique.fr/~touzi).

116. J. Keppo, N. Touzi, R. Zuo, Dynamic Contracting in Worker-Manager-Owner Relationship.

115. D. Possamaï and N. Touzi, Is there a Golden Parachute in Sannikov's principal–agent problem ?

114. A. Barrasso and N. Touzi, Controlled diffusion Mean Field Games with common noise, and McKean-Vlasov second order backward SDEs.

113. Z. Ren, N. Touzi, J. Yang, Nonlinear predictable representation and L1-solutions of second-order backward SDEs.

112. R. Aïd, D. Possamaï, and N. Touzi. Optimal electricity demand response contracting.

111. Y. Lin, Z. Ren, N. Touzi, J. Yang, Random horizon principal-agent problem.

ARTICLES PUBLICATIONS

110. P. Henry-Labordère, N. Touzi, Branching diffusion representation for nonlinear Cauchy problems and Monte Carlo approximation. To appear in *Annals of Applied Probability.*

109. O. El Euch, T. Mastrolia, M. Rosenbaum, N. Touzi, Optimal make-take fees for market making regulation. To appear in *Mathematical Finance.*

108. Y. Lin, Z. Ren, N. Touzi, J. Yang, Second order backward SDE with random terminal time. Revision in *Electronic Journal of Probability* 2020, Vol. 25, paper no. 99, 1-43.

107. A. Richard, X. Tan, N. Touzi, On the Root solution to the Skorokhod embedding problem given full marginals. To appear in *SIAM Journal on Control and Optimization.*

106. D. Possamaï, N. Touzi, J. Zhang, Zero-sum path-dependent stochastic differential games in weak formulation. *Annals of Applied Probability*, to appear.

105. Z. Ren, N. Touzi, and J. Zhang, Comparison of Viscosity Solutions of Semi-linear Path-Dependent PDEs. *SIAM Journal on Control and Optimization*, to appear.

104. H. De March, N. Touzi, Irreducible convex paving for decomposition of multi-dimensional martingale transport plans. *The Annals of Proability* 47, Number 3 (2019), 1726-1774.

102. P. Henry-Labordère, N. Oudjane, X. Tan, N. Touzi, and X. Warin. Branching diffusion representation of semilinear PDEs and Monte Carlo approximation, to appear in *Annales de l'Institut Henri Poincar (B) Probabilités et Statistiques*, Vol. 55, N.1 (2019), 184–210.

101. A.M.G. Cox, J. Obloj and N. Touzi, The Root solution to the multi-marginal embedding problem: an optimal stopping and time-reversal approach, to appear in *Probability Theory and Related Fields*, Volume 173, Issue 1–2, pp 211–259.

100. Z. Ren, N. Touzi, and J. Zhang, Comparison of viscosity solutions of fully nonlinear degenerate parabolic Path-dependent PDEs. *SIAM Journal on Mathematical Analysis*, 49(5), 409–4116.

99. J. Cvitanic, D. Possamaï and N. Touzi, Dynamic programming approach to Principal-Agent problems. *Finance and Stochastics*, Volume 22, Issue 1, pp 137.

98. G. Guo, X. Tan and N. Touzi, Tightness and duality of martingale transport on the Skorokhod space. *Stochastic Processes and their Applications*, 127(3):927-956, 2017.

97. G. Guo, X. Tan and N. Touzi, On the monotonicity principle of optimal Skorokhod embedding problem. *SIAM Journal on Control and Optimization*, 54(5):2478–2489, 2016.

96. M. Beiglböck, M. Nutz and N. Touzi, Complete duality for martingale optimal transport. *Annals of Applied Probability*, Volume 45, Number 5 (2017), 3038–3074.

95. G. Guo, X. Tan and N. Touzi, Optimal Skorokhod embedding under finitely-many marginal constraints. *SIAM Journal on Control and Optimization*, 54(4):2174–2201, 2016.

94. M. Beiglböck, P. Henry-Labordère and N. Touzi, Monotone Martingale Transport Plans and Skorohod Embedding. *Stochastic Processes and their Applications*, 127, 9 (Sep 2017), p.3005–3013.

93. P. Henry-Labordère, X. Tan and N. Touzi, Unbiased simulation of multi-dimensional stochastic differential equations. *Annals of Applied Probability*, Volume 27, Number 6 (2017), 3305–3341.

92. A. Cosso, F. Gozzi, M. Rosestolato, F. Salvatore and N. Touzi, Path-dependent equations and viscosity solutions in infinite dimension. *Annals of Probability*, Volume 46, Number 1 (2018), 126–174.

91. S. Kallblad, X. Tan and N. Touzi, Optimal Skorokhod embedding given full marginals and Azéma-Yor peacocks. *Annals of Applied Probability*, Volume 27, Number 2 (2017), 686-719.

90. J. Cvitanic, D. Possamaï and N. Touzi, Moral hazard in dynamic risk management, arXiv:1406.5852. *Management Science*, Volume 63, Issue 10 (Oct. 2017), p. 3147–3529.

89. P. Henry-Labordère, X. Tan and N. Touzi, An Explicit Version of the One-dimensional Breniers Theorem with Full Marginals Constraint. *Stochastic Processes and their Applications*, 126(9):2800-2834, 2016.

88. E. Fabre, G. Royer et N. Touzi. Liquidation of an indivisible asset with independent investment. *Mathematical Finance*, Volume 28, Issue 1 January 2018, pages 153176.

87. P. Henry-Labordère and N. Touzi, An Explicit Martingale Version of Brenier's Theorem. *Finance and Stochastics*, July 2016, Volume 20, Issue 3, pp 635668.

86. J. Ma, Z. Ren, N. Touzi and J. Zhang, Large Deviations for Non-Markovian Diffusions and a Path-Dependent Eikonal Equation. *Annales de lIHP: Probabilités et Statistique*, 1196-1216 (2016).

85. I. Ekren, N. Touzi and J. Zhang, Viscosity Solutions of Fully Nonlinear Parabolic Path Dependent PDEs: Part I, *Annals of Probability*, Volume 44, Number 2 (2016), 1212–1253.

84. I. Ekren, N. Touzi and J. Zhang, Viscosity Solutions of Fully Nonlinear Parabolic Path Dependent PDEs: Part II, *Annals of Probability*, Volume 44, Number 4 (2016), 2507–2553.

83. D. Possama, M. Soner and N. Touzi, Homogenization and asymptotics for small transaction costs: the multidimensional case. *Communications in Partial Differential Equations*, to appear. arXiv:1212.6275

82. J. Obloj, P. Spoida, and N. Touzi, Martingale Inequalities for the Maximum via Pathwise Arguments, *Séminaires de Probabilités*, to appear.

81. N. Touzi, Martingale Inequalities, Optimal Martingale Transport, and Robust Superhedging, *ESAIM: Proceedings and Surveys*, Vol. 45 (September 2014), Congrs SMAI 2013.

80. Z. Ren, N. Touzi and J. Zhang, An Overview of Viscosity Solutions of Path Dependent PDEs, *Stochastic Analysis and Applications*, in Honnor of Terry Lyons, Springer Proceedings in Mathematics and Statisctics.

79. P. Henry-Labordère, J. Obloj, P. Spoida, and N. Touzi, Maximum Maximum of Martingales given Marginals, *Annals of Applied Probability*, Volume 26, Number 1 (2016), 1–44..

78. D. Possamaï, G. Royer and N. Touzi, On the robust superhedging of measurable claims. *Electronic Communications in Probability*, 18(95):1-13.

77. P. Henry-Labordère, X. Tan and N. Touzi, A numerical algorithm for a class of BSDE via branching process. *Stochastic Processes and their Applications* 124:1112-1140, 2014.

76. M. Soner and N. Touzi, Homogenization and asymptotics for small transaction costs. *SIAM Journal on Control and Optimization*, 51(4), 2893–2921. (2013)

75. I. Ekren, N. Touzi and J. Zhang, Optimal Stopping under Nonlinear Expectation, *Stochastic Processes and Their Applications*, 124 (2014), 3277–3311.

74. A. Galichon, P. Henry-Labordère and N. Touzi, A stochastic control approach to no-arbitrage bounds given marginals, with an application to Lookback options. *Annals of Applied Probability*, Volume 24, Number 1 (2014), 312-336.

73. G.-E. Espinosa and N. Touzi, Optimal Investment under Relative Performance Concerns. *Mathematical Finance*, Volume 25, Issue 2 April 2015, Pages 221–257.

72. X. Tan and N. Touzi, Optimal Transportation under Controlled Stochastic Dynamics, *Annals of Probability* 2013, Vol. 41, No. 5, 3201–324.

71. I. Ekren, C. Keller, N. Touzi and J. Zhang, On Viscosity Solutions of Path Dependent PDEs, *Annals of Probability*, Volume 42, Number 1 (2014), 204-236.

70. G.-E. Espinosa and N. Touzi, Detecting the Maximum of a Mean-Reverting Scalar Diffusion, *SIAM Journal on Control and Optimization*, Vol. 50, No. 5, pp. 2543–2572 (2012).

69. R. Carmona, F. Delarue, G.-E. Espinosa and N. Touzi, Singular forward-backward stochastic differential equations and emissions derivatives. *Annals of Applied Probability*, Volume 23, Number 3 (2013), 1086-1128.

68. M. Soner, N. Touzi and J. Zhang, Dual Formulation of Second Order Target Problems, *Annals of Applied Probability* 23(1), 308-347 (2013).

67. D. Possamaï, M. Soner, and N. Touzi, Large liquidity expansion of superhedging costs, *Asymptotic Analysis*, Volume 79, N. 1-2, 2012, p. 45-64.

66. M. Soner, N. Touzi and J. Zhang, Quasi-sure Stochastic Analysis through Aggregation, *Electronic Journal of Probability* 16, 1844-1879 (2011).

65. Ad R, G. Chemla, A. Porchet A. and N. Touzi (2011), Hedging and vertical integration in electricity markets. *Management Science*, Vol. 57, 8, 1438-1452, ISSN:0025-1909.

64. B. Bouchard and N. Touzi, Weak Dynamic Programming Principle for Viscosity Solutions. *SIAM Journal on Control and Optimization*, 49, 3, 948–962 (2001).

63. M. Soner, N. Touzi and J. Zhang, Wellposedness of second order backward SDEs, *Probability Theory and Related Fields*, 153, 149–190.

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