CURRICULUM VITAE
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Current Position

Professor of Mathematics, Université de Toulouse 1 Capitole

Former Position

- 2007-2008 Visiting Professor, University of California Santa Barbara
- 2002-2007 Assistant Professor, University of Toulouse 1 Capitole.
- 1999-2002 Assistant Professor, University of Evry.

Education

- 2006: Habilitation à diriger les recherches: Optimal Stopping, Singular Control with application to finance.
- 1999: PhD in Applied Mathematics: Options Américaines dans un modèle de Black-Scholes multidimensionnel, University of Marne la Vallée.
  Supervisor: Damien LAMBERTON.
- 1995: Master of Science in Statistics and stochastic models in Finance with high honors Université Paris 7.

Grants, Awards and memberships

- 2019 PES holder.
- 2019 Member of the scientific board of the Institut Louis Bachelier LABEX FCD.
- 2018 Member of the scientific committee of the Green and Sustainable finance Transversal Program from Institut Louis Bachelier
- 2017-2020 Member of the ANR PACMAN ANR-16-CE05-0027 presented by Dylan Possamai
- 2007- Co-head of TSE/SCOR chair *Market risk and Value creation.*
- 2015- Member of the Editorial board of *Mathematics and Financial Economics*
- 2015- Responsible of the Program *Managerial turnover and long-term investment*, supported by the EUROPLACE Institute of Finance.
- 2013 Grant for EDF OSIRIS for developing numerics in corporate Finance.
- 2013-2016 Research Grant, "Pertubation Analysis for Deterministic and Stochastic Optimal Control Problems", programme PGMO 2013-2016 (member of the project)
- 2012 Finance Best Paper Award for *Free Cash-Flow, Issuance Costs and Stock Price Volatility* Europlace Institute of Finance
- 2011-2015 PES holder.
- 2009-2013 Member of the ANR project Corporate Finance and Contract Theory ANR-09-BLAN-0358-01 presented by Jean-Paul Décamps
- 2007-2011 Academic Fellow of EUROPLACE Institute of Finance.
- Member of the ANR project Evamef presented by Adrien Blanchet
- Responsible researcher of the program *Finance d'entreprise, Régulation bancaire et Théorie de l'agence*, supported by the EUROPLACE Institute of Finance.

- Member of the scientific project (Nouvelles interfaces des mathématiques), NIM 185, *Options réelles et théorie de l'investissement*, supported by the CNRS.

- Member of the scientific program AMAMEF supported by the European Science Fondation.

- Past member (1999-2002) of the open source project PREMIA, Ecole nationale des ponts et chaussées.
  http://www-rocq.inria.fr/mathfi/Premia/index.html.

Administrative duties

- 2015- Member of the TSE recruiting committee.
- 2020- Member of the department council
- 2014- 2017 Head of the Department of Mathematics
- 2008-2014 Responsible of the Master of science: Marchés et Intermédiaires financiers Toulouse School of Economics.
- 2008-2011 Responsible of the Master of finance and actuarial studies IAE Toulouse.
- 2010-2017 Member of the Department council of TSE.
- Member of the faculty council in economics, University of Toulouse.
- Member of the recruitment commission in applied mathematics (section 26) University of Toulouse 1 Capitole and INSA.
- Co-Responsible of the Master of science: *ingénierie mathématique*, University of Evry (1999-2002)

Ph-D Student

- Supervisor of Jessica Martin September 2017-May 2021. Jessica has been hired at Goldman Sachs in 2021.
- Supervisor of Vincent Tena, September 2016-July 2021. Vincent has accepted a tenure-track position at the University of Paris-Dauphine at the 2020 job market.
- Co-supervisor of Lee Dinetan, Post-Doc IAST, thesis defended in November 2015.
- Supervisor of Erwan Pierre researcher EDF R&D, thesis defended in December 2015.
- Co-supervisor of Catherine Bobtcheff with Christian Gollier, CNRS researcher.

Publications

28. Décamps, J.P. and Villeneuve, S: Dynamics of cash holdings, learning about profitability, and access to the market, TSE Working Paper, n°19-1046, November 2019, revised and resubmitted *Journal of Economic Theory.*

27. Miclo L. and Villeneuve S.: On the forward algorithm for stopping problems on continuous-time Markov chains, forthcoming Journal of Applied Probability, (2021)

26. De Angelis, T., Gensbittel F. and Villeneuve S.: Dynkin Game on Assets with Incomplete Information on the Return, Mathematics of Operations Research, Vol. 46, 1, p. 28–60, (2021).

25. Décamps, J.P. and Villeneuve S., S: A two-dimensional control problem arising from dynamic contracting theory, Finance and Stochastics, vol. 23, 1, p. 1–28 (2019).

24. Décamps, J.P. and Villeneuve S.: Jusqu'où les compagnies d'assurance peuvent-elles investir dans le financement des dettes des PME/ETI ?, Revue d'économie financière,126, association d'économie financière (2017).

23. Pouget, S, Sauvagnat J. and Villeneuve, S.: A mind is a terrible thing to change: confirmation bias in financial markets, The Review of Financial Studies, Vol. 30, n 6, p. 2066–2109,(2017).

22. Pierre, E., Villeneuve, S. and Warin, X. : Numerical approximation of a cash-constrained firm value with investment opportunities, *SIAM Journal on Financial Mathematics*, Vol. 8, No 1, p. 54–81,(2017).

21. Décamps, J.P., Gryglewicz S., Morellec E. and Villeneuve, S.: Corporate Policies with Temporary and Permanent Shocks, *Review of Finan-cial Studies*, Vol. 30, No 1, p. 162–210,(2017).

20. Pierre, E.; Villeneuve, S. and Warin, X. : Capital Investment and Liquidity Management with collateralized debt, *Finance and Stochas-tics*,Vol. 20, No 4, p. 809–854,(2016)

19. Décamps, J.P. and Villeneuve, S. : Rethinking Dynamic Capital Structure Models with roll-over debt, *Mathematical Finance*,Vol 24, 1,66-96,(2014)

18. Villeneuve, S. and Warin, X.: Optimal Liquidity management and hedging in the presence of a non predictable growth opportunity, *Mathematical and Financial Economics*, Vol 8, 2, 193-227, (2014).

17. Décamps, J.P; Mariotti, T; Rochet, J.C and Villeneuve, S.: Free Cash-Flow, Issuance Costs and Stock Price Volatility. *Journal of Finance* Vol 66, p 1501-1544,(2011).

16. Rochet, J.C and Villeneuve, S.: Liquidity Risk and Corporate Demand for Hedging and Insurance. *Journal of Financial Intermediation*, Vol 3, p 300-323, (2011).

15. Biais, B.; Mariotti, T.; Rochet, J.C. and Villeneuve, S.: Large Risk, Limited Liability and Dynamic Moral Hazard. *Econometrica*, Vol 78, No 1, p 73-118,(2010).

14. Bobtcheff, C. and Villeneuve, S. : Technology Choice under Several Uncertainty Sources, *European Journal of Operation Research*, Vol 206, No 3,p 586-600, (2009).

13. Décamps, J.P., Mariotti T and Villeneuve, S. : Irreversible investment under uncertainty, Erratum, *Mathematics of Operation Research*, Vol 34 No 1, p 255-256, (2009).

12. Ly Vath V., Pham, H. and Villeneuve, S.:A mixed singular/switching control problem for a dividend policy with reversible technology investment. *Annals of Applied Probability* Vol 18, No 3,p 1164-1200,(2008).

11. Villeneuve, S.: On the threshold strategies for optimal stopping arising in Real option Theory. *Journal of Applied Probability* Vol 44, No 1, 181-198, (2007).

10. Décamps, J.P. and Villeneuve, S.: Optimal dividend policy and growth option. *Finance and Stochastics* Vol 11, No 1, 3-27, (2007).

9. Ekstrøm E. and Villeneuve, S. : On the value of optimal stopping games. *Annals of Applied Probability* Vol. 16, No. 3, 1576-1596, (2006).

8. Rochet, J.C and Villeneuve, S.: Corporate Portfolio Management, *Annals of Finance*, Vol 1, No. 3, 225-243, (2005).

7. Décamps, J.P., Mariotti T and Villeneuve, S.: Irreversible investment in alternative projects, *Economic theory*, Vol 28, No. 2, 425-448, (2006).

6. Décamsp, J.P., Mariotti T et Villeneuve, S.: Irreversible investment under uncertainty, *Mathematics of Operation Research*, Vol 30, No. 2, 472-500, (2005).

5. Ern, A.; Villeneuve, S. and Zanette, A. : Adaptive finite element methods for local volatility European option pricing, *International Journal of theoretical and applied finance*, Vol 7, 659-684, (2004).

4. Lamberton, D. and Villeneuve, S. : Critical Price near maturity for an American option on a dividend-paying stock, *Annals of Applied Probability*, Vol 13, 800-815, (2003).

3. Loubergé, H., Villeneuve, S. and Chesney, M. : Long term Risk Management of Nuclear waste, *Journal of Economic Dynamics and Control*, Vol 27,157-180, (2002).

2. Villeneuve, S. and Zanette, A. : Parabolic A.D.I. methods for pricing American options on two stocks, *Mathematics of Operation Research*, Vol 27,121-149, (2002).

1. Villeneuve, S.: Exercise regions of American options on several assets, *Finance and Stochastics*, Vol 3, 295-322, (2002).

Working papers and work in progress

1. Martin J., and Villeneuve S.: A Class of Explicit optimal contracts in the face of shutdown, TSE Working Paper, No. 21-1183, January 2021, submitted.

2. Aid, R, Touzi N. and Villeneuve S.: Shifting Demand, Hedging and Incentive Pay, 2021.

Contribution to books and Policy paper

1. Villeneuve S.: Alternating Direction Implicit Method , in Encyclopedia of Quantitative Finance, Wiley Sons Ltd: Chichester, p. 30-37, (2010).

2. Décamps, J.P. and Villeneuve S. : Optimal Investment under liquidity constraints , in Real Options, Ambiguity, Risk and Insurance (Editors: Bensoussan, A., Peng, S. , Sung, J.), (2013) .

3. Guembel, A. and Villeneuve S. : Regulating performance-based compensation in the financial sector, Opinion et debats, Institut Louis bachelier, (2013).

Conferences and Seminar

- *As Participant*
  - Invited Plenary Speaker: Applications of Stochastic Control to Finance and Economics, May 9-May 14, 2021, BIRS, Banff.
  - Invited Plenary Speaker European summer school of the European Mathematical society, Ecole Polytechnique, August 27- 31 2018
  - Invited Speaker, Workshop on Stochastic Modelling and Financial Applications, Verona 11-15 June 2018
  - Invited Speaker, Conference, Les défis de l'industrie de l'assurance, Caisse des dépôts, May 18th 2018.
  - Invited Speaker: Conference PDE and Probability Methods for Interactions , Antibes, April 2017
  - Invited Speaker: Conference Stochastic Analysis of Dynamical Systems, Stochastic Control and Games, Leeds October 2016
  - Speaker Bachelier Conference, New-York, July 2016.
  - Invited Speaker: Closing Conference Robust Finance thematic semester on Mathematics and Financial Economics Center For Interdisciplinary Research, BIELEFELD, May 17 - 21, 2016
  - Invited Speaker: Conference "Information in Finance and Insurance", PARIS, 23-25 June
  - Invited Speaker: Workshop on Mathematics and Financial Economics Center For Interdisciplinary Research, BIELEFELD, May 18 - 22, 2015
  - Invited Speaker: Annual Conference of the Chaire Finance et Développement Durable, Paris October 2013.

- Invited Speaker: Swissquote Conference on Liquidity and Systemic Risk, Lausanne November 2012.
- Invited speaker: Optimal stopping, optimal control and Finance, University of Warwick July 2012.
- Speaker Conference PWRI, Toulouse April 2012.
- Invited speaker: Conference on credit and liquidity risks, University of Freiburg March 2012.
- Speaker *IMS annual meeting*, Miami August 2011.
- Seminar, ORFE princeton May 2011.
- Seminar, EPFL Lausanne, April 2011.
- Seminar, ISFA LYON, March 2011
- Speaker: *Modelling and managing the risk*, Paris January 2011. –
Invited Speaker: Symposium of Optimal stopping with applications, Turku Finland June 2009.
- Invited speaker: First FBF/IDEI Conference on Investment Banking and Financial markets March 2009.
- Workshop on Dynamic Risk Sharing, Paris January 2009.
- World Congress of the Bachelier Society, London July 2008
- Invited speaker Congress of the American Mathematical Society, San Diego January 2008.
- Financial Mathematics Seminar, Stanford University December 2007.
- Financial Mathematics Seminar, University of California Santa Barbara October 2007.
- World Congress on Real options, Berkeley June 2007.
- Bachelier Seminar, IHP Paris May 2007.
- Seminar of the school of mathematics, University of Manchester November 2006.
- New mathematical methods in risk theory, Florence October 2005.

• *As Organiser*

- *Conference in honour of the 60th birthday of Jean-Charles Rochet*, Toulouse, May 31th, June 1 2018
- *Optimization of the flow of dividends: 20 years after*, Palais Brongniart, Paris, France, May 26th–27th 2016.
- *SCOR and IDEI Conference on Extreme Events and Uncertainty in Insurance and Finance*, SCOR headquarter, Paris, January 10th 2014.
- *Stochastic Control and Optimal Stopping in Finance*, Toulouse, France, December 9th-11th 2011
- *Risk Management after the Crisis II*, Toulouse, France, September 6th-7th 2011.
- *Risk Management after the Crisis*, Toulouse, France, April 2011.
- *Integration of Extremal Events in Quantitative Risk Management*, La Tour SCOR- La Défense, Paris, France, March 2010.
- *First IDEI-SCOR Conference on "Risk Sharing and Finance*, Toulouse, France, September 10th-11th 2009.

Referee for:

Econometrica, Journal of Economic Theory, Journal of Finance, Review of Economic Studies, Finance and Stochastics, Annals of Applied Probability, Mathematics of Operation Research, Mathematical Finance, Stochastic Processes and their applications, Operation Research, Management Science, Rand Journal of Economics, Journal of Mathematical Economics, Mathematics and Financial economics International Journal of Theoretical and Applied Finance.