October 2022

CURRICULUM VITAE

Full name	Hatem Ben Ameur
Position	Full Professor
Field	Decision sciences – Financial engineering
Address	HEC Montréal
	Department of decision sciences
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Languages	Arabic, French, and English

Degrees

1. PhD Administration with a specialization in financial engineering. (1995–2001). HEC Montréal, Montreal, Quebec, Canada.
2. Diploma of statistician, economist, and INSEE administrator. (1984–1987). Ecole Nationale de la Statistique et de l'Administration Economique (ENSAE), Paris, France.
3. Maîtrise de mathématiques. (1980–1984). Faculté des Sciences de Tunis, Tunis, Tunisia.

Work experience

1. Professor. (Since June 2014). Decision sciences, HEC Montréal, Montreal, Quebec, Canada.
2. On sabbatical leave. (June 2022 to June 2023). IHEC Carthage and HEC Montréal, Tunis, Tunisia.
3. On sabbatical leave. (June 2015 to June 2016). BESTMOD Laboratory, ISG Tunis, Tunisia.
4. Professor (On leave). (Since June 2010). Management sciences, ISG Tunis, Tunis, Tunisia.
5. Associate professor. (June 2008 to June 2010). Finance, operations, and information systems, Brock University, St. Catharines, Ontario, Canada.
6. Associate professor. (June 2003 to June 2014). Management sciences, HEC Montréal, Montreal, Quebec, Canada.
7. Associate professor (On leave). (June 2003 to June 2010). Management sciences, ISG Tunis, Tunis, Tunisia.
8. On sabbatical leave. (June 2006 to June 2007). Visiting professor at Brock University (St. Catharines, Ontario, Canada), ISG Tunis (Tunis, Tunisia), and Valladolid University (Valladolid, Spain).

9. Director. (June 2005 to June 2006). Research center in new financial economy, HEC Montréal, Montreal, Quebec, Canada.
10. Assistant professor. (June 2001 to June 2003). Management sciences, HEC Montréal, Montreal, Quebec, Canada.
11. Assistant professor. (June 1999 to June 2001). Finance, UQÀM, Montreal, Quebec, Canada.
12. Assistant professor. (June 1988 to June 1995). Management sciences. ISG Tunis, Tunis, Tunisia.

Honours

1. Prize for the best PhD dissertation defended at HEC Montréal during 2001. (2002). Awarded by HEC Montréal.
2. Merit scholarship for studies in Canada. (1995–2000). Awarded by the Tunisian ministry of higher education and the Canadian international development agency.
3. Merit scholarship for studies in France. (1984–1987). Awarded by the Tunisian ministry of higher education.

Invitations

1. Invited professor. (Fall 2022). American University in Cairo, Cairo, Egypt.
2. Invited professor. (Fall 2022). Tunis Business School, Tunis, Tunisia.
3. Guest speaker. (March 2022). IHEC Carthage, Tunis, Tunisia.
4. Guest speaker. (December 2017). IHEC Carthage, Tunis, Tunisia.
5. Invited professor. (April 2017). ENCG – Ibn Zohr University, Agadir, Morocco.
6. Guest speaker. (November 2016). National Bank of Canada, Montreal, Canada.
7. Guest speaker. (September 2016). Inaugural lecture, HEC Montréal, Montreal, Canada.
8. Plenary speaker. (March 2016). The 7th International Conference on Engineering and Business Management, (EBM 2016), Beijing, China.
9. Plenary speaker. (December 2015). World Accounting and Finance Conference (WAFC 15), Tunis, Tunisia.
10. Invited professor. (December 2014, October 2011, May 2009). ISG Tunis, Tunis, Tunisia.
11. Guest speaker. (May 2013). IREQ Varennes, Varennes, Quebec, Canada.
12. Guest speaker. (December 2011). Central Bank of Tunisia.
13. Plenary speaker. (December 2010). Djerba 2010 – Conference on Financial Regulation, Djerba, Tunisia.
14. Guest speaker. (October 2010). Ecole Polytechnique La Marsa, Tunis, Tunisia.
15. Plenary speaker. (October 2009). PhD meeting of ISG Tunis, Hammamet, Tunisia.
16. Guest researcher. (May 2009). Université d'Orléans, Orléans, France.
17. Guest speaker. (May 2009). Rouen Business School, Rouen, France.
18. Guest speaker. (April 2007). ESSEC, Tunis, Tunisia.
19. Guest researcher. (February 2007). University of Valladolid, Valladolid, Spain.
20. Guest speaker. (January 2007, July 2006, and May 2004). Brock University, St. Catharines, Ontario, Canada.
21. Guest speaker. (July 2005). Workshop on the Tunisian bonds markets, Organized by the Arab Tunisian Bank, Tunis, Tunisia.
22. Guest speaker. (January 2004). FSEG Sfax, Sfax, Tunisia.

Scientific publication

- **Submitted papers:** The name of the journal is listed once the authors are asked to revise and resubmit.

1. Ben-Ameur, Hatem, Tarek Fakhfakh, and Alexandre Roch. Valuing corporate securities when the firm's assets are illiquid, under revision at *Computational Economics*.
2. Ben-Abdellatif, Malek, Hatem Ben-Ameur, Rim Chérif, and Tarek Fakhfakh. Quasi-maximum likelihood for estimating structural models.
3. Ben-Abdellatif, Malek, Hatem Ben-Ameur, and Rim Chérif. A two-factor structural model for valuing corporate securities.

- **Accepted papers**

1. Ben-Ameur, Hatem; Rim Chérif, and Bruno Rémillard. A dynamic program under Lévy processes for valuing corporate securities, Forthcoming in *Journal of Risk*.
2. Ben-Abdellatif, Malek, Hatem Ben-Ameur, and Bruno Rémillard. Dynamic programming and parallel computing for valuing two-dimensional American options. Forthcoming in *Journal of Systems Science and Complexity*.
3. Ben-Ameur, Hatem, Rim Chérif, and Bruno Rémillard. (2020). American options under the variance-gamma process: evaluation and estimation. *Journal of Futures Markets*, 40:1548–1561.
4. Ayadi, Mohamed A., Hatem Ben-Ameur, Nabil Channouf, and Tran Quang-Khoi. (2019). NORTA for portfolio credit risk. *Annals of Operations Research*, 281:99–119.
5. Ben-Ameur, Hatem, Rim Chérif, and Bruno Rémillard. (2016). American options under jump-diffusions: evaluation and estimation. *Quantitative Finance*, 16:1313–1324.
6. Ayadi, Mohamed, Hatem Ben-Ameur, and Tarek Fakhfakh. (2016). A dynamic program for valuing corporate securities. *European Journal of Operational Research*, 249:751–770.
7. Ayadi, Mohamed, Hatem Ben-Ameur, and Lawrence Kryzanowski. (2016). Typical and tail performance of SRI equity mutual funds. *Journal of Financial Services Research*, 50:57–94.
8. Ben-Ameur, Hatem, Lotfi Karoui, and Walid Mnif. (2014). Pricing interest-rate derivatives using multilinear and transition densities. *Journal of Derivatives*, 22:82–109.
9. Ayadi, Mohamed, Hatem Ben-Ameur, Tymur Kirillov, and Robert Welch. (2014). A stochastic dynamic program for valuing options on futures. *Journal of Futures Markets*, 34:1185–1201.
10. Ben-Ameur, Hatem, Javier de Frutos, Tarek Fakhfakh, and Diaby Vacaba. (2013). Upper and lower bounds for convex value functions of derivative contracts. *Economic Modelling*, 34:69–75.
11. Ayadi, Mohamed, Hatem Ben-Ameur, Skander Lazrak, and You Wang. (2013). Canadian investors and the discount on closed-end funds, *Journal of Financial Services Research*, 43:69–98.
12. Ben-Abdallah Ramzi, Hatem Ben-Ameur, and Michèle Breton. (2012). Pricing the CBOT T-bonds futures contract. *Quantitative Finance*, 12:1663–1678.

13. Bou-Hamad, Imad, Denis Larocque, and Hatem Ben-Ameur, (2011). A Review of survival trees. *Statistics Surveys*, 5:44–71.
14. Bou-Hamad, Imad, Denis Larocque, and Hatem Ben-Ameur. (2011). Discrete-time survival trees and forests with time-varying covariates: application to bankruptcy data. *Statistical Modelling*, 5:429–446.
15. Ben-Ameur, Hatem, Michèle Breton, and Juan-Manuel Martinez. (2009). A dynamic programming approach for pricing derivatives in the GARCH model. *Management Science*, 55:252–266.
16. Ben-Ameur, Hatem, Damiano Brigo, and Eymen Errais. (2009). A dynamic programming approach for pricing CDS and CDS options. *Quantitative Finance*, 9:717–726.
17. Bou-Hamad, Imad, Denis Larocque, Hatem Ben-Ameur, Louise C. Mâsse, Frank Vitaro, and Richard E. Tremblay. (2009). Discrete-time survival trees. *Canadian Journal of Statistics*, 37:17–32.
18. Ben-Abdallah, Ramzi, Hatem Ben-Ameur, and Michèle Breton. (2009). An analysis of the true notional bond system applied to the CBOT T-bonds futures. *Journal of Banking and Finance*, 33:534–545.
19. Ben-Ameur, Hatem, Hind Bouafi, Pierre Rostan, Raymond Theoret, and Samir Trabelsi. (2008). Assessing bankrupt probability on American firms: A Logit approach. *Journal of Theoretical Accounting Research*, 3:1–11.
20. Ben-Ameur, Hatem, Michèle Breton, Lotfi Karoui, and Pierre L'Écuyer. (2012). A dynamic programming approach for pricing options embedded in bonds. *Journal of Economic Dynamics and Control*, 31:2212–2233.
21. Ben-Ameur, Hatem, Michèle Breton, and Pascal François. (2006). A dynamic programming approach to price instalment options. *European Journal of Operational Research*, 169:667–676.
22. Ben-Ameur, Hatem, Pierre L'Écuyer, and Christiane Lemieux. (2004). Combination of general antithetic transformations and control variables. *Mathematics of Operations Research*, 29:946–960.
23. Ben-Ameur, Hatem, Michèle Breton, and Pierre L'Écuyer. (2002). A dynamic programming procedure for pricing American-style Asian options. *Management Science*, 48:625–643.
24. Ben-Ameur, Hatem, Christiane Lemieux, and Pierre L'Écuyer. (1999). Variance reduction of Monte Carlo and randomized Quasi-Monte Carlo estimators for stochastic volatility models in finance, Proceedings of the 1999 Winter Simulation Conference, IEEE Press, 336–343.

- **Text books**

1. Breton, Michèle, and Hatem Ben-Ameur. (2005). Co-editors, *Numerical Finance*, Springer, New York.
2. Ben-Ameur, Hatem, Michèle Breton, and Pierre L'Écuyer. (2002). Partial hedging for options based on extreme values and passage times, in *Decision and Control in Management Science*, Edited by Georges Zaccour, Kluwer Academic Publishers, 179–200, Boston.

- **Working papers**

1. Ben-Ameur, Hatem and Rim Chérif. (2022). The components of the credit spread, under construction.
2. Ben-Abdellatif, Malek, Hatem Ben-Ameur, and Pascal François. (2022). Dynamic programming for valuing CoCos. under construction.
3. Ben-Abdellatif, Malek, Hatem Ben-Ameur, Rim Chérif, and Tarek Fakhfakh. (2022). Dynamic programming for valuing options embedded in corporate bonds, under construction.
4. Ben-Abdellatif, Malek, Hatem Ben-Ameur, Rim Chérif, and Tarek Fakhfakh. (2021). Quasi-maximum likelihood for estimating structural models. GERAD report no G–2111–1.
5. Ben-Ameur, Hatem, Tarek Fakhfakh, and Alexandre Roch. (2018). Valuing corporate securities when the firm's assets are illiquid. GERAD report no G–2018–68.
6. Ben-Abdellatif, Malek, Hatem Ben-Ameur, and Bruno Rémillard, (2017). A structural model for valuing exchangeable bonds. GERAD report no G–2017–48.
7. Ben-Ameur, Hatem; Rim Chérif, Bruno Rémillard. (2017). A dynamic program under Lévy processes for valuing corporate securities. GERAD report no G–2017–43.
8. Ayadi, Mohamed A.; Hatem Ben-Ameur, Nabil Channouf, and Tran Quang-Khoi. (2016). NORTA for portfolio credit risk. GERAD report no G–2016–123.
9. Ben-Abdellatif, Malek, Hatem Ben-Ameur, and Bruno Rémillard. (2016). A two-factor structural model for valuing corporate securities. GERAD report no G–2016–119.
10. Ben-Ameur, Hatem, Rim Chérif, and Bruno Rémillard. (2016). American options under variance-gamma processes. GERAD report no G–2016–74.
11. Ben-Abdellatif, Malek, Hatem Ben-Ameur, and Bruno Rémillard. (2016). Dynamic programming and parallel computing for valuing two-dimensional American-style options. GERAD report no G–2016–48.
12. Ayadi, Mohamed, Hatem Ben-Ameur, and Tarek Fakhfakh. (2013). A stochastic dynamic program for valuing corporate securities. GERAD report no G–2013–53.
13. Ayadi, Mohamed, Hatem Ben-Ameur, Tymur Kirillov, and Robert Welch. (2013). A stochastic dynamic program for valuing options on futures. GERAD report no G–2013–03.
14. Ben-Ameur, Hatem, Rim Chérif, and Bruno Rémillard. (2012). American options under jump-diffusions: evaluation and estimation. GERAD report no G–2012–58.
15. Ayadi, Mohamed, Hatem Ben-Ameur, and Lawrence Kryzanowski. (2011). Luck versus skill in the cross-section of ethical mutual funds. GERAD report no G–2011–07.
16. Ayadi, Mohamed, Hatem Ben-Ameur, Skander Lazrak, and You Wang. (2011). Canadian investors and the discount on closed-end funds. GERAD report no G–2011–06.
17. Ben-Ameur, Hatem, Lotfi Karoui, and Walid Mnif. (2011). Pricing interest rate derivatives with multilinear interpolations and transition densities. GERAD report no G–2011–04.
18. Bou-Hamad, Imad, Denis Larocque, and Hatem Ben-Ameur. (2011). A review of survival trees. GERAD report no G–2011–43.

19. Bou-Hamad, Imad, Denis Larocque, and Hatem Ben-Ameur. (2009). Discrete-time survival trees and forests with time-varying covariates: application to bankruptcy data. GERAD report no G–2009–17.
20. Bou-Hamad, Imad, Denis Larocque, Hatem Ben-Ameur, Louise C. Mâsse, Frank Vitaro, and Richard E. Tremblay. (2007). Discrete-time survival trees. GARAD report no G–2007–68.
21. Ben-Ameur, Hatem, Javier de Frutos, Tarek Fakhfakh, and Vacaba Diaby. (2007). Upper and lower bounds for convex value functions of derivative contracts. GERAD report no G–2007–63.
22. Ben-Abdallah, Ramzi, Hatem Ben-Ameur, and Michèle Breton. (2006). An analysis of the true notional bond system applied to the CBOT T-bonds futures. GERAD report no G–2007–60.
23. Ben-Abdallah, Ramzi, Hatem Ben-Ameur, and Michèle Breton. (2006). Pricing the CBOT T-bonds futures. GERAD report no G–2006–77.
24. Ben-Ameur, Hatem, Damiano Brigo, and Eymen Errais, (2006). A dynamic programming approach for pricing CDS and CDS options. GERAD report no G–2006–17.
25. Ben-Ameur, Hatem, Michèle Breton, and Pascal François. (2005). Pricing ASX instalment warrants under GARCH. GERAD report no G–2005–42.
26. Ben-Ameur, Hatem, Michèle Breton, and Juan-Manuel Martinez. (2005). A Dynamic programming approach for pricing derivatives in the GARCH model. GERAD report no G–2005–31.
27. Ben-Ameur, Hatem, Hind Bouafi, Pierre Rostan, Raymond Theoret, and Samir Trabelsi. (2005). Assessing bankrupt probability on American Firms: a Logit approach. UQÀM CRG report.
28. Ben-Ameur, Hatem, Michèle Breton, Lotfi Karoui, and Pierre L'Écuyer. (2004). A dynamic programming approach for pricing options embedded in bonds. GERAD report no G–2004–35.
29. Ben-Ameur, Hatem, Pierre L'Écuyer, and Christiane Lemieux. (2003). Combination of general antithetic transformations and control variables. GERAD report no G–2003–19.
30. Ben-Ameur, Hatem, Michèle Breton, and Pascal François. (2002). Pricing instalment options with an application to ASX instalment warrants. GERAD report no G–2002–59.
31. Ben-Ameur, Hatem, Michèle Breton, and Pierre L'Écuyer. (2002). Pricing call and put options embedded in bonds. GERAD report no G–2002–10.
32. Ben-Ameur, Hatem, Michèle Breton, and Pierre L'Écuyer. (2002). A numerical procedure for pricing American-style Asian options. GERAD report no G–99–39.
33. Ben-Ameur, Hatem, Michèle Breton, and Pierre L'Écuyer. (1999). Partial hedging for options based on extreme values and passage times. GERAD report no G–1999–15.

Supervision

- **In progress**

1. François-Michel Boire. (Registered since spring 2022). Alternative processes for valuing American options. Postdoctoral trainee, HEC Montréal and Wilfrid Laurier University, co-directed by Mark Reesor.

2. Alireza Fellahi. (Registered since summer 2022). Neural networks for valuing and estimating structural models. MSc thesis, HEC Montréal.
3. Yasmin Kalhor. (Registered since summer 2022). Computing point-in-time vs through-the-cycle default probabilities. MSc thesis, HEC Montréal, co-directed by Michèle Breton.
4. Emanuel Lemus-Monge. (Registered since winter 2022). NLP for corporate bankruptcy prediction. MSc thesis, HEC Montréal, co-directed by Gilles Caporossi.
5. Arthur Madore-Boisvert. (Summer 2022). Corporate bankruptcy prediction. Undergraduate NSERC internship, McGill University.
6. Fortuné Amakbré. (Registered since summer 2019). CDS premiums and equity prices for estimating structural models. MSc thesis, HEC Montréal, co-directed by Rim Chérif.
7. Chaima Ben Mahmoud. (Registered since 2018). Credit analysis of the Tunis Stock Exchange's companies. PhD thesis in finance, IHEC Carthage, co-directed by Amel Zenaidi.
8. Edouardo Magini. (registered in summer 2022). Improving the LSMC algorithm. MSc project, HEC Montréal.

- **Completed – PhD and postdoctoral fellows**

1. Ben-Ammar, Mouldi. (Fall 2021). Essays on corporate bankruptcy prediction. PhD thesis in economics, IHEC Carthage, co-directed by Samia Haddad.
2. Ben-Abdellatif, Malek. (Winter 2017). A dynamic program for options valuing in two-dimensional models. PhD thesis, HEC Montréal, co-directed by Bruno Remillard.
3. Cherif, Rim. (Winter 2017). A Dynamic program for valuing corporate bonds in a one-dimensional Lévy structural model. PhD thesis, HEC Montréal, co-directed by Bruno Remillard.
4. Fakhfakh, Tarek. (Summer 2016). A dynamic program for valuing corporate securities. PhD thesis in economics, ISG Tunis, co-directed by Mohamed Ayadi.
5. Channouf, Nabil. (Fall 2008 to fall 2010). NORTA for credit risk. Postdoctoral fellow, GERAD, co-directed by Mohamed Ayadi.
6. Bou-Hamed, Imed. (Summer 2009). Discrete-time survival trees for bankruptcy prediction. PhD thesis, HEC Montréal, co-directed by Denis Laroque.
7. Ben-Abdallah, Ramzi. (Summer 2008). Essays on the modeling and pricing of the CBOT long-term T-bonds futures contract. PhD thesis, HEC Montréal, co-directed by Michèle Breton.

- **Completed – MSc**

1. Antoine Léger. (Winter 2021). LSMC and neural networks in stochastic volatility models. MSc project, HEC Montréal, co-directed by Christian Dorion.
2. Achraf Ajroudi. (Winter 2020). LSMC, neural networks, and jump-diffusion processes. MSc project, HEC Montréal, co-directed by Christian Dorion.
3. Marianne Fabry-Chaussée. (Winter 2020). LSMC, neural networks, and reduction of variance techniques. MSc project, HEC Montréal, co-directed by Christian Dorion.

4. Blanchard Martin. (Fall 2018). PCA and dynamic programming for valuing two-dimensional American options. MSc thesis, HEC Montréal, co-directed by Michèle Breton.
5. Auger-Morin Frédérick. (Fall 2017). Neural networks for options valuing. MSc project, HEC Montréal, co-directed by Laurent Charlin.
6. Ben-Abdallah Thouraya. (Winter 2017). Social responsibility and bankruptcy prediction. MSc thesis in finance, IHEC Carthage, co-directed by Amel Zenaidi.
7. Gharsallaoui, Nidhal. (Winter 2017). A cash-flow-based model for corporate bankruptcy prediction. MSc thesis, HEC Montréal, co-directed by Julien Le-Maux.
8. Painchaud, Guillaume. (Fall 2016). A hybrid model for corporate bankruptcy prediction, MSc thesis, HEC Montréal.
9. Abdul-Menhem, Hesham. (Winter 2014). Crude ratios versus relative ratios for corporate bankruptcy prediction. MSc thesis, HEC Montréal.
10. Tran, Quang-Khoi. (Summer 2014). Efficient computations of default thresholds in credit risk models. MSc project, HEC Montréal.
11. Abdellilah, Nafia. (Summer 2014). Data downloading and analysis for financial arbitrage. MSc project, HEC Montréal.
12. Kirillov, Tymur. (Winter 2011). A dynamic-programming procedure for pricing options on stock index futures. MSc thesis in finance, Brock University, co-directed by Mohamed ayadi.
13. Li, Mi. (Winter 2010). Models for pricing futures contracts. MBA thesis in accounting, Brock University, co-directed by Mohamed Ayadi.
14. Chérif. Rim. (Fall 2009). American options under jump-diffusion processes. MSc thesis, HEC Montréal, co-directed by Bruno Remillard.
15. Mnif, Walid. (Fall 2008). Pricing derivatives in a multifactor affine model. MSc thesis, HEC Montréal, co-directed by Lotfi Karoui.
16. Rhissa, Yahia. (Fall 2008). Regressor families in the LSMC procedure. MSc thesis, HEC Montréal, co-directed by Michèle Breton.
17. Iafigliola, Jiuseppe. (Fall 2007). A Gaussian model for pricing interest rate swaps. MSc thesis, HEC Montréal, co-directed by Michèle Breton.
18. Amaya, Diego. (Winter 2007). A credit-risk model for the computation of CDO tranche spreads. MSc thesis, HEC Montréal, co-directed by Geneviève Gauthier.
19. Ben-Tekaya, Samir. (Fall 2004). Measuring economic capital for a credit portfolio. MSc thesis, HEC Montréal, co-directed by Philippe Zaugg.
20. Vacaba, Diaby. (Winter 2004). Upper and lower bounds for option values. MSc thesis, HEC Montréal, co-directed by Javier de Frutos.
21. Martinez, Juan-Manuel. (Winter 2004). Valuing American puts under GARCH. MSc thesis, HEC Montréal.
22. Mejri, Sofiène. (Winter 2004). Importance sampling for VaR computing. MSc thesis, HEC Montréal, co-directed by Thanos Avramidis.
23. Naud, Mathieu. (Fall 2003). Valuing callable bonds in the BDT model. MSc thesis, HEC Montréal, co-directed by Jean-Pierre Paré.
24. Ben-Abdallah, Ramzi. (Summer 2003). The Cheapest to Deliver. MSc thesis, HEC Montréal, co-directed by Michèle Breton.
25. Chokri, Karim. (Fall 2002). Robustness of the Binninga and Wienner's rule for the identification of the cheapest to deliver. MBA thesis in finance, UQÀM.
26. Maalaoui, Olfa. (Summer 2001 to fall 2002). Callable bonds issued by Quebec. MBA thesis in finance, UQÀM, co-directed by Jean-Pierre Paré.

27. Karoui, Lotfi. (Winter 2002). Valuing callable bonds in the CIR Model. MSc thesis, HEC Montréal, co-directed by Michèle Breton.
28. Béguin, Karine. (Fall 2001). An analysis of a margin account underlying to a future contract. MSc thesis, HEC Montréal, co-directed by Michèle Breton.

- **Completed – BAA**

1. Pablo Segura. (Winter 2019). Corporate bankruptcy prediction. BAA NSERC project, Finance, HEC Montréal.
2. Imane Ben Khalifa. (Summer 2018). ANOVA under SAS, BBA NSERC project, HEC Montréal.
3. Malak Belrhiti. (Summer 2018). Financial distress analysis under SAS, BBA NSERC project, HEC Montréal.
4. Francois Laperrière. (Summer 2016). Discriminant analysis under R, BBA NSERC project, HEC Montréal.
5. Nidhal Gharsellaoui. (Summer 2013). PCA and corporate bankruptcy prediction. Graduating year project. Ecole Supérieure de la Statistique et de l'Analyse de l'Information (Tunis).
6. Salah Ben-Khelil. (Summer 2008). Pricing barrier options under GARCH. Graduating year project, Ecole Polytechnique La Marsa, co-directed by Michèle Breton.
7. Mohamed-Amine Radhouane. (Summer 2008). Pricing vanilla options under NIG-GARCH. Graduating year project, Ecole Polytechnique La Marsa, co-directed by Michèle Breton.
8. Paul de Bodin de Galembert. (Fall 2007). Measuring investor confidence. BAA training course, HEC Montréal.
9. Soni Nougatra. (Summer 2005). New economy versus old economy. BSc training course, Polytechnique Montréal.

Research grants

- **Individual – External funds**

1. Individual grant for discovery. (5 years: 2018–2024). Solving and estimating extended credit-risk structural models. NSERC, $150,000.
2. Individual grant for discovery. (5 years: 2013–2018). Stochastic dynamic programming and Monte Carlo simulation for valuing corporate debts. NSERC, $120,000.
3. Individual research grant. (3 years: 2011–2014). Corporate bankruptcy prediction. IFM^2, $60,000.
4. Individual grant for discovery. (5 years: 2008–2012). Efficiency improvement of dynamic programs for options pricing. NSERC, $85,000.
5. Individual research grant. (1 year: 2005–2006). Credit risk and bankruptcy prediction. IFM², $20,000.
6. Individual grant for discovery. (5 years: 2003–2008). Dynamic programming and Monte Carlo simulation in finance. NSERC, $65,000.
7. New researcher grant. (3 years: 2002–2005). Valuing bonds issued by Quebec. IFM², $60,000.

- **Group – External funds**

1. Collaborative research team project with Adam Metzler and Mark Reesor (Wilfrid Laurier University). (3 years: 2019–2023). Contingent capital and calibration of capital structure models. CANSSI, $180,000.
2. Georges Dionne and 23 researchers, INE collaborative research initiative grants. (5 years: 2002–2007). New financial economy. SSHRC, $3,000,000.

- **Individual – Internal funds**

1. Internal research funds. (1 year: 2015–2016). HEC Montréal, $2,500.
2. Internal research funds. (1 year: 2009–2010). Brock University, $6,000.
3. Internal research funds. (1 year: 2008–2009). Brock University, $6,000.
4. Internal research funds. (1 year: 2008–2009). Brock University, $2,500.
5. Start-up grant. (2 years: 2008–2010). Statistics for financial risk management under SAS, HEC Montréal, $4,500.
6. Start-up grant. (1 year: 2003–2004). Options embedded in the long-term T-bonds futures contract, HEC Montréal, $4,500.
7. Start-up grant. (1 year: 2002–2003). Pricing installment options, HEC Montréal, $4,500.
8. Start-up grant. (1 year: 2001–2002). The timing option for the Treasury-bonds futures contract, HEC Montréal, $4,500.

Reviews

1. **Organizations (on a regular basis):** NSERC, SSHRC, FQRNT, and HEC Montréal.
2. **Journals:** Annals of Operations Research. Automatica. Computational Management Science. Canadian Journal of Statistics. Computers and Operations Research. Engineering Economist. European Journal of Operational Research. IEE Transactions on Engineering Management. Journal of Economic Dynamics and Control. Journal of Futures Markets. Management Science. Managerial Finance. Mathematical Finance. Mathematics and Computers in Simulation. North American Journal of Economics and Finance. Quantitative Finance. Review of Financial Economics. Revue Gestion. SIAM Journal on Applied Mathematics.

Conferences: An asterisk follows the name of the co-author if he presented the paper.

1. The AFS 2022 summer conference. (July 2022). QML for estimating structural models. Mahdia, Tunisia. Co-authors: Malek Ben-Abdellatif, Tarek Fakhfakh, and Rim Chérif.
2. Symposium pour une gouvernance axée sur les résultats et fondée sur le savoir. (December 2021). QML for estimating structural models. Tozeur, Tunisia. Co-authors: Malek Ben-Abdellatif, Tarek Fakhfakh, and Rim Chérif.
3. CANSSI Showcase conference. (November 2021). QML for estimating structural models. Virtual. Co-authors: Malek Ben-Abdellatif, Tarek Fakhfakh, and Rim Chérif*.

4. Fifth International Conference on Finance. (December 2019). Valuing corporate securities when the firm's assets are illiquid. Monastir, Tunisia. Co-authors: Tarek Fakhfakh and Alexandre Roch.
5. WEHIA 2019 workshop on economic science with heterogeneous interacting agents. (Summer 2019). Valuing corporate securities when the firm's assets are illiquid. London, UK. Co-authors: Tarek Fakhfakh and Alexandre Roch.
6. MEAFA 2019 annual meeting. (Summer 2019). Valuing corporate securities when the firm's assets are illiquid. Sousse, Tunisia. Co-authors: Tarek Fakhfakh and Alexandre Roch.
7. Sixth TSFS International Conference on Finance. (15–16 December 2018). Valuing corporate securities when the firm's assets are illiquid. Sousse, Tunisia. Co-authors: Tarek Fakhfakh and Alexandre Roch.
8. Tenth Workshop on Dynamic Games in Management Science. (1–2 November 2018). Valuing corporate securities when the firm's assets are illiquid. Rabat, Morocco. Co-authors: Tarek Fakhfakh and Alexandre Roch.
9. CAIMS Annual Meeting, (4–7 June 2018). Dynamic programming for valuing American options under variance-gamma process. Toronto, Ontario, Canada. Co-authors: Rim Chérif* and and Bruno Rémillard.
10. CAIMS Annual Meeting (4–7 June 2018). Dynamic programming and parallel computing for valuing two-dimensional derivatives. Toronto, Ontario, Canada. Co-authors: Malek Ben-Abdellatif* and Bruno Rémillard.
11. International Conference on Social Science, Arts, Business, and Education. (27–28 December 2016). NORTA for credit risk. Venice, Italy, co-authors: Mohamed Ayadi, Nabil Channouf, and Quang Khoi-Tran.
12. The 7th International Conference on Engineering and Business Management (EBM 2016). (5–7 March 2016). A dynamic program for valuing corporate securities. Beijing, China, co-authors: Mohamed Ayadi and Tarek Fakhfakh.
13. The 5th European Business Research Conference. (10–11 September 2015). American-style options in jump-diffusion models: estimation and evaluation. Rome, Italy, co-authors: Rim Chérif and Bruno Rémillard.
14. The Annual Tokyo Business Research Conference. (15–16 December 2014). A dynamic program for valuing corporate securities. Tokyo, Japan, co-authors: Mohamed Ayadi and Tarek Fakhfakh.
15. The Canadian Applied and Industrial Mathematics Society (CAIMS). (22–26 June 2014). American-style options in jump-diffusion models: estimation and evaluation. Saskatoon, Saskatchewan, Canada, co-authors: Rim Chérif* and Bruno Rémillard.
16. The Mathematical Finance Days. (28–29 April 2014). American-style options in jump-diffusion models: estimation and evaluation. Montreal, Quebec, Canada, co-authors: Rim Chérif* and Bruno Rémillard.
17. First Paris Financial Management Conference. (16–17 December 2013). A dynamic program for valuing corporate securities. Paris, France, co-authors: Mohamed Ayadi and Tarek Fakhfakh.
18. The 10th International Conference on Computational Management (CMS13). (1–3 May 2013). A dynamic program for valuing corporate securities. Montreal, Quebec, Canada, co-authors: Mohamed Ayadi and Tarek Fakhfakh.
19. The 10th International Conference on Computational Management (CMS13). (1–3 May 2013). Gaussian jump-diffusion models: estimation and evaluation. Montreal, Quebec, Canada, co-auteurs: Rim Chérif* amd Bruno Remillard.

20. Mathematical Finance Days. (29–30 April 2013). A dynamic program for valuing corporate securities. Montreal, Quebec, Canada, co-authors: Mohamed Ayadi and Tarek Fakhfakh.
21. Mathematical Finance Days. (29–30 April 2013). Gaussian jump-diffusion models: estimation and evaluation, Montreal, Quebec, Canada, co-authors: Rim Chérif* and Bruno Remillard.
22. The 9th EBES International Conference. (11–13 January 2013). Typical and tail performance of SRI equity mutual funds. Rome, Italy, co-authors: Mohamed Ayadi* and Lawrance Kryzanowski.
23. The Annual Conference on Global Economy, Business, and Finance. (15–17 December 2012). A stochastic dynamic program for valuing corporate debts. Hong Kong, China, co-authors: Mohamed Ayadi and Tarek Fakhfakh.
24. Optimization Days. (8–9 May 2012). A dynamic program for valuing corporate debts. Montreal, Quebec, Canada, co-authors: Mohamed Ayadi and Tarek Fakhfakh*.
25. Mathematical Finance Days. (3–4 May 2012). A dynamic program for valuing corporate debts. Montreal, Quebec, Canada, co-authors: Mohamed Ayadi and Tarek Fakhfakh*.
26. The 2nd International Symposium in Computational Economics and Finance (ISCEF). (15–17 March 2012). Upper and lower bounds for convex value functions of derivative contracts. Tunis, Tunisia, co-authors: Javier de Frutos, Tarek Fakhfakh*, and Vacaba Diaby.
27. Asia-Pacific Business Research Conference. (13–14 February 2012). A dynamic program for valuing corporate debts. Kuala Lumpur, Malaysia, co-authors: Mohamed Ayadi and Tarek Fakhfakh.
28. The 5th Annual Risk Management Conference – Global Imbalances and their Risk Management Implications. (7–8 July 2011). Pricing interest rate derivatives with multilinear interpolations and transition probabilities. Singapore, co-authors: Lotfi Karoui and Walid Mnif*.
29. 2011 Meeting of the Midwest Finance Association. (21–22 June 2011). Luck versus skills in the cross-section of ethical mutual funds. Fairmont, Chicago, USA, co-authors: Mohamed Ayadi and Lawrence Kryzanowski*.
30. Mathematical Finance Days. (9–10 May 2011). Option evaluation and model estimation under jump-diffusion. Montreal, Quebec, Canada, co-authors: Rim Chérif* and Bruno Remillard.
31. Mathematical Finance Days. (9–10 May 2011). NORTA-based approach for portfolio credit risk. Montreal, Quebec, Canada, co-authors: Mohamed Ayadi and Nabil Channouf*.
32. Optimization Days. (2–4 May 2011). NORTA-based approach for portfolio credit risk. Montreal, Quebec, Canada, co-authors: Mohamed Ayadi and Nabil Channouf*.
33. 2011 Eastern Finance Association Meetings. (13–16 April 2011). Luck versus skill in the cross-section of ethical mutual funds. Savannah, Georgia, USA, co-authors: Mohamed Ayadi and Lawrence Kryzanowski*.
34. FDIC–Cornell–University of Houston Derivative Securities and Risk Management Conference. (25–26 March 2011). Pricing interest rate derivatives with multilinear interpolations and transition probabilities, Arlington, Virginia, USA, co-authors: Lotfi Karoui and Walid Mnif*.
35. Colloque International sur la Régulation Financière. (12–13 December 2010). A dynamic-programming approach for valuing corporate bond portfolios and the

term structure of conditional default probabilities, Djerba, Tunisia, co-authors: Mohamed Ayadi and Tarek Fakhfakh.

36. The 17th Annual Meeting of the Multinational Finance Society. (27–30 June 2010). Pricing the CBOT T-bonds futures. Barcelona, Spain, co-authors: Ramzi Ben-Abdallah and Michèle Breton.

37. The 12th International Business Research Conference. (8–9 April 2010). Pricing the CBOT T-bonds futures. Dubai, United Arab Emirates, co-authors: Ramzi Ben-Abdallah and Michèle Breton.

38. The First International Symposium in Computational Economics and Finance (ISCEF). (25–27 February 2010). Upper and lower bounds for convex value functions of derivative contracts, Sousse, Tunisia, co-authors: Tarek Fakhfakh, Javier de Frutos, and Diaby Vacaba.

39. Colloque Djerba – Financial Crises, Governance, and Risk Management. (11–13 December 2009). Pricing the CBOT T-bonds futures. Djerba, Tunisia, co-authors: Ramzi Ben-Abdallah and Michèle Breton.

40. The 3rd International Conference on Asia-Pacific Financial Markets. (6 December 2008). Pricing the CBOT T-bonds futures. Seoul, South Korea, co-authors: Ramzi Ben-Abdallah* and Michèle Breton.

41. Troisième Colloque International en Finance et Actuariat. (13–15 December 2008). Pricing the CBOT T-bonds futures. Douz, Tunisia, co-authors: Ramzi Ben-Abdallah and Michèle Breton.

42. Optimization Days. (12–14 May 2008). Pricing barrier options under GARCH. Quebec city, Quebec, Canada, co-authors: Salah Ben Khelil* and Michèle Breton.

43. Optimization Days. (12–14 May 2008). Pricing vanilla options under NIG–GARCH. Quebec city, Quebec, Canada, co-authors: Amine Radhouane* and Michèle Breton.

44. Optimization Days. (12–14 May 2008). A dynamic-programming approach for pricing swaptions. Quebec city, Quebec, Canada, co-authors: Lotfi Karoui and Walid Mnif*.

45. International Conference MAF'2008 – Mathematical and Statistical Methods for Actuarial Sciences and Finance. (26–28 March 2008). An analysis of the true notional bond system applied to the CBOT T-bonds futures. Venice, Italy, co-authors: Ramzi Ben Abdallah and Michèle Breton.

46. The 4th Melbourne Derivatives Research Group Conference. (19 March 2008). An analysis of the true notional bond system applied to the CBOT T-bonds futures. Melbourne, Australia, co-authors: Ramzi Ben Abdallah* and Michèle Breton.

47. AFFI Paris Finance International Meeting. (20–21 December 2007). An analysis of the true notional bond system applied to the CBOT T-bonds futures. Paris, France, co-authors: Ramzi Ben Abdallah* and Michèle Breton.

48. Deuxième Colloque International en Finance et Actuariat. (13–15 December 2007). A dynamic-programming procedure for options pricing under GARCH. Djerba, Tunisia, co-authors: Michèle Breton and Juan-Manuel Martinez.

49. The 4th International Finance Conference. (15–17 March 2007). A dynamic-programming approach for pricing CDS and CDS options. Hammamet, Tunisia, co-authors: Damiano Brigo and Eymen Erraies.

50. Optimization Days. (7–9 May 2007). Pricing the CBOT T-bonds futures. Montreal, Quebec, Canada, co-authors: Ramzi Ben-Abdallah* and Michèle Breton.

51. The 39th Meeting, Euro Working Group on Financial Modelling. (16–17 November 2006,). A dynamic-programming procedure for pricing CDS and CDS options. Sophia Antipolis, France, co-authors: Damiano Brigo and Eymen Erraies.
52. The 12th International Conference on Computing in Economics and Finance. (22–24 June 2006). Pricing the CBOT T-bonds futures. Limassol, Cyprus, co-authors: Ramzi Ben Abdallah and Michèle Breton*.
53. The 16th Annual Derivative Securities and Risk Measurement Conference. (7–8 April 2006). Pricing CDS Bermudan options: an approximate dynamic-programming approach. Arlington, Virginia, USA, co-authors: Damiano Brigo and Eymen Erraies*.
54. INFORMS Annual Meeting. (13–16 November 2005). Pricing CDS Bermudan options: an approximate dynamic-programming approach. San Francisco, California, USA, co-authors: Damiano Brigo and Eymen Erraies*.
55. MEC-VNS Conference. (23–25 November 2005). Pricing CBOT T-bonds futures. Tenerife, Spain, co-authors: Ramzi Ben Abdallah and Michèle Breton*.
56. 12th Global Finance Conference. (27–29 June 2005). A dynamic-programming approach for pricing derivatives in the GARCH model. Dublin, Ireland, co-authors: Michèle Breton and Juan-Manuel Martinez.
57. The 13th INFORMS Applied Probability Conference. (10 March 2005). Pricing CDS Bermudan options: an approximate dynamic programming approach. Ottawa, Ontario, Canada, co-authors: Damiano Brigo and Eymen Erraies*.
58. The 3rd International Finance Conference, Investment, Information Technologies, Value, and Control. (3–5 March 2005). A dynamic-programming approach for pricing derivatives in the GARCH model. Hammamet, Tunisia, co-authors: Juan-Manuel Martinez and Michèle Breton.
59. Quantitative Methods in Finance 2004 Conference. (15–18 December 2004). A stochastic dynamic-programming approach for pricing CDS and CDS options. Sydney, Australia, co-authors: Eymen Errais*.
60. The 10th International Conference on Computing in Economics and Finance. (8–10 July 2004). A dynamic-programming approach for pricing options embedded in bonds. Amsterdam, The Netherlands, co-authors: Michèle Breton, Lotfi Karoui, and Pierre L'Écuyer.
61. EURO XX, 20th European Conference on Operational Research. (4–7 July 2004). A dynamic programming approach for pricing options embedded in bonds. Rhodes, Greece, co-authors: Michèle Breton*, Lotfi Karoui, and Pierre L'Écuyer.
62. Optimization Days. (10–12 May 2004). A dynamic-programming procedure for pricing options in the GARCH model. Montreal, Quebec, Canada, co-authors: Michèle Breton and Juan-Manuel Martinez*.
63. EURO and Istanbul 2003 Conference. (6–10 July 2003). Pricing instalment options with an application to ASX instalment warrants. Istanbul, Turkey, co-authors: Michèle Breton* and Pascal François.
64. ISINI, Seventh International Congress. (20–23 August 2003). Pricing instalment options with an application to ASX instalment warrants. Lille, France, co-authors: Michèle Breton and Pascal François.
65. Optimization Days. (5–7 May 2003). Pricing instalment options with an application to ASX instalment warrants. Montreal, Quebec, Canada, co-authors: Michèle Breton and Pascal François.
66. The 20th AFFI International Conference. (23–25 June 2003). Pricing instalment options with an application to ASX instalment warrants. Lyon, France, co-authors: Michèle Breton and Pascal François*.

67. An International Finance Conference, Investment and Financing Decisions, Risk and Value Creation: Theory and Evidence. (13–15 March 2003). Pricing callable bonds under the CIR model. Hammamet, Tunisia, co-authors: Michèle Breton and Lotfi Karoui*.
68. The 2nd International Conference on Banking and Finance, Issues and Strategies. (9–11 August 2002). Integrating AV and CV in stochastic simulations, Crete, Greece, co-authors: Pierre L'Écuyer and Christiane Lemieux.
69. The XIV Italian Meeting on Game Theory and Applications. (11–14 July 2001). Pricing options embedded in bonds. Ischia, Italy, co-authors: Michèle Breton* and Pierre L'Ecuyer.
70. Francoro III. (9–12 May 2001). Pricing American-style Asian options. Quebec city, Quebec, Canada, co-authors: Michèle Breton* and Pierre L'Écuyer.
71. Financial and Real Markets, Risk Management and Corporate Governance: Theory and Evidence. (15–17 March 2001). Pricing call and put options embedded in bonds. Hammam-Sousse, Tunisia, co-authors: Michèle Breton and Pierre L'Écuyer.
72. International Workshop on Decision and Control in Management Science. (19–20 October 2000). A numerical procedure for pricing American-style Asian options. Montreal, Quebec, Canada, co-authors: Michèle Breton and Pierre L'Écuyer.
73. The 7th Viennese Workshop on Optimal Control, Dynamic Games, and Nonlinear Dynamics: Theory and Applications in Economics and OR/MS. (24–26 May 2000). Dynamic game model for pricing assets with embedded options. Vienna, Austria, co-authors: Michèle Breton* and Pierre L'Écuyer.
74. Optimization Days. (15–17 May 2000). A dynamic-programming approach for pricing bonds with embedded options. Montreal, Quebec, Canada, co-authors: Michèle Breton* and Pierre L'Écuyer.
75. Optimization Days. (15–17 May 2000). Amerasian options: using properties of the value function and exercise frontier. Montreal, Quebec, Canada, co-authors: Michèle Breton* and Pierre L'Écuyer.
76. International Conference on Mathematical Finance. (14–18 June 1999). Numerical evaluation of American-style Asian options. Hammamet, Tunisia, co-authors: Michèle Breton and Pierre L'Écuyer.

Scientific committees

1. Examiner, Thesis jury. (Fall 2022). Yuanyuan Cheng, Systemic risk in an interbank market with a large bank and many small banks, MSc financial engineering, HEC Montréal.
2. Examiner, Thesis jury. (Summer 2022). Pari Gholi Panah, COVID-19 news announcements and the foreign exchange markets, MSc finance, Brock University.
3. Examiner, Thesis jury. (Fall 2021). Maxence Premont, Reinforcement learning algorithms for a dynamic goal-based wealth management problem, MSc financial engineering, HEC Montréal.
4. Chair, MSc thesis jury. (Fall 2021). Ali Roshani Moghaddam. Model risk in stock liquidation strategies, HEC Montreal.
5. Examiner, Graduation project report. (Summer 2020). Nihel Seghaier, Efficient option pricing using Fourier techniques, Ecole Polytechnique LaMarsa.
6. Member, Thesis jury. (Fall 2019). Martin Blanchard, PCA and dynamic programming for valuing two-dimensional option contracts. HEC Montréal.

7. Chair, Thesis jury. (Fall 2017). Edith Viau, Dynamic programming for options replication, MSc financial engineering, HEC Montréal.
8. Chair, Thesis jury. (Fall 2016). Ayoub Boujneh, Credit risk and credit spreads, MSc financial engineering, HEC Montréal.
9. Examiner, Thesis jury. (Fall 2016). Forough Ensandoust-Ghazvini, Credit value adjustment of a portfolio in a context of dependency between the value of the portfolio and the credit quality of the counterparty, MSc financial engineering, HEC Montréal.
10. Director, Thesis jury. (Summer 2016). Tarek Fakhfakh, A dynamic program for valuing corporate securities, PhD finance, ISG Tunis.
11. Examiner, Thesis jury. (Summer 2016). Natalia Child, A model of corporate debt valuation under stochastic interest rates, MSc financial engineering, HEC Montréal.
12. Director, Thesis jury. (Fall 2014). Hesham Abdul-Menhem, Crude ratios versus relative ratios for corporate bankruptcy prediction, MSc financial engineering, HEC Montréal.
13. Director, Short thesis jury. (Summer 2014). Quang-Khoi Tran, Credit risk modeling, MSc financial engineering, HEC Montréal.
14. Director, Short thesis jury. (Summer 2014). Nafia Abdellilah, Data downloading and analysis for financial arbitrage, MSc financial engineering, HEC Montréal.
15. Member, Thesis defense. (Winter 2014). Mohamed Mnasri, Three essays on corporate risk management, PhD finance, UQÀM.
16. Chair, Thesis jury. (Winter 2014). Jean-Paul Ahouassou, A model for loan syndicates, MSc financial engineering, HEC Montréal.
17. Examiner, Stage III thesis committee. (Fall 2013). Mohamed Mnasri, Three essays on corporate risk management, PhD finance, UQÀM.
18. Chair, Thesis jury. (Summer 2013). Alexandre Cléroux Perrault, Valuing convertible bonds by dynamic programming, MSc financial engineering, HEC Montréal.
19. Examiner, Thesis jury. (Fall 2012). Rami Jrad, Valuing options by dynamic programming, spectral approximations, and finite elements, MSc financial engineering, HEC Montréal.
20. Examiner, Thesis committee. (Fall 2011). Mohamed-Amine Radhouane, Option pricing under NIG-GARCH, MSc financial engineering, HEC Montréal.
21. Examiner, Thesis committee. (Winter 2011). Fares Ben-Mahmoud, Approximation methods for pricing derivatives under the CIR model, MSc financial engineering, HEC Montréal.
22. Director, Thesis defense. (Winter 2011). Tymur Kirillov, A dynamic-programming procedure for pricing options on stock index futures, MSc finance, Brock University.
23. Co-director, Stage II thesis committee. (Winter 2011). Rim Chérif, Risky debt in a structural model with jumps, PhD administration, HEC Montréal.
24. Co-director, Stage II thesis committee. (Winter 2010). Malek Ben-Abdellatif, Risky debt in a multifactor structural model, HEC Montréal, PhD Administration.
25. Examiner, Stage II thesis committee. (Fall 2009). Mohamed Mnasri, VaR and its applications in finance, PhD finance, UQÀM.
26. Committee member, Thesis defense. (Fall 2009). Yue Wang, The discount on Canadian closed-end funds and the cross-section of expected returns, MSc finance, Brock University.

27. Committee member, Thesis defense. (Winter 2009). Haiming Luo, The impact of macroeconomic announcement on the US Treasury market, MSc finance, Brock University.
28. Co-director, Thesis committee. (Winter 2009). Rim Cherif, Option evaluation and model estimation under jump-diffusions, MSc financial engineering, HEC Montréal.
29. Co-director, Thesis defense. (Fall 2008). Ramzi Ben-Abdallah, Essays on the pricing of the CBOT long-term T-bonds futures contract, PhD administration, HEC Montréal.
30. Examiner, Stage II thesis committee. (Fall 2008). Amira Anabi, Dynamic games in finance, PhD administration, HEC Montréal.
31. Co-director, Project defense. (Summer 2008). Mohamed-Amine Radhouane, Option pricing under NIG-GARCH, Graduating year project, Ecole Polytechnique La Marsa.
32. Co-director, Project defense. (Summer 2008). Slah Ben-Khelil, Valuing barrier options under GARCH, Graduating year project, Ecole Polytechnique La Marsa.
33. Examiner, Thesis committee. (Winter 2008). Adil Abkari, A quasi-closed formula for vanilla American options, MSc financial engineering, HEC Montréal.
34. Co-director, Stage III thesis committee. (Winter 2008). Ramzi Ben-Abdallah, Pricing the CBOT long term T-bonds futures contract, PhD administration, HEC Montréal.
35. Co-director, Stage III thesis committee. (Fall 2007). Imad Bou-Hamad, Discrete-time survival trees with applications in bankruptcy prediction, PhD administration, HEC Montréal.
36. Examiner, Thesis defense. (Summer 2007). Mohamed El-Ghourabi, Change patterns of time-series-based control charts, PhD economics and quantitative methods, ISG Tunis.
37. Examiner, Thesis defense. (Summer 2007). Bouhouch Raouf, Neural networks performance in predicting returns of international financial assets, PhD economics and quantitative methods, ISG Tunis.
38. Examiner, Thesis defense. (Summer 2007). Neila Jellali, Credit diversification and risk management, PhD economics and quantitative methods, ISG Tunis.
39. Examiner, Project defense. (Summer 2007). Ali Boudhina, Refinancing risk of mortgage-backed securities, Graduating year project, Ecole Polytechnique La Marsa.
40. Examiner, Thesis defense. (Summer 2007). Wael Hemrit, Operational risk measurement for insurance companies, PhD economics and quantitative methods, ISG Tunis.
41. Examiner, Project defense. (Summer 2007). Ines Henchiri, Exact simulations for solutions of stochastic differential equations, Graduating year project, Ecole Polytechnique La Marsa.
42. Examiner, Defense for an academic supervision authorization. (Summer 2007). Sami Ben-Naceur, Associate professor in finance, IHEC Carthage.
43. Examiner, Thesis defense. (Summer 2007). Hayet Ben-Hmida, PhD economics and quantitative methods, ISG Tunis.
44. Chair, Thesis defense. (Winter 2007). Olfa Borsali, MSc finance, IHEC Carthage.
45. Chair, Thesis defense. (Fall 2006). Manel Bouali, MSc quantitative methods, ISG Tunis.
46. Chair, Thesis defense. (Fall 2006). Nejla Mahjoub, MSc modeling and forecasting, ISG Tunis.

47. Committee member, Stage III thesis committee. (Summer 2006). Nadher Essafi, PhD finance, UQÀM.
48. Examiner, Thesis committee. (Winter 2006). Myriam Deslandes, MSc financial engineering, HEC Montréal.
49. Co-director, Stage II thesis committee. (Summer 2005). Ramzi Ben-Abdallah, PhD administration, HEC Montréal.
50. Co-director, Stage II thesis committee. (Summer 2005). Moktar Ben-Said, PhD administration, HEC Montréal.
51. Committee member, Stage II thesis committee. (Summer 2005). Nadher Essafi, PhD finance, UQÀM.
52. Examiner, Thesis committee. (Winter 2005). Sarah Bounab, MSc financial engineering, HEC Montréal.
53. Examiner, Thesis committee. (Summer 2004). Philippe Hynes, MSc financial engineering, HEC Montréal.
54. Examiner, Thesis committee. (Fall 2003). Spino Mario, MSc financial engineering, HEC Montréal.
55. Examiner, Thesis committee. (Fall 2002). Léger Olivier, MSc financial engineering, HEC Montréal.

Teaching

- **Academic**

1. Business Analytics. (since fall 2016). Decision sciences, BBA, HEC Montréal, 36h.
2. Mathematics II. (Since winter 2017). Decision sciences, BBA, HEC Montréal, 36h.
3. Monte Carlo simulation. (since fall 2001). Decision sciences, MSc financial engineering, HEC Montréal, 36h.
4. Correspondence analysis. (2001–2014). Management sciences, MSc business intelligence, HEC Montréal, 18h.
5. Statistics. (2010–2014). Management sciences, BBA, HEC Montréal, 36h.
6. Probability. (2011–2014). Management sciences, BBA, HEC Montréal, 12h.
7. Numerical finance, (2009–2010). Finance, MSc, Brock University, 36h.
8. Derivatives and risk management. (2008–2009). Finance, MBA, Brock University, 36h.
9. Derivatives: Part II. (2009–2010). Finance, BBA, Brock University, 36h.
10. Probability and statistics. (1996–2008). Management sciences, BBA, HEC Montréal, 42h.
11. Mathematics of finance. (2004–2008). Management sciences, BBA, HEC Montréal, 15h.
12. Data analysis. (2001–2004). Management sciences, MBA, HEC Montréal, 15h.
13. Statistics. (2001). Management sciences, MBA, HEC Montréal, 18h.
14. Options and futures. (1999–2001). Finance, BBA, UQÀM, 42h.
15. Bonds markets. (1999–2001). Finance, BBA, UQÀM, 42h.
16. Derivatives. (1999–2001). Finance, MSc, UQÀM, 42h.
17. Quantitative methods in finance. (1999–2001). Finance, MBA, UQÀM, 12h.
18. Algebra. (1988–1995). Quantitative methods, BBA, ISG Tunis, 45h.
19. Mathematical analysis. (1988–1995). Quantitative methods, BBA, ISG Tunis, 45h.

20. Multivariate data analysis. (1988–1995). Quantitative methods, BBA, ISG Tunis, 45h.
21. Econometrics. (1988–1995). Quantitative methods, BBA, ISG Tunis, 45h.
22. Micro-economy. (1988–1995). Economics, BBA, ISG Tunis, 45h.

- **Professional**

1. Statistics for risk management under SAS. (2007–2008). MSc, The professional association of Tunisian banks and financial institutions, Tunisia, 36h.

Other academic activities

1. Member of an FRQNT scholarship selection committee (Winter 2019 and 2020).
2. Member of an IVADO scholarship selection committee (Winter 2019 and 2020).
3. Production of a case study in statistics based on Boardex database. (Fall 2019). with Mohamed Jabir and Michel-Yevenunye Keoula.

Specialized computer programming knowledge

1. Thorough knowledge of SAS.
2. Thorough knowledge of C and Python.
3. Thorough knowledge of the libraries GSL and IMSL.
4. Thorough knowledge of R.

Consultation

1. Design, implementation, and production of a SAS software package on "Rating Tunisian companies." (2019–2021). Financed by the World Bank, for Tunisian Central Bank, Tunisia.
2. Design, implementation, and production of an R software package on "Sales forecasting, order planning, and stock management." (2015–2016). Financed by Parenin: Tunisian Caterpillar representative, Tunisia.
3. Design, implementation, and production of a SAS software package on "Customs' selectivity." (2009–2010). Financed by the World Bank, for Tunisian customs, Tunisia.
4. Data analysis of a survey on the use of management software packages. (2007). Financed by ISTIS and ULYSOFT, Tunisia, 2007.
5. Speaker at seminars on computer and statistical analysis. (Summer 1993 to summer 1995). The summer school on computing and management, ISG Tunis, Tunisia.
4. Study on the education financing. (1995). Carried out by a team of academics and public service administrators, financed by the World Bank, for the ministry of development, Tunisia.
5. Construction of energy efficiency indicators. (1995). Carried out by a team of Tunisian and European consultants, financed by the European Union, for the ministry of energy. Tunisia.
6. Study on the personnel training in the hotel industry. (1994). Financed by the USAID, for the ministry of tourism, Tunisia.

7. Evaluation of a training project for young rural women. (1994). Carried out by a team of academics, financed by the United Nations Population Fund, for the ministry of employment, Tunisia.
8. Study on the upgrading of Tunisian businesses. (1994). Carried out by a team of academics and researchers from the public sector, financed by the ministry of development, Tunisia.
9. Study on the teaching quality at the University of Tunis. (1994). Carried out by a team of academics, financed by the ministry of higher education, Tunisia.
10. Study on the liberalization of the road transport in Tunisia. (1994). Carried out by a team of consultants, financed by the ministry of transport, Tunisia.
11. Study on the distribution of agricultural products. (1993). Carried out by a team of academics, financed by the ministry of agriculture, Tunisia.
12. Study on population issues faced by young rural women. (1993). Carried out by a team of academics, financed by the United Nations Population Fund, for the ministry of employment, Tunisia.
13. Design and development of an energy database. (1993). Carried out by a team of academics, financed by the ministry of energy, Tunisia.
14. Design and development of an employment database. (1991–1992). Financed by the ministry of employment, Tunisia.