Hayette GATFAOUI

Ph.D. in Economics

Associate Professor, Finance

h.gatfaoui@ieseg.fr

EDUCATION

2010 Habilitation à Diriger des Recherches (HDR) /
Accreditation for Research and Ph.D. Supervision, University of Cergy, France

2002 Ph.D. in Economics , University of Paris I Panthéon-Sorbonne, France

1998 MSc in Money, Finance, and Banking (1 year), University of Paris I Panthéon-Sorbonne, France

1996 MSc in Statistics and Random Modeling in Economics and Finance, University of Paris VII, France

RESEARCH INTERESTS

Artificial Intelligence and Machine Learning, Behavioral finance, Big data and Machine learning, Chaotic systems, Corporate

PROFESSIONAL EXPERIENCE

ACADEMIC:

2022 - 2022 Professor, Sapienza Università di Roma, Rome, Italy

2019 - Present Master theses coach (Coaching/Advising new Adjunct supervisors and Students), IÉSEG School of Management, France

2017 - Present Member of the Teaching and Learning Development Committee (TLDC), IÉSEG School of Management, France

2010 - 2013 Member of the Promotion, Career and Valuation, Rouen Business School, Rouen, France

2005 - 2015 Associate Professor, Neoma Business School, Mont-Saint-Aignan, France

2004 - 2004 Lecturer, Rouen Business School, Rouen, France

2001 - 2003 Assistant lecturer, University of Paris I Panthéon-Sorbonne, Paris, France

1998 - 2001 Assistant lecturer, University of Paris I Panthéon-Sorbonne, Paris, France

CONSULTING EXPERIENCE

2005 - 2006 Consultant (7 months), Groupe SMA BTP, France

2000 Consultant, ABN Amro, France

2000 Researcher, CDC-IXIS CAPITAL MARKETS, France

COURSES TAUGHT

- Econometrics-time series, Grande ecole (master cycle)
- Contemporary & ethical issues in finance, Grande ecole (bachelor cycle)
- Commodity market, Grande ecole (bachelor cycle)
- Research & consulting tools, Grande ecole (bachelor cycle)
- Finance research methodology, Grande ecole (master cycle)
- Active portfolio management
- Active portfolio management, Grande ecole (master cycle)
- Financial econometrics, Post graduate program
- Financial markets, Grande ecole (bachelor cycle)
- Introduction to derivatives, Grande ecole (bachelor cycle)
- Portfolio management and analysis, Grande ecole (master cycle)
- Portfolio management and analysis, Msc in finance
- Banking ii: risk management in the banking insdustry

INTELLECTUAL CONTRIBUTIONS

Papers in refereed journals

Published

Gatfaoui H., Cerqueti R., Rotundo G., (2024), Resilience for Financial Networks under a Multivariate GARCH Model of Stock Index Returns with Multiple Regimes, *Annals of Operations Research*, 2024(2024), pp. 31

Gatfaoui H., De Peretti P., (2020), Testing for Non-Chaoticity Under Noisy Dynamics Using the Largest Lyapunov Exponent, *Soft Computing*, 24(12), pp. 8617–8626

Gatfaoui H., (2019), Diversifying portfolios of U.S. stocks with crude oil and natural gas: A regime-dependent optimization with several risk measures, *Energy Economics*, 80(May 2019), pp. 132-152

Gatfaoui H., de Peretti P., (2019), Flickering In Information Spreading Precedes Critical Transitions in Financial Markets, *Scientific Reports*, 9, pp. 11

Gatfaoui H., (2017), Equity Market Information and Credit Risk Signaling: A Quantile Cointegrating Regression Approach, *Economic Modelling*, 64, pp. 48-59

Gatfaoui H., (2016), Linking the gas and oil markets with the stock market: Investigating the U.S. relationship, *Energy Economics*, 53, pp. 5-16

Gatfaoui H., (2015), Pricing the (European) option to switch between two energy sources: An application to crude oil and natural gas, *Energy Policy*, 87, pp. 270–283

Gatfaoui H., (2013), Translating Financial Integration Into Correlation Risk: A Weekly Reporting's Viewpoint for the Volatility Behavior of Stock Markets, *Economic Modelling*, 30, pp. 776-791

Nekhili M., Gatfaoui H., (2013), Are Demographic Attributes and Firm Characteristics Drivers of Gender Diversity? Investigating Women's Positions on French Boards of Directors, *Journal of Business Ethics*, 118(2), pp. 227-249

Gatfaoui H., (2012), A Correction for Classic Performance Measures, *Chinese Business Review*, 11(1), pp. 1-28

Gatfaoui H., (2010), Deviation from Normality and Sharpe Ratio Behavior: A Brief Simulation Study, *Investment Management and Financial Innovations*, 7(4), pp. 106-118

Gatfaoui H., (2010), Investigating the Common Latent Component in Stock Returns: Systematic and Systemic Risk Factors, *Bankers, Markets & Investors (Banque & Marchés)*, 107, pp. 20-44

Gatfaoui H., (2010), Investigating The Dependence Structure Between Credit Default Swap Spreads and the U.S. Financial Market, *Annals of Finance*, 6(4), pp. 511-535

Gatfaoui H., (2009), Is Corporate Bond Market Performance Connected with Stock Market Performance, *Bankers, Markets & Investors (Banque & Marchés)*, 102, pp. 45-58

Gatfaoui H., (2006), From Fault Tree to Credit Risk Assessment: An Empirical Attempt, *ICFAI Journal of Risk & Insurance*, 3(1), pp. 7-31

Gatfaoui H., (2005), How Does Systematic Risk Impact US Credit Spreads? A Copula Study, *Bankers, Markets & Investors (Banque & Marchés)*, 77, pp. 5-16

Gatfaoui H., (2004), Default and Liquidity Risks: Studying the Two Components of Credit Spread, *La Revue des Sciences de Gestion*, 210, pp. 123-134

Gatfaoui H., (2003), Risk Disaggregation And Credit Risk Valuation in a Merton Framework , *Journal of Risk Finance*, 4(3), pp. 27-42

Gatfaoui H., Chauveau T., (2002), Systematic Risk, Idiosyncratic Risk: A Useful Distinction For Valuing European Options , *Journal of Multinational Financial Management*, 12(4-5), pp. 305-321

Gatfaoui H., Radacal F., (2002), Business Cycle and Default Risk, *Finance*, 23, pp. 45-75

Forthcoming

Gatfaoui H., (2024), On the Relationship between U.S. Crude Oil and Natural Gas for Economic Resilience Prospects, *Annals of Operations Research*, ?(?), pp. 29

Papers in non-refereed journals

Published

Gatfaoui H., Walter C., (2009), Less Can Be More, *Journal of Money, Investment and Banking*, (9), pp. 59-77

Gatfaoui H., (2008), From Fault Tree to Credit Risk Assessment: A Case Study, *International Research Journal of Finance and Economics*, (14), pp. 379-401

Communications in refereed conferences

International

Gatfaoui H., (2024), *A deep learning approach to forecasting commodity prices* 33rd EURO Conference (European Operational Research Societies), COPENHAGEN, Denmark

Gatfaoui H., (2024), *A Deep Learning Approach to Forecasting Commodity Prices* 37th Australasian Finance & Banking Conference, Sydney, Australia

Gatfaoui H., (2024), *A deep learning approach to forecasting commodity prices* 69th EWGCFM Conference (Euro Working Group for Commodity and Financial Modeling), Warsaw, Poland

Gatfaoui H., (2023), *A Novel Approach of the Long- and Short-term relationship between Crude Oil and Natural Gas Prices* 67th EWGCFM Meeting 2023, Roma (Trieste district), Italy

Gatfaoui H., Ayari S., (2022), *Portfolio Optimization across Financial Market States: An application of Clustering Algorithm* 32nd European Conference on Operational Research (EURO 2022), Espoo, Finland

Gatfaoui H., De Peretti P., Vitting-Andersen J., (2022), *Price dynamics and synchronous trading driven by stickiness in decision making: A laboratory experiment* 32nd European Conference on Operational Research (EURO 2022), Espoo, Finland

Gatfaoui H., (2020), *A Dynamic Study of the U.S. Natural Gas Market Integration* 33rd Australasian Finance and Banking Conference (AFBC), Sydney, Australia

Gatfaoui H., (2019), *A Dynamic Study of the U.S. Natural Gas Market Integration* Commodity and Energy Markets Association (CEMA) Annual Meeting 2019, Pittsburg, USA

Gatfaoui H., (2019), *A Dynamic Study of the U.S. Natural Gas Market Integration* Energy Finance Christmas Workshop (EFC19), Dublin, Ireland

Gatfaoui H., (2018), *Capturing long-term coupling and short-term decoupling crude oil and natural gas prices* 29th European Conference on Operational Research (EURO 2018), Valencia, Spain

Gatfaoui H., (2018), *On the Long-Term Coupling and Short-Term Decoupling of Crude Oil and Natural Gas Prices* 9th Research Workshop on Energy Markets, Valencia, Spain

Gatfaoui H., (2018), *On the Long-Term Coupling and Short-Term Decoupling of Crude Oil and Natural Gas Prices* Commodity and Energy Markets Annual Meeting 2018, Roma, Italy

Gatfaoui H., de Peretti P., (2018), *Flickering of Information Spreading As an Early Warning of Critical Transitions in Financial Systems* Quantitative Methods in Finance (QMF) Conference, Sydney, Australia

Gatfaoui H., (2017), *Capturing Long-Term Coupling and Short-Term Decoupling Crude Oil and Natural Gas Prices* Isefi 2017-5th International Symposium on Environment Energy & Finance Issues, Paris, France

Gatfaoui H., (2017), *Investigating US Natural Gas Prices* Quantitative Methods in Finance (QMF) 2017, Sydney, Australia

Frattarolo L., Billio M., Gatfaoui H., De Peretti P., (2016), *Clustering in Dynamic Causal Networks as a Measure of Systemic Risk on the Euro Zone* Conference Quantitative Methods for Financial Regulation, Stony Brook, USA

Gatfaoui H., (2016), *Cross-Linkages between Commodity Markets over Time* Quantitative Methods in Finance (QMF) Conference, Sydney, Australia

Gatfaoui H., (2015), *Capturing Long-Term Coupling and Short-Term Decoupling Crude Oil and Natural Gas Prices* Quantitative Methods in Finance (QMF) Conference, Sydney, Australia

Gatfaoui H., (2015), *Pricing the (European) option to switch between two energy sources: An application to crude oil and natural gas* Computational and Financial Econometrics (CFE), London, United Kingdom

Other conference and seminar presentations

International

Gatfaoui H., (2017), *Systemic Risk in Equity and CDS Markets* Workshop on Systemic Risk, Paris, France

Gatfaoui H., (2016), *L'Enseignant Innovateur* 2ème Symposium Management 2020 – Paroles d'Enseignants, Innovations et Pratiques en Enseignement Supérieur, Casablanca, Morocco

Gatfaoui H., De Peretti P., Frattarolo L., Billio M., (2016), *Clustering in Dynamic Causal Networks as a Measure of Systemic Risk on the Euro Zone* Syrto International Conference, Paris, France

Books

Published

Gatfaoui H., (2008), *Une Histoire du Risque de Défaut*, 9782748344974, Éditions Publibook Université, Saint-Denis, 188 pages

Gatfaoui H., (2004), *Rôle et Impact de la Volatilité dans le Pricing d'Options et de Produits Dérivés*, 9782748303889, Éditions Publibook Université, Saint-Denis, 60 pages

Chapters in books

Published

Gatfaoui H., Nagot I., De Peretti P., (2016), Are Critical Slowing Down Indicators Useful to Detect Financial Crises?, in: Billio, M., Pelizzon, L., Savona, R., (Eds.), *Systemic Risk Tomography – Signals, Measurement and Transmission Channels, 9781785480850, Elsevier - ISTE Editions, London, chapter 3, pp. 73-94*

Gatfaoui H., (2015), French SMEs' Default: Inferring Critical Thresholds from Economic and Financial Fundamentals (In French), in: Gilles Lecointre(Eds.), *Le grand livre de l'Economie PME 2015, 978-2-297-02068-8, Paris : Gualino éditeur, Paris, chapter 2, pp. 725-752*

Gatfaoui H., (2012), Linking U.S. CDS Indexes with the U.S. Stock Market: A Multidimensional Analysis with Market Price and Volatility Channels, in: Jan Emblemsvag(Eds.), *Risk Management for the Future - Theory and Cases, 978-953-51-0571-8, InTech, Rijeka,, chapter 18, pp. 413-434*

Gatfaoui H., (2010), Capital Asset Pricing Model, in: Rama Cont(Eds.), *ENCYCLOPEDIA OF QUANTITATIVE FINANCE, 978-0-470-05756-8, John Wiley & Sons, Chichester, pp. 241-249*

Gatfaoui H., (2010), Model Risk: Caring about stylized features of asset returns! - How does equity market influence credit default swap market?, in: Gregoriou Greg N., Hoppe Christian, Wehn Carsten(Eds.), *The Risk Modeling Evaluation Handbook: Rethinking Financial Risk Management Methodologies in the Global Capital Markets, 9780071663700, McGraw-Hill Education, New York, chapter 5, pp. 75-95*

Gatfaoui H., (2008), Investigating The Link Between Credit Default Swap Spreads and U.S. Financial Market, in: Greg N. Gregoriou and Paul U. Ali(Eds.), *The Credit Derivatives Handbook: Global Perspectives, Innovations and Market Drivers, 978-0071549523, McGraw-Hill Education, New York, chapter 9, pp. 183-200*

Gatfaoui H., (2007), How Does Systematic Risk Impact Stocks? A Study on the French Financial Market, in: Greg N. Gregoriou(Eds.), *Asset Allocation and International Investments, 978-0-230-01917-1, Palgrave Macmillan, New York, NY, chapter 10, pp. 183-213*

Gatfaoui H., (2007), Idiosyncratic Risk, Systematic Risk and Stochastic Volatility: an Implementation of Merton's Credit Risk Valuation, in: Greg N. Gregoriou(Eds.), *Advances in Risk Management, 978-0-230-01916-4, Palgrave Macmillan, New York, NY, chapter 6, pp. 107-131*

PROFESSIONAL MEMBERSHIPS

2019 International Association for Energy Economics (IAEE), USA

2019 Association for Energy Economics-France (F-AEE), France

2019 Commodity & Energy Markets Association (CEMA) , Germany

2017 The Institute for Operations Research and the Management Sciences (INFORMS), USA

2016 ICoR research center at IESEG School of Management, France

2016 Athens Institute for Education and Research, Greece

2015 LEM CNRS (UMR 9221), France

2013 Labex RéFi, France

2013 University of Paris I Panthéon-Sorbonne, France

Global Association of Risk Professionals (GARP)

Professional Risk Managers' International Association (PRMIA)

Emerald Insight

Computational and Methodological Statistics (CMStatistics, DMC, SEA, SSEF)

Association for Public Economic Theory (APET)

EDITORIAL ACTIVITY

Associate Editor in an academic journal

2010 International Research Journal of Applied Finance

Middle Eastern Finance and Economics Journal

Editor in a special issue of a peer reviewed journal

2010 American Journal of Economics and Business Administration

Editor in an academic journal

2021 Sustainability

2020 Artificial Intelligence in Finance

Member of the editorial board of an academic journal

2018 UPI Journal of Business Management and Computer Applications, India

Review of Finance and Banking

Reviewer in an academic journal

2023 Annals of Operations Research

2022 - 2023 Annals of Operations Research

2022 Review of Managerial Science

2022 PHYSICA A

2022 Review of Managerial Science

2022 PHYSICA A

2021 FRONTIERS IN ARTIFICIAL INTELLIGENCE

2021 FRONTIERS IN ARTIFICIAL INTELLIGENCE

2020 Energy Journal

2020 Energy Economics

2020 Plos One

2020 Energy Economics

2020 Physica A

2020 Energy Journal

2019 - 2020 Soft Computing

2019 Physica A

2019 Energy Economics

2019 - 2020	Journal of South East Asian Economics (JSAE)
2019	Energy Economics
2019	Soft Computing
2019	Soft Computing
2019	Soft Computing Journal
2019	Soft Computing Journal
2019	Soft Computing
2019	International Journal of Finance and Economics
2018	Revue Management international, Canada
2018	Investment Management and Financial Innovations
2018	Energy Economics
2018	Energy Economics
2018	Energy Economics
2018	Energy Economics
2017	Management International, Canada
2017	Energy Policy
2017	Energy Economics
2017	Economic Modelling
2017	Athens Journal of Business and Economics
2016	International Review of Financial Analysis
2016	Energy Economics
2016	Management International, Canada
2015	Quantitative Finance
	Journal of Mathematical Finance
	Sustainability
	Sustainability
	Sustainability
	Physica A: Statistical Mechanics and its Applications
	Physica A: Statistical Mechanics and its Applications
	Frontiers in Artificial Intelligence in Finance
	Frontiers in Artificial Intelligence in Finance

Energy Economics

Energy Economics

Reviewer in an book / textbook

2016 Rejda / McNamara's Principles of Risk Management and Insurance, 13/e, United Kingdom

PROFESSIONAL SERVICE

Chair in an academic conference

2024 69th EWGCFM Conference, Poland

Committee/task force member

Research seminar, France

Discussant in an academic conference

2024 69th EWGCFM Conference, Poland

2023 67th EWGCFM MEETING, Italy

2020 33rd Australasian Finance and Banking Conference - AFBC 2020, Australia

2019 Commodity and Energy Markets Association Annual Meeting 2019 (CEM2019), USA

Commodity and Energy Markets Association Annual Meeting 2018 (CEM2018), Italy

ENERGY AND COMMODITY FINANCE Conference 2016 (ECOMFIN 2016), ESSEC Business School , France

Keynote address

2022 Workshop “Interdisciplinary and multiple approaches to systemic risks”, Poland

Member of the organizing committee of an academic conference

1st IÉSEG Financial Risk Management Conference, France

Member of the scientific committee of an academic conference

2018 Dyses2018, France

Reviewer for an academic conference

2023 IMCIC 2023

2017 - 2018 Risk Management and Cyber-Informatics: RMCI 2018, USA

Risk Management and Cyber-Informatics: RMCI 2016

Risk Management and Cyber-Informatics: RMCI 2020 Conference

Wmsci Conference

Session chair in an academic conference

2023 67th EWGCFM MEETING, Italy

2018 Quantitative Methods in Finance - QMF2018, Australia

2017 Quantitative Methods for Finance (QMF) 2017 Conference, Australia

2016 Quantitative Methods for Finance (QMF) 2016 Conference, Australia

QMF 2015, Australia

ENERGY AND COMMODITY FINANCE Conference 2016 (ECOMFIN 2016), ESSEC Business School , France

Commodity and Energy Markets Association Annual Meeting 2018 (CEM2018), Italy

RESEARCH ACTIVITIES

COMMITTEE CHAIR

Course Coordinator

2022 Portfolio Management, IÉSEG School of Management, France

2020 - 2021 Contemporary & Ethical Issues in Finance, IÉSEG School of Management, France

2020 Commodity Market, IÉSEG School of Management, France

2015 Fundamentals of Financial Derivatives (Formerly redesigned Introduction to derivatives), IÉSEG School of Management, France

Member of a recruitment jury (orals)

2023 - 2023 FINANCE DEPARTMENT, IÉSEG School of Management, France

2021 - 2021 Finance Department, IÉSEG School of Management, France

2021 - 2021 Finance Department, IÉSEG School of Management, France

2021 - 2021 Finance Department, IÉSEG School of Management, France

2021 - 2021 Finance Department, IÉSEG School of Management, France

2021 - 2021 Finance Department, IÉSEG School of Management, France

2018 - 2018 Finance, Audit and Control, IÉSEG School of Management, France

Member of a teaching quality committee

2017 TLDC (Teaching and Learning Development Committee), IÉSEG School of Management, France

Participation in a professional advisory board

2022 - 2022 Finance department, IÉSEG School of Management, France

2021 - 2021 Finance, IÉSEG School of Management, France

2017 - 2017 Finance,Audit and Control, IÉSEG School of Management, France

Participation in recruitment of professors

2023 - 2023 FINANCE, IÉSEG School of Management, France

2023 - 2023 FINANCE, IÉSEG School of Management, France

2023 - 2023 FINANCE, IÉSEG School of Management, France

2023 - 2023 FINANCE, IÉSEG School of Management, France

2023 - 2023 FINANCE, IÉSEG School of Management, France

2023 - 2023 FINANCE, IÉSEG School of Management, France

2023 - 2023 FINANCE, IÉSEG School of Management, France

2023 - 2023 FINANCE, IÉSEG School of Management, France

2023 - 2023 FINANCE, IÉSEG School of Management, France

2023 - 2023 FINANCE, IÉSEG School of Management, France

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2023 - 2023 FINANCE, IÉSEG School of Management, France

2023 - 2023 FINANCE, IÉSEG School of Management, France

2023 - 2023 FINANCE, IÉSEG School of Management, France

2023 - 2023 FINANCE, IÉSEG School of Management, France

2023 - 2023 FINANCE, IÉSEG School of Management, France

2021 - 2021 Finance Department, IÉSEG School of Management, France

2021 - 2021 Finance Department, IÉSEG School of Management, France

2021 - 2021 Finance Department, IÉSEG School of Management, France

Supervision of Ph.D. Thesis:

2023 Director, Artificial Intelligence and Portfolio Management, LEM UMR CNRS

2023 Director, How do CSR initiatives of automotive companies influence their financial performance ?

2023 Director, Portfolio optimization and risk measures for thematic investments, IÉSEG School of Management

2023 Director, Analysis of the financial performance of SRI, so-called green funds: ecological reality or financial greenwashing?, IÉSEG School of Management

2023 Director, What is the impact of entries and exits of institutional investors on stock price?, IÉSEG School of Management

2023 Director, How do music royalties perform as an alternative investment and what factors impact their valuation, revenue forecasting, and investment preferences?, IÉSEG School of Management

2023 Director, To what extent do Environmental, Social and Governance (ESG) score impact Corporate financial performance, and how does this relationship vary across Europe and the US ?, IÉSEG School of Management

2023 Director, What are the differences in terms of functioning between SRI investments in France and in the US and are their performances comparable since 2019?, IÉSEG School of Management

2023 Director, What is the influence of women's representation in management committees on corporate economic and environmental performance indicators,, IÉSEG School of Management

2022	Director, Relationship between ecological involvement and financial performance: evidence from CAC40 companies, IÉSEG School of Management
2022	Director, Is the All-Weather portfolio able to perform over all the phases of the economic cycle?, IÉSEG School of Management
2022	Director, Are thematic ETF performing better than well diversified ETF ?, IÉSEG School of Management
2022	Director, Are thematic ETF performing better than well diversified ETF ?, IÉSEG School of Management
2022	Director, Quelle influence la digitalisation a sur le métier de banquier privé et ses clients ?, IÉSEG School of Management
2022	Director, How Diversity on Gender, Age and Nationality in the American Boardroom Influence on the Firm's Performance?, IÉSEG School of Management
2022	Director, How well do Socially Responsible Investment perform in comparison with conventional funds between 2012 and 2022? The case of the US market., IÉSEG School of Management
2022	Director, Can gold still be considered as a safe haven investment during financial crisis ?, IÉSEG School of Management
2020	Director, Using Artificial Intelligence for Asset Selection and Management
2017	Co-director, Revisiting the impact of fiscal policy on the dynamics of inflation: Three essays on Turkish economy, University of Paris I Panthéon-Sorbonne
2014 - 2017	Co-director, Analysing the impact of fiscal policy on price levels: Empirical evidence from Turkey, University of Paris I Panthéon-Sorbonne