



Program

The research laboratories

International Finance Group Tunisia, IFGT, Tunis El Manar University

Laboratory of Research in Innovative Management, Risk, Accounting and Finance,
LARIMRAF, Manouba University

Gouvernance, Finance & Comptabilité, GFC, Sfax University

In collaboration with

Association Tunisienne de Risk Management, ASTURIMA.

Organize

**Tunisia International Conference on Economics Finance
and Accounting
TICEFA-2024**

Interconnections of Finance

**Quantum Finance : Exploring the Frontiers between
Quantum Physics and Quantum Computing**

Tunisia
May 24, 25 & 26, 2024

Finance is an academic discipline that deals with the formation, management, and distribution of financial resources and other assets over time. The scarcity of financial resources and uncertainty about the future are the major culprits behind its importance as a research discipline. The emergence of finance as a distinct research discipline can be traced back to the early to mid-20th century and is still in constant evolution. This broad area of research examines financial systems, organizations, tools, financial instruments, and rules controlling the flow of capital. Finance plays a critical role in decision-making at the individual, business, organizational, and governmental levels.

Finance is a highly interdisciplinary and constantly evolving field, as it includes the theory and application of financial resource management to maximize results and accomplish particular goals. This multidisciplinary field utilizes concepts from statistics, mathematics, accounting, physics, computing information technology, law, philosophy, psychology, political science, public policy, sustainability, climate change, and economics. These connections highlight the interdisciplinary nature of finance and the need for researchers and professionals in the field to have a broad understanding of various disciplines. Successful finance professionals often draw on knowledge from multiple fields to make informed decisions in dynamic and complex financial environments.

Given these features of finance, the TICEFA annual conference intends to discuss and shed light on the interconnections between finance and other fields. This year will be the first of a series of conferences dealing with the interconnections of finance with other disciplines and will particularly open the debate about «Quantum Finance».

The relationship between finance and quantum physics is a relatively nascent area of exploration, and it often falls under the broader umbrella of «Quantum Finance». Quantum physics, which traditionally deals with the behavior of particles at the quantum level, has found some conceptual parallels in finance, particularly in terms of modeling uncertainty and decision making. However, it's important to note that the application of quantum principles to finance is still an area of ongoing research and debate. Moreover, "Quantum finance" refers to the practical application of quantum computing and quantum technologies, which are based on the principles of quantum mechanics and quantum physics, in the field of finance. Quantum finance is concerned with implementing quantum computing solutions to address specific financial problems or tasks. Quantum computing is still in its early stages of development, and building practical and scalable quantum computers faces significant technical challenges. Researchers and engineers are actively working to address issues such as quantum error correction, quantum decoherence, and the development of fault-tolerant quantum processors. Quantum computing has the potential to solve certain types of problems much more efficiently than classical computers, especially those related to optimization and algorithms (portfolio optimization, risk management automated and high frequency trading), financial modelling and simulation (pricing models, market simulation algorithmic market making), and information and security (communication, cryptography and fraud detection). However, applying quantum technologies to finance may raise challenges stemming from the inherent complexities of both quantum mechanics and financial systems. Quantum finance may also raise ethical issues and challenges related to the data privacy and security, fairness and accessibility of the quantum technologies, and the absence of a regulatory framework that can mitigate the potential risks of using quantum technology in finance.

Conference objectives

This conference aims to:

- ✓ Facilitate the exchange of knowledge and ideas among researchers, academics, practitioners, and industry professionals in the field of quantum finance.
- ✓ Highlight how quantum computing, quantum algorithms, and other quantum-inspired approaches can address challenges and open new possibilities in financial modeling, optimization, and risk management.
- ✓ Contribute to the education and awareness of quantum finance concepts.
- ✓ Facilitate networking opportunities among conference participants and create an environment that encourages interaction, collaboration, and formation of professional connections.
- ✓ Inspire and stimulate future research on quantum finance.
- ✓ The conference is intended to be multidisciplinary. As such, papers in all the fields of finance are welcome.

Targeted audience

- Ph.D Students
- Academics
- Professionals

Conference Topics

Truck 1	Quantum Finance: applications of quantum physics and quantum computing to finance
Truck 2	Fintech, cryptocurrencies and financial innovation
Truck 3	Digitalization of financial services and artificial intelligence
Truck 4	Financial inclusion and financial literacy
Truck 5	Recent crises and geopolitics effects on financial markets and banking system
Truck 6	Sustainable finance, responsible investment and climate change
Truck 7	Risk management and derivatives
Truck 8	Financial markets, commodities and energy markets
Truck 9	Innovation and entrepreneurship
Truck 10	Corporate finance and corporate governance
Truck 11	Accounting, auditing and taxation
Truck 12	Economic development and circular economy

Keynote speakers

Dr. Hichem Eleuch,
University of Sharjah, UAE



Dr. Hichem Eleuch, a Professor of Physics at the University of Sharjah, UAE, holds a Diplom-Ingenieur Univ. in Electrical and Information Engineering from the Technical University of Munich and a Ph.D. in Quantum Physics from Kastler Brossel Laboratory at Ecole Normale Supérieure de Paris and Université Pierre-et-Marie-Curie, France. Serving as the Principal Investigator of the "Quantum Information, Quantum Simulation, and Quantum Processing" Research Group, his diverse research interests span quantum optics, quantum computing, mathematical physics, and complex systems. Dr. Eleuch's academic contributions extend to over 280 papers in Scopus and Web of Science-indexed journals, along with 13 US patents. He has worked at and visited several prestigious universities and research institutes including Texas A&M University, Max Planck Institute for the Physics of Complex Systems, Princeton University, McGill University, Auckland University, and University of Montreal. He has been awarded several fellowships (from the Fulbright Foundation, Max Planck Society, and the International Center of Theoretical Physics, Trieste, Italy). He is also a Fellow of the African Academy of Sciences, a Member of Sigma Xi, The Scientific Research Honor Society, USA, and a member of the Mohammed bin Rashid Academy of Scientists. Recently he has been awarded the Prize of Excellence from the Arabic Physical Society.

Dr. Shakir Ullah,
Fayetteville State University



Dr. Ullah is an Associate Professor of Finance at Fayetteville State University, North Carolina, United States. Earlier, he worked at the University of Louisiana, Georgetown University, Washington D.C., and the University of Southampton, UK. He is a member of the AAOIFI Working Committee on Sustainable Financing under AAOIFI's Governance and Ethics Board. Dr. Ullah holds a Ph.D. in banking and finance from the University of Southampton, U.K., and an MBA in finance and strategic management from the KDI School of Public Policy and Management, South Korea, and a B.Sc in Computer Science and Mathematics. He has published over twenty articles. Dr. Ullah is an internationally renowned professor in his field. He has spoken and continues to speak at renowned international conferences as a Guest/Keynote speaker. Dr. Ullah's research interests include FinTech, blockchain, corporate governance, sustainable finance, Islamic finance, and corporate social responsibility.

Nejia Gharbi, CEO Deposit Loan Fund (CDC, Tunisia)



Holder of a master's degree in management in 1987 and a diploma in the ENA Superior Cycle in 1991, Nejia Gharbi began her career as the general control of public services at the primary from April 1991 to July 2001, then administrative and financial manager of the project valuation of the cultural heritage funded by the World Bank from August 2001 to January 2009, State controller of the Phosphate and Fure Sector sector from 2009 to February 2012 and from March 2012 to June 2014, Secretary General of Tunisair, from July 2014 to March 2018 Mission manager in the office of the head of government and director general of the investor supervision unit and since April 2018, DGA of the Caisse des Dépôts et Consignations CDC. And since November 2015, she has accumulated with her duties the post of president of the Board of Directors of the STB. She also followed several training cycles and training of trainers with BM, SFI and BERD.

Feriel Chabrak, CEO Banque de Tunisie et des Emirates (BTE)



Feriel Chabrak is an expert in the banking and financial sector, boasting a wealth of knowledge and experience. With a strong background in banking strategies and operations, she specializes in various areas including market activities such as money markets, foreign exchange, bonds, and treasury securities. Her expertise also extends to asset-liability management (ALM), banking techniques, financial engineering, and digital finance. Holding advanced degrees from renowned institutions like the University of Paris I – Panthéon SORBONNE, she has continuously honed her skills and knowledge throughout her career. With extensive experience in treasury management and investment, she has held significant roles in top financial institutions, including Director of Treasury at TSB (formerly STUSID BANK), where she oversaw various critical functions such as refinancing, asset management, and market activities. Furthermore, Feriel has made significant contributions to education, serving as a professional instructor at the School of Commerce and as an accredited trainer at the National Center for Continuing Education and Professional Promotion. Beyond her professional endeavors, Feriel has also demonstrated exceptional leadership in governance, serving as President of various boards and actively participating in committees focused on financial market development and project management.

Maher Gaida, CEO, lecturer and Senior Auditor



Former vice President of Tunisian Institute of Chartered Accountants, expert in business process reengineering, risk and fraud prevention, payroll processing & financial and accounting management. With more than 25 years experience in finance, telecom, Oil & Gas, industry and service sectors.

Trainers

Nader Kolsi
Assistant Professor ESCT



Workshop **W1** title:

Informatique décisionnelle: Création de tableaux de bord avec Power BI

Hichem Saidi
Associate Professor



Expert in applied economics and econometrics

Workshop **W2** title:

Panel simultaneous equation model

Hichem Saidi is an associate professor in quantitative methods at the ESC of Tunis. He is a doctor in Economics of the FSEG of Tunis. Pr. Saidi is an econometrics specialist specializing in research and teaching applied economics and econometrics.

Ali Ben Mrad
Assistant Professor ISAAS



Expert in Artificial Intelligence and Machine Learning

Workshop **W3** title:

From theory to Practice: Applied machine learning in Finance with Python

Ali Ben Mrad is an Assistant Professor at the University of Sfax, bringing over 14 years of experience in teaching and specialized research in artificial intelligence. He graduated from the Faculty of Sciences of Sfax (Tunisia). He completed his PhD in Computer Science through a collaborative program between the University of Sfax (Tunisia) and the University of Valenciennes (France) in 2015. Dr. Ben Mrad has taught at various institutions, including a recent appointment as a visiting professor at the Rochester Institute of Technology in New York, USA, in 2023. His research spans Artificial Intelligence, Machine Learning, Uncertain Reasoning, and Decision Support Systems. He has made significant contributions to academia, with publications in esteemed international journals and conferences covering diverse applications of Machine Learning. Furthermore, he was the Co-Supervisor of the recipient of the PRESIDENT OF TUNISIA award for Best Doctoral Thesis in 2022.

Conference Chair

Prof. Kamel Naoui (LARIMRAF Director, ESCT Director)

Scientific Committee

Abdelfettah Bouri FSEG Sfax	Hédi Noubigh ESC Tunis	Saber Sebai ISCAE Manouba
Abdelkader Boudriga IHEC Carthage	Hichem Khlif FSEG Sfax	Rym Bouderbala ISCAE Manouba
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Yecine Hammemi
ISCAE Manouba
Ghazi Zouari
FSEG Sfax
Dorra Talbi
ESSEC Tunis

Organizing committee

Kamel Naoui, Ecole Supérieure de Commerce de Tunis (ESCT)
Adel Boubaker, Faculté des Sciences Economiques et de Gestion de Tunis (FSEGT)
Saber Sebai, institut Supérieur de Comptabilité et d'Administration des Entreprises (ISCAE).
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Saliha Theiri, (FSEGT)
Ferihane Zaraa, (ISCAE)
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Amira El Faid, (IFGT, FSEGT)

Jihene Ben Jenana, (LARIMRAF, ESCT)

Conference Website

<https://ticefa-2024.sciencesconf.org/>

Venue

The conference will be held at **Hôtel Golden Tulip Taj Sultan**

Address: Zone Touristique Yasmine Hammamet / 8050 Hammamet, Tunisie

Phone: +216 72 240290

<https://taj-sultan.goldentulip.com/fr-fr/#L'H%C3%B4tel>

Program

The conference will take place according to the following tentative program:

Day 1 – 24/05/2024

14H30 - 15H30	Registration
15H30 - 17H30	Training course 1 Informatique décisionnelle : Création de tableaux de bord avec Power BI
17H30 - 19H30	Parallel sessions A

Day 2 – 25/05/2024

08H30 - 09H00	Registration
09H00 - 09H30	<i>Conference opening</i>
09H30 - 11H00	<i>Plenary Session 1 :</i>
09H30 - 10H00	Dr. Shakir Ullah (Fayetteville State University):
10H00 - 10H15	Quantum Horizons: Unveiling the Future of Finance
10H15 - 10H45	Discussion
10H45 - 11H00	Mr. Maher Gaida
	Discussion
10H00 - 11H15	Coffee Break
11H15 - 13H15	<i>Plenary Session 2 :</i>
11H15 - 12H30	Prof. Hichem Eleuch
12H30 - 13H00	Discussion
13H15 - 14H30	Lunch Break
14H30 à 15H30	<u>Round Table 1: La digitalisation des services financiers.</u> Mme Nejia Garbi (CDC), Mme Feriel Chabrak (BTE)

15H30 à 16H30	<u>Round Table 2: Publications scientifiques en Finance et Comptabilité</u> Pr. Samir Saadi (Paris School of Business), Pr. Khaled Guesmi (Paris Business School), Pr. Walid Ben Amar (Telfer School of Management), Pr. Walid Mensi (Sultan Qaboos University) & Pr. Imed Chkir	
<i>16H30 - 16H45</i>	<i>Coffee Break</i>	
16H45 à 19H00	Parallel Sessions B	Training course 2 Panel simultaneous equation model

Day 3 : 26/05/2024

08H30 à 11H30	Parallel Sessions C	Training course 3 From theory to Practice: Applied machine learning in Finance with Python
<i>11H30 - 12H00</i>	<i>Coffee Break</i>	
12H00 à 13H00	<u>Conference Closing and Best papers award ceremony</u>	

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