Amirkabir University of Technology
(Tehran Polytechnic)

Erfan Salavati

Assistant Professor
Department of Mathematics and Computer Science
Pure Mathematics

Email:
erfan.salavati@aut.ac.ir

Phone:
+98 (21) 6454-5661

h-index (Scopus):
1
Citations (Scopus):
5

Supervised MSc Theses

#	Thesis title	By	Date
1	Option Pricing, Using Optimal Transport Approach	Amineh Shekaramiz & Erfan Salavati	January 2022
2	Portfolio selection, using hidden Markov models	Mina Roostapour Deilamany & Erfan Salavati	September 2021
3	Numerical investigation for option pricing with jump diffusion models using meshless methods	Nima Mohamadi & Erfan Salavati	September 2021
4	Deep Learning in Pricing and Hedging	Kasra Hosseiny & Erfan Salavati	August 2021
5	Pricing participation option in collective pension funds	Abbas Khandan & Erfan Salavati	April 2021
6	Pricing Financial Derivative under time - change levy processes	Mojtaba Hoseinisoflaee & Erfan Salavati	February 2021
7	Portfolio optimization problem under uncertainty	Zohreh Anoushirvani & Erfan Salavati	October 2020
8	fractional stochastic volatility models and Applications in pricing	Samira Amiriyan & Erfan Salavati	October 2020
9	Asset Price forecasting Using Recrrent Neural Netwoks	Hamed Vaheb & Erfan Salavati	July 2020

10	optimal execution strategies in limit order markets	Hossein Javdan Fard & Erfan Salavati	February 2020
11	Factor models in finance : testing and forecasting	Alireza Fallahi & Erfan Salavati	February 2020
12	The recovery theorem and its application in asset pricing	Mohammad Dad Saay & Erfan Salavati	August 2019

Journal Papers

Portal Records

1 Mohammad Zaremohammadkhani, Omid Naghshine Arjmand, Erfan Salavati, Adel Mohammadpour, "An Agent-Based Model and Detect Price Manipulation based on Intraday Transaction Data with Simulation", APPLIED ECONOMICS, August 2021 Vol. 53, Num. 43, Page 4931-4949, August 2021,

2 Majid Zamani, Seyed Mansour Vaezpour, Erfan Salavati, "Existence and Uniqueness for a Class of SPDEs Driven by Levy Noise in Hilbert Spaces", SAHAND COMMUNICATIONS IN MATHEMATICAL ANALYSIS, June 2021 Vol. 18, Num. 3, Page 51-68, June 2021,

3 Alireza Fallahi, Erfan Salavati, Adel Mohammadpour, "Sufficient Forecasting for Sub-Gaussian Processes Using Factor Models", FLUCTUATION AND NOISE LETTERS, May 2021 Vol. 20, Num. 3, Page 1-11, May 2021,

4 Erfan Salavati, "An extension of the Cardioid distributions on circle", AUT Journal of Mathematics and Computing, February 2021 Vol. 2, Num. 1, Page 45-52, February 2021,

5 Mohammad Zaremohammadkhani, Omid Naghshine Arjmand, Erfan Salavati, Adel Mohammadpour, "An Agent Based Model for Limit Order Book: Estimation and Simulation", INTERNATIONAL JOURNAL OF FINANCE & ECONOMICS, June 2020 Vol. 0, Num. 0, Page 0-0, June 2020,

6 Erfan Salavati, Bijan Z. Zangeneh, "Stochastic evolution equations with multiplicative Poisson noise and monotone nonlinearity", BULLETIN OF THE IRANIAN MATHEMATICAL SOCIETY, November 2017 Vol. 43, Num. 5, Page 1287-1299, November 2017,

7 Erfan Salavati, "An extension of the Yamada-Watanabe theorem", MATHEMATICAL METHODS IN THE APPLIED SCIENCES, July 2017 Vol. 0, Num. 0, Page 0-0, July 2017,

8 Erfan Salavati, "On Projections of Measures", Journal of Fundamental and Applied Sciences, February 2016 Vol. 8, Num. 2, Page 2366-2373, February 2016,

Conference Papers

Portal Records

1 Erfan Salavati, Maedeh Hosseini, "Predicting Stock Price Direction Using Machine Learning Methods ", 7th Seminar of Mathematics and Humanities (Financial Mathematics), May 2022

2 Nader Karimi, Hirbod Assa, Erfan Salavati, Hojatollah Adibi, "Optimal trading strategy from an agricultural producer perspective: Calibration and regularization ", The 7th FINACT-IRAN National Conference on Financial and Actuarial Mathematics, August 2021

3 Samira Amiriyan, Erfan Salavati, "Option Pricing in the Fractional Stochastic Volatility Models Using Malliavin Calculus ", 52nd Annual Iranian Mathematics Conference, August 2021

4 Erfan Salavati, Mahnaz Manteghipour, "Improving Chain-Ladder Method Using Count of Issued Policies ", 4th Conference on Advances in Enterprise Architecture, November 2020

5 Erfan Salavati, "Mean Field Games in Finance ", The 6 th FINACT-IRAN National Conference and 4 th Workshop on Financial and Actuarial Mathematics, February 2020

6 Alireza Fallahi, Erfan Salavati, Adel Mohammadpour, "S&P500 Stock Selection via Factor Analysis and Principal Component Analysis ", The 6 th FINACT-IRAN National Conference and 4 th Workshop on Financial and Actuarial Mathematics, February 2020

7 Samira Amiriyan, Erfan Salavati, "Fractional Stochastic Volatility Models and Applications in Pricing ", The 6 th FINACT-IRAN National Conference and 4 th Workshop on Financial and Actuarial Mathematics, February 2020

8 Nader Karimi, Hirbod Assa, Erfan Salavati, "An Investigation of Demand for Agricultural Commodities in the Presence of Future Markets ", The 6 th FINACT-IRAN National Conference and 4 th Workshop on Financial and Actuarial Mathematics, February 2020

9 , Erfan Salavati, "Optimazation portfolio under uncertain condition ", The 6 th FINACT-IRAN National Conference and 4 th Workshop on Financial and Actuarial Mathematics, February 2020

10 Hamid Maadani, Adel Mohammadpour, Erfan Salavati, "A Black-Litterman Model Using LINEX Loss Function ", The 21th workshop on APPLIED STOCHASTIC PROCESSES Alzahra university November 19-21 2019, November 2019

11 Alireza Fallahi, Erfan Salavati, "Sufficient nonlinear forecasting using factor models ", Vienna Congress on Mathematical Finance, September 2019

12 Amineh Shekaramiz, Erfan Salavati, "A Generalized Martingale Transport Problem and it’s Application in Option Pricing ", The 50th Annual Iranian Mathematics Conference, August 2019

13 Amineh Shekaramiz, Erfan Salavati, "Contagion in Financial Networks ", The 50th Annual Iranian Mathematics Conference, August 2019

14 Erfan Salavati, "An Extension of the Cardioid Distributions on Circle ", The 50th Annual Iranian Mathematics Conference, August 2019

15 Amineh Shekaramiz, Erfan Salavati, "A Generalized Martingale Transport Problem and its Application in Option Pricing ", The 12th Seminar On Probability and Random Processes, August 2019

16 Samira Amiriyan, Erfan Salavati, "Pricing European Options in Fractional Stochastic Volatility Model ", The 12th Seminar On Probability and Random Processes, August 2019

17 Amineh Shekaramiz, Erfan Salavati, "Contagion in Financial Networks ", The 12th Seminar On Probability and Random Processes, August 2019

18 Erfan Salavati, Amineh Shekaramiz, "A Generalized Martingale Transport Problem and its Application in Option Pricing ", 4th Conference on Financial Mathematics and Applications, June 2019

19 Amineh Shekaramiz, Erfan Salavati, "Contagion in Financial Networks ", 4th Conference on Financial Mathematics and Applications, June 2019

20 Alireza Fallahi, Erfan Salavati, "A Sufficient Forecasting Method Using Factor Models and its Application to Iranian Macroeconomic Indices ", The 5th FINACT-IRAN National Conference on Financial and Actuarial Mathematics, December 2018

21 Hossein Javdan Fard, Erfan Salavati, "Equilibrium of Competing Large Traders in an Order Book ", The 5th finact-iran conference on financial and actuarial mathematics, December 2018

22 Erfan Salavati, Mahsan Hajimazdarani, Amineh Shekaramiz, "Contagion in Financial Networks ", The 5th finact-iran conference on financial and actuarial mathematics, December 2018

23 Amirsalar Vahidi Asgari, Erfan Salavati, Seyedeh Niloofar Ebrahimi, "Credit risk of bank loan case study in iran ", The 5th finact-iran conference on financial and actuarial mathematics, December 2018

24 Erfan Salavati, Amineh Shekaramiz, "Subhedging of compound options, using optimal mass transport ", The 5th finact-iran conference on financial and actuarial mathematics, December 2018

25 Erfan Salavati, "Stochastic Differential Equations with Discontinuous Coefficients ", 20th Workshop on Applied Stochastic Processes, April 2018

26 Kasra Alishahi, Erfan Salavati, "Strong Coupling Property for Markov Processes ", 19th Workshop on Applied Stochastic Processes, November 2017

27 Omid Naghshine Arjmand, Erfan Salavati, Mohammad Zaremohammadkhani, "Detecting Bubbles in Tehran Stock Exchange ", Modern Methods in Insurance Pricing and Industrial Statistics, September 2017

28 Erfan Salavati, "Current Trends in Portfolio Optimization ", New Challenges in Applied Mathematics, August 2017

29 Erfan Salavati, "Collocation Method for Random Ordinary Differential Equations with Boundary Values ", 11th Seminar on Probability and Stochastic Processes, August 2017

30 Omid Naghshine Arjmand, Erfan Salavati, Mohammad Zaremohammadkhani, "Detecting Bubbles in Iran Stock Market ", 4th FINACT-IRAN Conference on Financial and Actuarial Mathematics, July 2017

31 Erfan Salavati, "Collocation Method for Stochastic Partial Differential Equations ", 18th Workshop On Applied Stochastic Processes, May 2017

32 Erfan Salavati, "An Extension of the Yamada-Watanabe Theorem on One-dimensional SDEs ", 13th International Seminar on Differential Equations, Dynamical Systems and Applications, July 2016

Taught Courses

#	Course title	Description	Headlines	Date
1	Statistical Methods for Finance	Introducing data analysis and machine learning methods in finance		Spring 2022
2	Topics in Mathematics & Its Applications	Introducing combinatorial and simultaneous games, concept and computation of strategy and Nash equilibrium		Spring 2022
3	Stochastic Processes (I)	Understanding the concept of stochastic processes and developing the ability of modelling and computation with them		Spring 2022
4	Game Theory	Introducing strategic games, concept and computation of equilibrium and their applications		Spring 2022
5	Numerical Linear Algebra	Introduction and Analysis of Computational Algorithms for Matrix and Linear Algebraic Problems		Fall 2021
6	Mathematical Finance 1	Introduction to financial concepts and mathematical models in finance: present value analysis, discrete models of price, arbitrage, risk-neutral valuation, risk measures		Fall 2021
7	Mathematical Finance2	Introduction to stochastic models in finance: Brownian motion, Black-Scholes model and equation, replication of contracts, risk-neutral valuation, credit risk modeling		Fall 2021
8	Partial Differrential Equations	Introduction to modelling, methods of solution and theory of partial differential equations		Spring 2021
9	Stochastic Processes (I)	Understanding the concept of stochastic processes and developing the ability of modelling and computation with them		Spring 2021
10	Statistical Methods for Finance	Introducing data analysis and machine learning methods in finance		Spring 2021