



Maryam Alipour kolaei

Assistant Professor

Faculty : Mathematics, Statistics and Computer Science

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Education

- ✓ MS, Applied Mathematics - Numerical Analysis, University of Mazandaran - 2010
- ✓ PhD, Applied Mathematics - Numerical Analysis, Shahid Bahonar University of Kerman - 2016
- ✓ PhD, Applied Mathematics - Numerical Analysis, Shahid Bahonar University of Kerman - 2016

Courses

- | | |
|---|---|
| 1. Fundamental of numerical analysis | 2. Mathematics1 |
| 3. Differential equations | 4. Numerical calculations |
| 5. Topics on integral equtions | 6. integral equations |
| 7. Special Topic in optimal control | 8. Numerical solution of differential equations |
| 9. Advanced numerical analysis 1 | 10. Mathematics and its application in management |
| 11. Soft skills for employment with mathematical analysis | 12. Special topics |

Master Thesis

1. Modeling and solving rumor problems in virtual space with optimal control .
[Maryam Alipour kolaei, Ali Hatami, Samaneh Soradi zeid, Mohammad Hossein Dehghan]
امیرحسین کمال زاده
نیمسال دوم سال تحصیلی 1402-1403
2. Analysis and Solution of Optimal Control for Mathematical Model of Breast Cancer
[Maryam Alipour kolaei, Maryam Mojarab, Ali Hatami, Omid Zabeti]
مریم گرگیج
نیمسال دوم سال تحصیلی 1402-1403
3. Using of Muntz-Legendre polynomials for solving optimal control problem of nonlinear volterra-fredholm integral equation
[Maryam Alipour kolaei, Samaneh Soradi zeid, Mojtaba Bakherad, Haleh Tajadodi]
مهناز ریگی
نیمسال اول سال تحصیلی 1402-1403
4. Modeling the effect of soft skills in improving the career of teachers with optimal control
[Maryam Alipour kolaei, Omid Zabeti]
سپما جمال زهی مقدم
نیمسال دوم سال تحصیلی 1401
5. Solving a Class of Fractional Optimal Control Problems with Neural Network
[Maryam Alipour kolaei, Samaneh Soradi zeid, Maryam Arab-Ameri, Maryam Mojarab, Faranak Hosseinzadeh saljooghi]
سجاد بختیاری
نیمسال دوم سال تحصیلی 1401
6. Applications of mathematical analysis in modeling the behavioral performance of individuals
[Omid Zabeti, Maryam Alipour kolaei, Hamed Ahmadzade]
محمد رضا شیرزانی
نیمسال دوم سال تحصیلی 01-00
7. Numerical solution of variable-order fractional integral equation with Dickson approximation
[Maryam Alipour kolaei, Omid Zabeti, Maryam Arab-Ameri, Maryam Mojarab]
صغری عبدالحی مطلق
نیمسال دوم سال تحصیلی 00-99
8. Laguerre wavelets method for solving a class of optimal control problems
[Maryam Alipour kolaei]
محسن رئیس
نیمسال دوم سال تحصیلی 00-99
9. Solving time-delay fractional optimal control problems by using Laguerre polynomials
[Maryam Alipour kolaei, Samaneh Soradi zeid]
اسیه درازهی
نیمسال اول سال تحصیلی 00-99
10. Solving fractional optimal control problems by using Dickson polynomial
[Maryam Alipour kolaei, Samaneh Soradi zeid]
محمد احسان دادکانی
نیمسال دوم سال تحصیلی 99-98
11. Differential Transform method to solve a class of optimal control problem
[Maryam Alipour kolaei]
زکیه خوشرو
نیمسال اول سال تحصیلی 99-98
12. Hes variational iteration method to solve a class of optimal control problems
[Maryam Alipour kolaei]
پونه امیدی نیا
نیمسال دوم سال تحصیلی 98-97
13. Differential Transform method to solve a class of optimal control problem
[Maryam Alipour kolaei]
زکیه خوشرو

نیمسال دوم سال تحصیلی 97-98

14. Homotopy analysis method to solve a class of optimal control problems

[Maryam Alipour kolaei], فاطمه کاظمی

نیمسال اول سال تحصیلی 97-98

15. Hes variational iteration method to solve a class of optimal control problems

[Maryam Alipour kolaei], پونه امیدی نیا

نیمسال اول سال تحصیلی 97-98

Journals Papers

2024

1. MATHEMATICS, AN IRREPLACEABLE ACHIEVEMENT WITH NO EXPIRATION DATA

Maryam Alipour kolaei, Omid Zabeti

Volume: (9) 49 - 69

2. A collocation method using generalized Laguerre polynomials for solving nonlinear optimal control problems governed by integro-differential equations

Samaneh Soradi zeid, Maryam Alipour kolaei

JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS Volume: (436) 115410-1 - 115410-11

2023

3. Optimal control of Volterra integro-differential equations based on interpolation polynomials and collocation method

Maryam Alipour kolaei, Samaneh Soradi zeid

Computational Methods for Differential Equations Volume: (11) 52 - 64

4. A new application of q- homotopy analysis method to solve non-linear optimal control problems

Fatemeh Kazemi, Maryam Alipour kolaei

caspian journal of mathematical sciences Volume: (12) 105 - 127

5. Numerical solutions of fractional optimal control problems via Dickson polynomials

MohammadEhsan Dadkani, Maryam Alipour kolaei, Samaneh Soradi zeid

Wavelets and Linear Algebra Volume: (9) 51 - 77

2021

6. Solving a Class of Fractional Optimal Control Problems by Homotopy Analysis Method

Maryam Alipour kolaei, M. A. Vali, M. Babazadeh Valukola

Iranian Journal of Science and Technology-Transactions of Electrical Engineering Volume: (45) 733 - 745

7. OPTIMAL CONTROL OF NONLINEAR TIME-DELAY FRACTIONAL DIFFERENTIAL EQUATIONS WITH DICKSON POLYNOMIALS

SHU-BO CHEN, Samaneh Soradi zeid, Maryam Alipour kolaei, YU-MING CHU, J. F. G?MEZ-AGUILAR, HADI JAH

FRACTALS-COMPLEX GEOMETRY PATTERNS AND SCALING IN NATURE AND SOCIETY Volume: (29) 2150079-1 - 2150079-15

8. Optimal Control of Time Delay Fredholm Integro-Differential Equations

Maryam Alipour kolaei, Samaneh Soradi zeid

Journal of Mathematical Modeling Volume: (9) 277 - 291

9. Approximate optimal control of Volterra-Fredholm integral equations based on parametrization and variational iteration method

Maryam Alipour kolaei, Mohammad Ali vali

Mathematical Communications Volume: (26) 107 - 119

2020

10. A Semi-Analytic Method for Solving a Class of Non-Linear Optimal Control Problems

, Maryam Alipour kolaei

international journal of industrial electronics, control and optimization Volume: (3) 407 - 414

2019

11. A hybrid parametrization approach for a class of nonlinear optimal control problems

Maryam Alipour kolaei, M.A Vali, A. H. Borzabadi

Numerical Algebra, Control and Optimization Volume: (9) 493 - 506

2015

12. A direct approach for approximate optimal control of integro-differential equations based on homotopy analysis and parametrization method

Maryam Alipour kolaei, - -,

IMA JOURNAL OF MATHEMATICAL CONTROL AND INFORMATION Volume: (34) 611 - 630

2013

13. T-Stability Approach to the Homotopy Perturbation Method for Solving Fredholm Integral Equations

- -, Maryam Alipour kolaei,

Iranian Journal of Mathematical Sciences and Informatics Volume: (8) 49 - 58

2010

14. Solution of the DaveyStewartson equation using homotopy analysis method

- -, Maryam Alipour kolaei

Nonlinear Analysis-Modelling and Control Volume: (15) 423 - 433

Conferences Papers

2023

1. A numerical method to solve non-linear optimal control problem ruled by integral equation with delay

2019

2. Application of the optimal q-homotopy analysis method for solving a model for HIV infection of CD4 +T-cells

FIRST ANNUAL NATIONAL CONFERENCE ON BIOMATHEMATICS

Fatemeh Kazemi, Maryam Alipour kolaei

3. Modified variational iteration method to solve a model for HIV infection of CD4 +T-cells

FIRST ANNUAL NATIONAL CONFERENCE ON BIOMATHEMATICS

, Maryam Alipour kolaei

4. An efficient method for solving nonlinear optimal control problem

Maryam Alipour kolaei

2018

5. A new approach for a class of nonlinear optimal control problems based upon variational iteration and parametrization methods

2th Conference of Dynamic Systems and Geometric Theories

Maryam Alipour kolaei

6. AN EFFICIENT HYBRID METHOD FOR SOLVING OPTIMAL CONTROL OF VOLTERRA INTEGRO-DIFFERENTIAL EQUATIONS

First International Conference on Boundary Value Problems and Applications

Maryam Alipour kolaei

Executive activities

مشاوره دانشجویان کارشناسی

from 1402/11/21 - to 1403/04/04

مشاوره دانشجویان کارشناسی

from 1402/07/01 - to 1402/11/05

فرصت مطالعاتی پاره وقت

from 1401/05/01 - to 1401/10/30