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PhD of Applied Mathematics
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Google Scholar Page:

<https://scholar.google.com/citations?user=Izg4MVkAAAAJ&hl=en>



Journal Papers

1- Computational method based on Bernstein operational matrices for nonlinear Volterra–Fredholm–Hammerstein integral equations (**ISI**)

K Maleknejad, **E Hashemizadeh**, B Basirat

Communications in Nonlinear Science and Numerical Simulation (2012) 17 (1), 52-61

(Listed in Top 25 Hottest Articles-Communications in Nonlinear Science and Numerical Simulation-April to June 2011 & July to September 2011 & January to December 2011 full year)

2- A new approach to the numerical solution of Volterra integral equations by using Bernstein's approximation (**ISI**)

K Maleknejad, **E Hashemizadeh**, R Ezzati

Communications in Nonlinear Science and Numerical Simulation (2011) 16 (2), 647-655

(Listed in Top 25 Hottest Articles-Communications in Nonlinear Science and Numerical Simulation -July to September 2010)

3- Hybrid Legendre polynomials and block-pulse functions approach for nonlinear Volterra–Fredholm integro-differential equations (**ISI**)

K Maleknejad, B Basirat, **E Hashemizadeh**

Computers & Mathematics with applications (2011) 61 (9), 2821-2828

(Listed in Top 25 Hottest articles-Computers & Mathematics with Applications -April to June 2011 & January to December 2011 full year)

4- A Bernstein operational matrix approach for solving a system of high order linear Volterra–Fredholm integro-differential equations (**ISI**)

K Maleknejad, B Basirat, **E Hashemizadeh**

Mathematical and Computer Modelling (2012) 55 (3), 1363-1372

5- A NUMERICAL APPROACH FOR HAMMERSTEIN INTEGRAL EQUATIONS OF MIXED TYPE USING OPERATIONAL MATRICES OF HYBRID FUNCTIONS (**ISI**)

K MALEKNEJAD, **E HASHEMIZADEH**

U.P.B. Sci. Bull., Series A (2011) 73 (3), 95-104

- 6- A Numerical Approach for the Solution of Nonlinear Boundary Value Problems Arising in Biology Via Shifted Jacobi Operational Matrix **(ISI)**
E Hashemizadeh, F Mahmoodi
 Advances in Environmental Biology (2014) 8 (5), 1415-1419
- 7- Numerical solution of nonlinear stochastic integral equation by stochastic operational matrix based on Bernstein polynomials **(ISI)**
 M Asgari, **E Hashemizadeh**, M Khodabin, K Maleknejad
 BULLETIN MATHEMATIQUE DE LA SOCIETE DES SCIENCES
 MATHEMATIQUES DE ROUMANIE (2014) 57 (1), 3-12
- 8- Numerical method for solving Lane – Emden type equations arising in astrophysics **(ISI)**
 K. Maleknejad ,**E. Hashemizadeh** ,F. Mahmoodi
 Journal of Applied Science and Agriculture (2014) 9(4) , Pages: 1907-1913
- 9- Numerical Solution of Hammerstein Integral Equations of Mixed Type using Sinc-Collocation method **(ISI)**
E Hashemizadeh, M Rostami
 Journal of Computational and Applied Mathematics (2015) 279, Pages: 31-39
- 10- Wavelet Galerkin method for solving nonlinear singular boundary value problems arising in physiology **(ISI)**
 M Nosrati Sahlan, **E Hashemizadeh**
 Applied Mathematics and Computation (2015) 250, Pages: 260-269
- 11- A comparative study of numerical integration based on block-pulse and Sinc functions and Chebyshev wavelet **(ISI)**
 M Rostami, **E Hashemizadeh**, M Heidari
 Mathematical Sciences (2012) 6 (1), 1-7
- 12- Operational matrix approach for the nonlinear Volterra-Fredholm integral equations: Arising in physics and engineering
 B Basirat, K Maleknejad, **E Hashemizadeh**
 Int. J. Phys. Sci (2012) 7, 226-233
- 13- An efficient computational method for the system of linear Volterra integral equations by means of hybrid functions **(ISI)**
E Hashemizadeh, B Basirat
 Mathematical Sciences Quarterly Journal (MSQJ) (2011) 5 (4), 355-368
- 14- Numerical Solution of Nonlinear Singular Ordinary Differential Equations Arising in Biology Via Operational Matrix of Shifted Legendre Polynomials
 K Maleknejad, **E Hashemizadeh**
 American Journal of Computational and Applied Mathematics (2011) 1 (1), 15-19
- 15- Bernstein operational matrices method for solving Fredholm and Volterra integral equations of the second kind
E Hashemizadeh, B Basirat
 AWERProcedia Information Technology and Computer Science (2012) 1, 412-417

- 16- A computational approach to the Fredholm integral equation of the second kind
S Rahbar, **E Hashemizadeh**
Proceedings of the World Congress on Engineering (2008) 2, 933-937
- 17- The Application of Legendre Multiwavelet Functions in Image Compression
E Hashemizadeh, S Rahbar
Modern Applied Statistical Methods (2015) Accepted, In press
- 18- A simple and efficiently method for numerical solution of biology problems by Laguerre operational matrix
E Hashemizadeh
JOURNAL OF SCIENCES (ISLAMIC AZAD UNIVERSITY) (2015) Accepted, In press (**ISC**)
- 19- **Hashemizadeh E**, Mahmoodi F
Numerical solution of Painleve' equation by Chebyshev polynomials
Journal of Interpolation and Approximation in Scientific Computing (2016) SI. 1 Pages 26-31
- 20- **Hashemizadeh E**, Mohsenyazadeh MR
Bernoulli operational matrix method for system of linear Volterra integral equations
International Journal of Industrial Mathematics (IJIM) (2016) Volume 8, Issue 3 Page 201-207 (**ISC**)
- 21- Jami P, Khodabin M, **Hashemizadeh E**
Numerical solution of stochastic SIR model via split – step forward Milstein method
Journal of Interpolation and Approximation in Scientific Computing (2016)) SI. 1, Pages 38-45
- 22- Rahmani N, Khodabin M, **Hashemizadeh E**
Numerical solution of stochastic SIR model by Bernstein polynomials
Journal of Interpolation and Approximation in Scientific Computing (2016) SI. 1, Pages 19-25

Conferences

- 1- Maleknejad K, **Hashemizadeh E**, Basirat B.
Numerical Solvability of Hammerstein Integral Equations Based on Hybrid Legendre and Block-Pulse Functions.
World Congress in Computer Science, Computer Engineering, and Applied Computing (WORLDCOMP'10). 2010. Lasvegad, Nevada, USA
Published in: Proceedings of the 2010 international conference on parallel and distributed processing techniques and applications, Vol I (2010) 172 - 175.
- 2- Maleknejad K, **Hashemizadeh E**.
Numerical solution of the dynamic model of a chemical reactor by Hybrid functions.
World Conference on Information Technology 2010. Istanbul, Turkey.
Published in: Procedia Computer Science (Index in Elsevier), 3 (2011) 908 - 912.
- 3- **Hashemizadeh E**, Maleknejad K, Basirat B.
Hybrid functions approach for the nonlinear Volterra - Fredholm integral equations.
World Conference on Information Technology 2010. Istanbul, Turkey.
Published in: Procedia Computer Science (Index in Elsevier), 3 (2011) 1189 - 1194.
- 4- Maleknejad k, Basirat B, **Hashemizadeh E**.
A New Method Based on Operational Matrices of Bernstein Polynomials for Nonlinear Integral Equations.

World Congress in Computer Science, Computer Engineering, and Applied Computing (WORLDCOMP'11). 2011. Lasvegad, Nevada, USA
Published in: Proceeding of the 2011 international conference on scientific computing (2011) 131 - 135.

5- Hashemizadeh E, Basirat B.

Bernstein operational matrices method for solving Fredholm and Volterra integral equations of the second kind. World Conference on Information Technology. 2011. Antalya, Turkey.

6- Rahbar S, Hashemizadeh E.

A Computational Approach to the Fredholm Integral Equation of the Second Kind
Proceedings of the World Congress on Engineering 2008, WCE 2008, July 2 - 4, 2008, London, U.K

7- Maleknejad K, Basirat B, Hashemizadeh E.

Numerical solutions of linear and nonlinear integral equations and definite integrals based on hybrid functions. The 4th Applied Mathematics Conference, 19-21 Esfand, 1388 (March 10-12, 2010), Zahedan, Iran.

8- Maleknejad k, Hashemizadeh E.

Numerical Solution of Functional Integral Equations by using Bernstein's Approximation.
The 4th Applied Mathematics Conference, 19-21 Esfand, 1388 (March 10-12, 2010), Zahedan, Iran.

9- Maleknejad K, Hashemizadeh E.

A new approach for numerical solution of nonlinear singular boundary value problems arising in physiology. 17th Iranian Conference of Biomedical Engineering (ICBME2010). 2010. Isfahan University of Medical Sciences, Isfahan-Iran
Published in: Proceedings of the 17th Iranian Conference of Biomedical Engineering (Index in IEEE).

10- Rahbar S, Hashemizadeh E.

The Application of Legendre Multiwavelet Functions in Image Compression
The 4th Applied Mathematics Conference, 19-21 Esfand, 1388 (March 10-12, 2010), Zahedan, Iran.

11- Mafitorabi Z, Hashemizadeh E.

Finite Difference Methods for Solving a Fundamental Equation in Quantum Mechanics
40th Annual Iranian Mathematics Conference, 17-20 August 2009. Sharif University of Technology, Tehran, Iran.

12. Maleknejad K, Hashemizadeh E, Mohsenyazadeh M.

Bernstein operational matrix method for solving physiology problems (WORLDCOMP'12). 2012. Lasvegad, Nevada, USA
Published in: Proceeding of the 2012 international conference of Bioinformatics and Computational Biology, (2012) 276-279.

13. Maleknejad K, Mohsenyazadeh M, Hashemizadeh E.

Hybrid Orthonormal Bernstein and Block-Pulse Functions for Solving Fredholm Integral Equations
Proceedings of the World Congress on Engineering 2013, London, U.K

14. Hashemizadeh E, Mahmoodi F

Numerical method for solving Lane – Emden type equations arising in astrophysics
Applied and Pure Mathematics conference in Islamic Azad University Karaj Branch. 14 Esfand 1392

15. Hashemizadeh E, Mahmoodi F

Numerical solution of Painleve' equation by Chebyshev polynomials

The first international conference on intelligent decision science 28-31 October, 2015 in Islamic Azad University UAE, DUBAI.

16. Hashemizadeh E, Mohsenyazadeh MZ

Bernoulli operational matrix method for system of linear Volterra integral equations

The first international conference on intelligent decision science 28-31 October, 2015 in Islamic Azad University UAE, DUBAI.

17. Jami P, Khodabin M, Hashemizadeh E

Numerical solution of stochastic SIR model via split – step forward Milstein method

The first international conference on intelligent decision science 28-31 October, 2015 in Islamic Azad University UAE, DUBAI.

18. Rahmani N, Khodabin M, Hashemizadeh E

Numerical solution of stochastic SIR model by Bernstein polynomials

The first international conference on intelligent decision science 28-31 October, 2015 in Islamic Azad University UAE, DUBAI.

19. Hashemizadeh E, Mahmoudi F, Karimi A

Airfoil polynomials for solving nonlinear Fredholm-Volterra integral equation

24th ICFIDCAA-2016, August 22-26, AICE. (2016) Jaipur, India

20. Hashemizadeh E, Karimi A, Mahmoudi F

A New Approach to the Numerical Solution of Fredholm Integral Equations using Shifted Jacobi Polynomials

47th Annual Iranian Mathematics Conference (AIMC47), Kharazmi University, (1395) Karaj, Iran

21. Ghavami S, Hashemizadeh E

Defect detection of cans using Gabor wavelet

International Conference on Research In Engineering, Science and Technology, (2016) Georgia

Research Projects

1- K. Maleknejad, **E. Hashemizadeh**, "Numerical solution for Fredholm integral equations arise in inverse problems, spectrometry, communications, ...with Bernstein approximation in I.A.U. Karaj Branch, 2010.

2- **E. Hashemizadeh**, B. Basirat, "Numerical solution of integral equations based on hybrid functions and operational matrix", in I.A.U. Karaj Branch, 2011.

3- M. Rostami, **E. Hashemizadeh**, "Survey of numerical methods of integration with implementation", in I.A.U. Karaj Branch, 2011.

4- K. Maleknejad, **E. Hashemizadeh**, "Numerical solution of Hammerstein integral equations of mixed type arises from physical models", in I.A.U. Karaj Branch, 2011.

5- B. Basirat, **E. Hashemizadeh**, " Numerical solution of nonlinear integral equations by hybrid functions", in I.A.U. Birjand Branch, 2012.

6- **E. Hashemizadeh**, "Numerical solution for models that arising from physiology", in Young Researchers and Elite Club, Karaj Brach, 2014.

7- B. Basirat, **E. Hashemizadeh**, "Numerical solution for models that arising in Astrophysics", in I.A.U. Birjand Branch, 2014.

Education

B. Sc. In Applied Mathematics, July 2005, Qazvin University, Iran.

M. Sc. In Applied Mathematics, (Numerical Analysis), September 2007, Islamic Azad University Karaj Branch, Iran.
Dissertation title: Digital Image Compression by Multiwavelets.

Supervisor: Dr. Sohrab Rahbar.

Advisor: Prof. Khosrow Maleknejad.

Ph.D. In Applied Mathematics, (Numerical Analysis), February 2012, Islamic Azad University Karaj Branch, Iran.
Dissertation title: Numerical Solution of Integral Equations Using Expansion of Functions and Hybrid Functions.

Supervisor: Prof. Khosrow Maleknejad.

Advisors: Dr. Reza Ezzati & Dr. Morteza Khodabin

External Examiners: Dr. Mahmoud Hadizadeh Yazdi & Dr. Hamid Mesgarani

Internal Examiner: Dr. Seyed Moghtada Hashemiparast

Teaching

- Calculus 1
- Calculus 2
- Numerical Computations
- Numerical Analysis 1
- Numerical Analysis 2
- Numerical Linear Algebra
- Differential Equations
- Integral Equations
- Discrete Mathematics
- Mathematical Software (Mathematica)
- Engineering Mathematics
- Advance Numerical Computations
- Research Methodology
- Mathematical Foreign Language

Honor and Prize

- Always be top student in school (Year 1988-2000)
- The top undergraduate student (Year 2005)
- Ranked number one in M.Sc. course (Year 2005-2007)
- Top researcher in Islamic Azad University Karaj Branch (Year 2010 & 2011)
- The first Ph.D. graduate in Applied Mathematics in Islamic Azad University Karaj Branch (Year 2012)
- Ranked number one in Ph.D. course (Year 2009-2012)
- Selected as top teacher in Alborz University of Medical Sciences (May 2014)

Editorial board member

- Associate Editor in *Mathematical Sciences* journal that published by *Springer*. (ISSN: 2008-1359) **(ISI)**
- Editor in International Journal of Mutidisciplinary Research and Modern Education (ISSN: 2454-6119)

Administrative

- Head of Research Office, Faculty of Accounting and Management, Islamic Azad University Karaj Branch. (2014-2016)
- Deputy Dean, Faculty of Accounting and Management, Islamic Azad University Karaj Branch. (2016-Continuous)