Curriculum Vitae for Hanif Heidari

Personal Data:

Name: Hanif Heidari
Nationality: Iranian
Date of Birth: 15/09/1981
Marital Status: Married
Address: School of Mathematics and Computer Sciences, Damghan University, Damghan, P.O. Box 36715-364, Iran
Current Position: Assistant Professor at Damghan University
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Education

Sep 2003   Bachelor of Science in Applied Mathematics,
DamghanUniversity of Basic Sciences, Damghan, Iran

Oct 2005   Master of Applied Mathematics,
Faculty of Mathematical Sciences and Computer Engineering,
Teacher Training (Kharazmi) University, Tehran, Iran
                  Thesis:*Identifying Congestion in Stochastic Systems by Using Data Envelopment Analysis*

Feb 2011   Ph.D. of Applied Mathematics,
Department of AppliedMathematics,
TarbiatModares University, Tehran, Iran
                  Thesis:*Numerical Methods for Solving Optimal Control Problems of Some High Order PDEs*

Research Interests:

Infinite-dimensional system
Chaotic system
Mathematical modeling
Artificial Intelligence
Optimal control of dynamical system
Computational mechanics
Nanomechanics and MEMS
Prediction of time series

Memberships

Feb 2000 - April 2001	Iranian Society of Cryptology
Jan 2002 - Sep 2003	Iranian Mathematical Society
Oct 2005 –Present	Iranian Mathematical Society

Teaching Experience

Teaching assistant:

Spring 2000- Spring 2003 Calculus and Analytic Geometry I, II and III,
Differential Equations, Statistics and Probability I, II,
Department of Mathematics,Damghan University of Basic
Sciences,Damghan, Iran

Lecturer:

Fall 2004 Calculus and Analytic Geometry I,II and III, Calculus and its
Applications in Management, Damavand Branch of Payamenoor
University, Damavand, Iran

Spring 2004- Spring 2010   Calculus and Analytic Geometry I,II and III,
Calculus and its Applications in Computer
Sciences, Computational Mathematics, StatisticsAnd it's
Applications in Computer Sciences,
Damavand Branch of Islamic Azad University,
Damavand, Iran

Fall 2010   Differential Equations, Statistics and Probability,
Discrete Mathematics,Safadasht Branch of IslamicAzad
University,Tehran, Iran

Fall 2010-Spring 2011 Calculus, Differential Equations, Statistics And
Probability,Share-GhodsBranch of Islamic Azad University
Tehran, Iran

Spring 2007- Spring 2012 Calculus, Engineering Mathematics, Applicationsof Mathematics in
Oil and Gas Engineering,Computational Mathematics,Science and
Research Branch of Islamic Azad University,
Tehran, Iran

Fall 2011-Spring 2022 Computer Programming, Data Structure,

Advanced Operations, Research I and II,
Linear and Nonlinear Programming
Network and Integer Programming, Numerical Analysis,
Linear Algebra, Advanced Calculus, Computer Programming
Damghan University, Damghan, Iran

Working Experience

Fall 2000   Responsible in the Computer Center at Damghan
University of Basic Sciences: Duties included
teaching the students, correcting their reports,
installation and maintenance of software and
hardware related products.

Research

Published papers

H. Heidari,G. R. Jahanshahloo and F. HosseinzadehLotfi, "An improvement to the concept of congestion in DEA", The Journal of Damghan University of Basic Sciences, Vol. 2, No. 2, 2008, pp. 101-109.

H. Heidari and A. Malek, "Null boundary controllability for hyperdiffusion equation", International Journal of Applied Mathematics, Vol. 22, No.4, 2009, pp. 615-626.

H. Heidari, H. Zwart and A. Malek, "Controllability and stability of 3D heat conduction equation in a submicroscale thin film", Memorandum1917, Department of Applied Mathematics, University of Twente, Enschede, ISSN 1874-4850, 2010.

H. Heidari and A. Malek, "Optimal boundary control for hyperdiffusion equation", Kybernetika, Vol. 46, No.5, 2010, pp. 907-925.

H. Heidari, Dynamical analysis of an axially vibrating nanorod, International Journal of Applied Mathematics, Vol. 29, No.2, 263-270, 2016.

H. Heidari, R.Mohebbi and A.Safarzade, Parameter estimation of fractional convection-diffusion equation, Ponte, Vol. 72, No.2, 2016.

H. Heidari, R.Ramezani and A. Jamali, Efficiency analysis of multi-stage systems in the presence of undesirable outputs, American Scientific Journal for Engineering, Technology and Sciences, Vol. 18, No. 1, 206-218, 2016.

A. Badr, S. Mohammad Esmaeil and H. Heidari, Applying data mining techniques in order to categorize the target users of the central library of Isfahan University of Technology (studying the motives and information seeking behaviors of them), Iranian Journal of Information Processing and Management, Vol. 33, No. 1, 294-271, 2017. (In Persian)

R. Mohebbi and H. Heidari, Lattice Boltzmann simulation of fluid flow and heat transfer in a parallel-plate channel with transverse rectangular cavities, International Journal of Modern Physics C, Vol. 28, No. 3, 1750042, 2017.

A. Afzali and H. Heidari, A review on the role of mathematics in stabilization of chaotic financial system, Applicable Research in Management and Accounting, Vol. 5, 156-170, 2017.(In Persian)

S. Naeimi, S. Mohammad Esmaeil and H. Heidari, The Assessment of information- seeking behavior of Medical Sciences Universities researchers of Khorasan-e-Razavi with neural network Approach, Library and Information Science Research, Vol. 4, No. 1, 91-118, 2018. (In Persian)

M. Faghih MohmmadiJalali and H. Heidari, Forecasting palladium price using GM(1,1), Global Analysis and Discrete Mathematics, Vol. 3. No. 1, 1-9, 2018.

A. Safarzade and H. Heidari, Finite time mix synchronization of delay fractional-order chaotic systems, Global Analysis and Discrete Mathematics, Vol. 3. No. 1, 33-52, 2018.

P. Ranjbar, R. Mohebbi and H. Heidari, Numerical investigation of nanofluids heat transfer in a channel consisting of rectangular cavities by lattice Boltzmann method,International Journal of Modern Physics C, Vol. 29, No. 11, 1850108, 2018.

H. Heidariand H. Zwart, Port-Hamiltonian modeling of nonlocal longitudinal vibrations in a viscoelastic nanorod, Mathematical and Computer Modeling of Dynamical Systems, Vol. 25, No. 5, 447-462, 2019.

 H. Heidari, S. R. Ahmadi Haji Abadi and M. Faghih MohammadiJalali, Evaluating forecasting ability of stock price by grey models, static and dynamic neural networks (Case study: Insurance companies of tehran stock exchange), Journal of New Researches in Mathematics, In press, 2019.(In Persian)

M. Faghih MohmmadiJalali and H. Heidari, Predicting changes in Bitcoin price using grey system theory, Financial Innovation, Vol. 13, No.6, https://doi.org/10.1186/s40854-020-0174-9, 2020.

P. Alasvand, H. Heideari and R. Nazemnezhad, Approximate distributed controllability of nonlocal Rayleigh beam, Computational Methods for Differential Equations, Vol 9, No. 1, 180-186, 2021.

H. Heidari, R. Mohebbi and A.Kazemi, Forced convection heat transfer of Ag–MgO/water micropolar hybrid nanofluid inside a stairway channel, International Journal of Modern Physics C, Vol. 32, No.11, 2150147, 2021.

H. Heidari and A. Velichko, An improved LogNNet classifier for IoT application, Journal of Physics: Conference Series, Vol. 2094, 032015, 2021.

A. Velichko and H. Heidari, A Method for Estimating the Entropy of Time Series Using Artificial Neural Networks, Entropy, Vol. 23, No. 11, 1432, 2021.

S. Yang, S. Li, B. Zeng, S. Liu, H. Heidari, Commonality Refinement and Code Reuse of Grey Prediction Model Based on MATLAB., Journal of Grey Systems, Vol. 34, No. 1, 2022.

S.A. Zargari, N.A. Khorshidi, H. Mirzahossein and H. Heidari, Analyzing the effects of congestion on planning time index-grey models Vs random forest regression, International Journal of Transportation Science and Technology, under publication, 2022.

H. Heidari, Biomedical signal analysis using entropy measures: A case study of motor imaginary BCI in end-users with disability, in Biomedical Signals based Computer-Aided Diagnosis System (Springer-Verlag book), under publication.

H. Heidari and H. Zwart, Nonlocal longitudinal vibration in a nanorod, a system theoretic analysis, under review

H. Heidari and M. Murugappan, Facial emotion recognition using partitioned random forest method, under review

H. Heidari and B. Zeng, An optimized grey transition Verhulst method, under review

Conference presentation

H. Heidari, G. R. Jahanshahloo and S. Mehrabian, "Improving input-output model in DEA", The 35th Annual Iranian Mathematics Conference, Ahvaz, Iran, 2004. (In Persian)

H. Heidari and A. Malek, "Optimal control for high order PDEs", International Conference of Mathematical Sciences, Istanbul, Turkey, 2009.

H. Heidari, H. Zwart and A. Malek, "Analysis of the three dimensional heat conduction model in nano- or micro-scale", Proceedings of the 19th International Symposium on Mathematical Theory of Networks and Systems (MTNS), 2010, pp.1877-1882.

H. Heidari, H. Zwart and A. Malek, "Analysis of heat flow in a microscale thin film",Colloqiuaat University of Twente, 2010.

O. Matveichuk, P. Rosen Esquivel, H. Heidari andA.Muntean , "Modeling compressible non-Newtonian chicken flow",Proceeding of European Study Group Mathematics with Industry,2010, pp. 86-96.

T. Berger, H. Heidari, J. Muntero and O. Staffans, "The point at infinity", 14th ISEM, Wuppertal, Germany, 2011.

A. Jamali, H. Heidari and A. Hashemi Borzabadi,"Efficiency-measuring DEA model for network systems with undesirable outputs", The 4th National Conference on Data Envelopment Analysis, Mazandaran, Iran, 2012. (In Persian)

H. Heidari, A. Jamali, H. Naseri and J. RamezaniToosi, "Estimation of returns to scale in network systems with undesirable outputs", The 4th National Conference on Data Envelopment Analysis, Mazandaran, Iran, 2012. (In Persian)

A. MirzaeeKachi and H. Heidari, "A comparative study on synchronization of Lorenz system", The First Regional Conference in Mathematics and Statistics, Urmia,Iran, 2013. (In Persian)

A. MirzaeeKachi and H. Heidari, "Multiobjective optimization by using adaptive control method", The First Regional Conference in Mathematics and Statistics, Urmia,Iran, 2013. (In Persian)

S.Abdolahzadeh Mostafa Abadi and H. Heidari, "The impact of controllability in optimal control problems of Schrodinger equation",The 44thAnnual Iranian Mathematics Conference, Mashhad, Iran, 2013. (In Persian)

Z. Poorzamani, H. Heidari and M. Kalantary, "Fuzzy forecasting of corporate profitability based on deterministic data", The First National Conference on Accounting and Management, Shiraz, Iran, 2013. (In Persian)

Z. Poorzamani, H. Heidari and S. M. Rahanjam, "Ability of data envelopment analysis in the forecast profitability of companies accepted on the Tehran stock exchange", The Second Conference on Modern Management Sciences, Gorgan, Iran, 2013. (In Persian)

S. Abdolahzadeh Mostafa Abadi and H. Heidari, "The role of controllability in quantum computing", The First National Conference on Quantum Information and Quantum Computation, Ahwaz, Iran,2013.(In Persian)

H. Heidari and A.Safarzade, "Parameter identification in fractional-order diffusionless Lorenz system", The 10th Seminar on Differential Equations and Dynamical Systems, Mazandaran, Iran, 2013. (In Persian)

H. Heidari and A. Safarzade, "Parameter identification of fractional convection-diffusion equation using PSO",The11thSeminar on Differential Equations and Dynamical Systems, Damghan, Iran, 2014. (In Persian)

H. Heidari andN.Zare, "A comparison between PSO and DE method for parameter identification ofdelayedfractional-order chaotic systems", The 11[th]Seminar on Differential Equations and Dynamical Systems, Damghan, Iran, 2014. (In Persian)

R. Mohebbi and H. Heidari, Numerical investigation of heat transfer in a channel with open cavity using lattice Boltzmann method, 23rd Annual International Mechanical Engineering Conference, Tehran, Iran, 2015.(In Persian)

A. Malek, H. Heidari and M. Vali, Artificial magnetic nano-swimmer in drug delivery, 22nd Iranian Conference on Biomedical Engineering, Tehran, Iran, 2015.

R. Ramezani and H. Heidari, A method for modeling heart rate variability with a long range dependence properties and instabilityof variance, 22nd Iranian Conference on Biomedical Engineering, Tehran, Iran, 2015. (In Persian)

H. Baseri and H. Heidari, Numerical modeling of supercritical fluid extraction of essential oil from medical plants, 22nd Iranian Conference on Biomedical Engineering, Tehran, Iran, 2015. (In Persian)

S. S. Shahrokhi, S. Mashayekh and H. Heidari, Credit rating of companies listed in Tehran stock exchange using super data envelopment analysis, 3rd International Conference on Applied Researches in Management and Accounting, Tehran, Iran, 2016.(In Persian)

H. Heidari and R. Mohebbi, Lattice Boltzmann method for study of fluid flow and heat transfer in a channel contained two open cavity, 2th International Conference on New Technology Applications in Engineering, Mashhad, Iran, 2016. (In Persian)

M. Faghih MohmmadiJalali and H. Heidari, The role of grey systems in management of economic systems, The First International Conference on Management and Humanistic Science Research, Tehran, 2017.(In Persian)

M. Kramar Fijavž, C. Budde, H. Heidari and N. Edeko, Non-autonomous diffusion in networks,20th InternetSeminar "*Linear Parabolic Equations*", Baronissi, Italy, 2017.

H. Heidari, Approximate controllability of an axially vibrating nanorod embedded in an elastic medium, 37th Benelux meeting on Systems and Control, Amersfoort, The Netherlands, 2018.

P. AlasvandHadi, H. Heidari and R. Nazemnezhad, Stability investigation of Bishop nanorod, 3 Iranian Conference on Mathematical Physics, Ghom University of Technology, Ghom, Iran, 2019.

H. Heidari, Predicting time series with big or small data, 2021 Joint Mathematics Meetings (JMM), American Mathematical Society, USA, 2021.

Supervisor of M.Sc. Theses

Ali Jamali, Efficiency analysis of network systems with undesirable factors (2012).

Saeid Salehi Izeh, Investigation of the optimization methods for enhanced recovery of oil reservoir with nonlinear output constraint (2012).

SajadAbdolahzadeh Mostafa Abadi, The impact of controllability in optimization of quantum systems (2013).

AsiehMirzaeeKachi, Multiobjective synchronization of chaotic systems based on GA(2013).

HadiehMehmandoostToraj, Classifying large data sets using DEA(2013).

Asma Safarzade, Chaos investigation in fractional-order chaotic systems with time delay(2014).

NajmeZare, Efficiency Analysis of some metaheuristic optimization methods (2014).

Mostafa Amir Ahmadi, Classification and pattern recognition with ant colony optimization algorithm(2014).

GhasemObeidavi, Binary classification using artificial neural network (2015).

SeyedehMoloudRasooliGhahferakhi, Parameters estimation of fractional- order chaotic systems using CSODE (2015).

Mehdi Ganjkhanloo, Evaluation of Health Center's Efficiency Using Monte Carlo DEA (2015)

Azam Afzali, Chaos Control in Fractional Order Financial System using Multi-Objective Optimization (2017)

Pouria Ranjbar, Lattice Boltzmann simulation of nanofluid heat transfer in a channel with open cavities (2017)

Mahboubeh Faghih MohammadiJalali, Prediction of grey data trends using PGM(1,1) (2018)

NarjesOrouji, Numerical solution of constrained engineering design problems using water cycle algorithm (2018)

PariaAlasvandHadi, Controllability investigation of nanorod vibration (2019)

Faeze Hosseini Meyghan, Time series prediction using fractional grey sytems (2019)

Moslem Mohammdi, Port-Hamiltonian modelling of Navier-Stokes flows (2019)

Marziyeh Khodadadi, Optimization of saffron and barberry processing(2020)

Vahid Gheshlaghi, Gradual regression with imprecise data (2021)

Ramin Jafari Pouya, Portfilio investment using reinforcement learning (2021)

Co-supervisor of Ph.D. and M.Sc.Theses

Seyyed Hashem Mousavipour, Efficiencies of two-stage systems with fuzzy data(2013).

Mohammad Kalantary, Comparison of capability of neural networks and fuzzy rules in forecasting corporate profitability(2013).

Seyed Mohsen Rahanjam, Comparison the ability of data envelopment analysis and neural network in the forecast profitability of companies(2013).

Atefeh Badr, End users classification for Isfahan University of Technology central library using data mining approach (2015).

SeyedehSamaneh Shahrokhi, Design and development a model for corporate credit ranking (2016).

Conference Committee Member

Second National Conference on Computational Science, Damghan University 2016.

International Conference on Engineering Design and Optimization, Malysia, 2016.

International Conference on Cement and Functional Material, Korea, 2017.

Microfluidic and Nanofluidics Conference, Baltic Conference Series, Sweden, 2017.