

Farahnaz Mohanna

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Education

- B.Sc, Electrical Engineering - Electronics,Sistan and Baluchestan University - 1988
- MS, Electrical Engineering - Electronics,University of Tehran - 1993
- PhD, ,University of Surrey UK - 2002

Courses

1. Machine Vision
2. Image Analysis
3. Digital systems- ||
4. Design of Micro Processor Systems
5. Digital Image Processing
6. Design of Micro Processor Systems

Master Thesis

1. Accurate and real-time detection of harmful objects in real-world environments

   اميررضا شكل زهي, [Farahnaz Mohanna, Mehdi Rezaei, Pouria Jafari, Mojtaba Shahraki]

   نيمسال دوم سال تحصيلي 1404-1403

2. Solving Jigsaw Puzzle using Genetic Algorithm

   عاطفه پروين, [Farahnaz Mohanna, Masoumeh Rezaei, Mehdi Rezaei, Javad Ahmadi Shokouh, S. Masoud Barakati]

   نيمسال دوم سال تحصيلي 01-00

3. Video Rate Control for Real Time and Variable Bandwidth Applications

   روح الله ناصري, [Mehdi Rezaei, Farahnaz Mohanna, Shahpour Rahmani]

   نيمسال دوم سال تحصيلي91-90

4. Array Signal Processing Using Vector Sensors in Underwater Acoustic Communications

   محمود پاداش, [Hengameh Keshavarz, Javad Ahmadi Shokouh, Farahnaz Mohanna]

   نيمسال دوم سال تحصيلي91-90

5. variable bit rate multiview video rate control for real time communications

   اسفه كده يي, [Mehdi Rezaei, Farahnaz Mohanna,]

   نيمسال دوم سال تحصيلي91-90

Journals Papers

2025

1. Automatic identification of MS lesions based on local steering kernel features and sparse dictionary training

Mohammad javad Ahsani, Farahnaz Mohanna, Rahmani Motlagh Mehdi

MULTIMEDIA TOOLS AND APPLICATIONS Volume: (84) 9939 - 9961

2. Investigation of the noisy image edge detection based on the GWO algorithm

Aref Eslami mehdi abadi, Farahnaz Mohanna

Volume: (55) 35 - 42

3. Genetic-based square jigsaw puzzle solver using the combined color+texture compatibility criterion

Atefeh Parvin, Farahnaz Mohanna, Masoumeh Rezaei

JOURNAL OF UNIVERSAL COMPUTER SCIENCE Volume: (31) 1564 - 1580

4. Fabric Defect Identification based on KNN and PCA Algorithms

Zahra Nouri, Farahnaz Mohanna,

Journal of Information Systems and Telecommunication Volume: (13) 326 - 332

2023

5. Static hand gesture recognition in sign language based on convolutional neural network with feature extraction method using ORB descriptor and Gabor filter

Mahin Moghbeli damane, Farahnaz Mohanna, Pouria Jafari

EXPERT SYSTEMS WITH APPLICATIONS Volume: (211) 118559-1 - 118559-13

6. Reliable object recognition using deep transfer learning for marine transportation systems with underwater surveillance

, Farahnaz Mohanna

IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS Volume: (24) 2515 - 2524

7. Multiple targets video tracking based on extended kalman filter in combination with particle swarm optimization for intelligent applications

Amin Jahantighy, Hamed Torabi, Farahnaz Mohanna

SN Applied Sciences Volume: (5) 1 - 14

8. Effects of relay (source) side information on the coverage region in wireless Rayleigh and Rician fading multiple access relay channel

Jalil Etminan, Farahnaz Mohanna, Ghosheh Abed Hodtani

Vehicular Communications Volume: (42) 100613-1 - 100613-25

9. Content-based Retrieval of Tiles and Ceramics Images based on Grouping of Images and Minimal Feature Extraction

Simin Rajaei, Farahnaz Mohanna

Journal of Information Systems and Telecommunication Volume: (11) 241 - 250

2022

10. انتقال ميانگين و خوشه بندي Kirsch، بخش بندي خودكار كبد در تصاوير سي تي مبتني بر لبه ياب خوشه بندي means-K

, Farahnaz Mohanna

Volume: (9) 67 - 79

11. تشخيص و شناسايي علائم ترافيكي با استفاده از مدل هاي YOLOv3

Maede Narouei, Farahnaz Mohanna

Volume: (20) 1 - 15

2021

12. Presenting an Optimal Energy-Aware Locating Structure Using the Internet of Things and Device-to-Device Communications on Smartphones

, Farahnaz Mohanna, Hengameh Keshavarz

WIRELESS PERSONAL COMMUNICATIONS Volume: (118) 1745 - 1774

13. Inspection of textile fabrics based on the optimal Gabor filter

Mina Boluki, Farahnaz Mohanna

Signal Image and Video Processing Volume: (15) 1617 - 1625

14. A general achievable rate region and two certain capacity regions for Slepian-Wolf multiple-access relay channel with non-causal side information at one encoder

Jalil Etminan, Farahnaz Mohanna, Ghosheh Abed Hodtani

IET Communications Volume: (15) 497 - 512

15. Real-time underwater image enhancement: a systematic review

, Farahnaz Mohanna

Journal of Real-Time Image Processing Volume: (18) 1509 - 1525

16. Real-time underwater image resolution enhancement using super-resolution with deep convolutional neural networks

, Farahnaz Mohanna

Journal of Real-Time Image Processing Volume: (18) 1653 - 1667

17. Effects of relay and side information at one encoder on the coverage regions in Gaussian multiple-access channel

Jalil Etminan, Farahnaz Mohanna, Ghosheh Abed Hodtani

Transactions on Emerging Telecommunications Technologies Volume: (32) 4313-1 - 4313-19

18. Inner and outer bounding capacity region for multiple-access relay channel with non-causal side information at one encoder

Jalil Etminan, Farahnaz Mohanna, Ghosheh Abed Hodtani

WIRELESS NETWORKS Volume: (8) 1 - 22

19. Content-based Image Retrieval for Carpet E-Commerce Application

Mehdi Reza Shahabi, Mehdi Rezaei, Farahnaz Mohanna

International Journal of Information and Communication Technology Research (IJICT Volume: (13) 40 - 49

20. Outdoor fire detection on the video frames including fire zones close to the fire-like objects recorded by a fixed camera

Mahmood Talebiyan Mashhadi, Farahnaz Mohanna

Volume: (51) 371 - 380

2020

21. Underwater Optical Image Coding for Marine Health Monitoring Based on DCT

, Farahnaz Mohanna

CURRENT SIGNAL TRANSDUCTION THERAPY Volume: (14) 1 - 15

22. Boundary Detection in Digital Images using Structural Forests Method Based on Contour Grouping and Reasoning

, Farahnaz Mohanna

Journal of Soft Computing and Information Technology Volume: (9) 124 - 139

2019

23. A joint adaptive evolutionary model towards optical image contrast enhancement and geometrical reconstruction approach in underwater remote sensing

, Farahnaz Mohanna

SN Applied Sciences Volume: (10) 1242-1 - 1242-12

2018

24. Nondestructive high-resolution microwave imaging of biomaterials and biological tissues

Fatemeh Kazemi, Farahnaz Mohanna, Javad Ahmadi Shokouh

AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS Volume: (84) 177 - 185

25. Survey on clustering in heterogeneous and homogeneous wireless sensor networks

, Marzieh Badkoobe, Farahnaz Mohanna, Hengameh Keshavarz, Ali Asghar Rahmani Hosseinabadi, Arun Kuma

JOURNAL OF SUPERCOMPUTING Volume: (74) 277 - 323

26. Detection of biological abnormalities using a near-field microwave microscope

, Farahnaz Mohanna, Javad Ahmadi Shokouh

International Journal of Microwave and Wireless Technologies Volume: (10) 1 - 9

27. Microwave reflectometry for noninvasive imaging of skin abnormalities

, Farahnaz Mohanna, Javad Ahmadi Shokouh

AUSTRALASIAN PHYSICAL and ENGINEERING SCIENCES IN MEDICINE Volume: (41) 881 - 890

28. Microwave Near-field Imaging of Biological Samples Using a Microstrip Resonator Probe

, Farahnaz Mohanna, Javad Ahmadi Shokouh

IETE JOURNAL OF RESEARCH Volume: (10) 1 - 8

2017

29. A novel energy-aware target tracking method by reducing active nodes in wireless sensor networks

, Farahnaz Mohanna, Hengameh Keshavarz

WIRELESS PERSONAL COMMUNICATIONS Volume: (95) 3585 - 3599

2015

30. Solving Multiple Travelling Salesman problem using the Gravitational Emulation local search algorithm

Farahnaz Mohanna, Hengameh Keshavarz

APPLIED MATHEMATICS and INFORMATION SCIENCES Volume: (9) 1 - 11

31. Solving multiple traveling salesman problem using the gravitational emulation local search algorithm

, Farahnaz Mohanna, Hengameh Keshavarz, ali aqsghar rahmani hosyn abadi

APPLIED MATHEMATICS and INFORMATION SCIENCES Volume: (9) 1 - 11

32. A Private Secure Communication Scheme Using UKF-based Chaos Synchronization

, , Asad Azemi, Farahnaz Mohanna

Journal of Engineering Science and Technology Review Volume: (8) 96 - 105

2014

33. Applying Content-based Image retrieval techniques to provide new services for tourism industry

Zobeir Raisi, Farahnaz Mohanna, Mehdi Rezaei

International Journal of Advanced Networking and Applications Volume: (6) 2222 - 2232

2013

34. Digital Video Stabilization System by Adaptive Fuzzy Kalman Filtering

, Mehdi Rezaei, Farahnaz Mohanna

Journal of Information Systems and Telecommunication Volume: (1) 223 - 232

2012

35. Digital Video Stabilizer by Adaptive Fuzzy Filtering

Mehdi Rezaei, Farahnaz Mohanna

EURASIP Journal on Image and Video Processing Volume: (21-2012) 1 - 15

36. Digital Video Stabilization System by Adaptive Fuzzy Filtering

, Mehdi Rezaei, Farahnaz Mohanna

journal of Communication and Computer Volume: (7) 69 - 75

37. Digital video stabilizer by adaptive fuzzy filtering.

, Mehdi Rezaei, Farahnaz Mohanna

EURASIP Journal on Image and Video Processing Volume: (21) 1 - 15

38. Watermarking scheme based on Multiple Chaotic Maps

, Farahnaz Mohanna, Shahram Mohanna, Mehdi Rezaei

International Journal of Communications and Information Technology Volume: (2) 1 - 9

2011

39. Numerical Investigation of rectangular Dielectric Resonator Antennas DRAs) fed by Dielectric Image line DIL)

Hamide Dashti, Mohammad H Neshati, Farahnaz Mohanna

International Journal of Microwave and Optical Technology Volume: (6) 57 - 63

40. Content-Based Image Retrieval for Tourism Application Using Handheld Devices

, Farahnaz Mohanna, Mehdi Rezaei

International Journal of Information and Communication Technology Research (IJICT Volume: (4) 57 - 64

41. A Chaos Based Blind Digital Image Watermarking in The Wavelet Transform Domain

, Shahram Mohanna, Farahnaz Mohanna, Mehdi Rezaei

International Journal of Computer Science Issues Volume: (8) 192 - 199

42. Backward Radiation Reduction of Rectangular Dielectric Resonator Antennas Excited by Dielectric Image Line

, Mohammad H Neshati, Farahnaz Mohanna

International Journal of Microwave and Optical Technology Volume: (6) 22 - 28

Conferences Papers

2025

1. Target Identification by Remote Control System at Borders

International Conference on Artificial Intelligence and Related Technologies

Mahboobe Azizi, Farahnaz Mohanna, Mohammad javad Ahsani

2. Suit Identification in Peoples Clothing Images According to Machine Learning by Corners

International Conference on Artificial Intelligence and Related Technologies

, Farahnaz Mohanna

3. Quaternion Neural Network on Detecting Diabetic Retinopathy Using Fundus Images

International Conference on Artificial Intelligence and Related Technologies

Seyed Ebrahim Hosseini, Farahnaz Mohanna, Mohammad Hossain Validad

2024

4. Automatic Identification and Reconstruction of Tuberculosis in Microscopic Images Using Convolutional Auto-Encoder Network

15th International Conference on Information and Konwledge Tecknology

Ahmadreza Nadafi, Farahnaz Mohanna

2023

5. underwater images enhancement based on grey-wolf optimizer

2023 2nd International Engineering Conference Electrical, Energy and Artificial Intelligence (EICEEAI)

, Farahnaz Mohanna, Khalid E. Al-Qawasmi

2018

6. A New General Inner Bound for Multiple-Access Relay Channel with Non-Causal Side Information at One Encoder and Common Message

2018 Iran Workshop on Communication and Information Theory (IWCIT)

Jalil Etminan, Farahnaz Mohanna, Ghosheh Abed Hodtani

7. Application of Image Processing in Barberry Harvesting

13th International Symposium on Advances in Science and Technology

2015

8. A novel dynamic multi-hop Clustering Protocol based on Renewable Energy for Energy harvesting wireless sensor networks

2nd International Conference on Knowledge-Based Engineering and Innovation(KBE

, , , Farahnaz Mohanna

9. A novel dynamic multi-hop Clustering Protocol based on Renewable Energy for Energy harvesting wireless sensor networks

2nd International Conference on Knowledge-Based Engineering and Innovation(KBEI)

seyed mostafa bozorgi, mahdi golsorkh tabar amiri, , Farahnaz Mohanna

2014

10. Design and Fabrication of a Near-Field Probe for Sub-surface Microwave Imaging

7th International Symposium on Telecommunications (IST2014)

2013

11. Applying Specific Region Frequncy and Texture Features on Content-based Image Retrieval

8th Iranian Conference on Machine Vision and Image Processing

2011

12. Content-Based Image Retrieval for Tourism Application

7th Iranian Conference on Machine Vision and Image Processing (MVIP 2011)

Farahnaz Mohanna, Mehdi Rezaei

13. Digital video stabilization system by adaptive fuzzy filtering

19th European Signal Processing Conference (EUSIPCO 2011

, Mehdi Rezaei, Farahnaz Mohanna

14. Real-time Video Stabilization by Adaptive Fuzzy Filtering

1th international econference on Computer and knowledge engineering (ICCKE)

, Mehdi Rezaei, Farahnaz Mohanna

15. Camera Motion Modeling for Video Stabilization Performance Assessment

7th Iranian conference on Machine Vision and Image Processing (MVIP 2011)

, Mehdi Rezaei, Farahnaz Mohanna

16. A Fuzzy Bit Allocation Algorithm for Variable Bit Rate Video Coding

The 7th Iranian Machine Vision and Image Processing Conference

17. Digital Video Stabilization system by adaptive Fuzzy Kalman Filtering

The 11th Iranian conference on Fuzzy Systems

2010

18. A Fuzzy Video Rate Controller for Variable Bit Rate Applications Using ANFIS

1st International Conference on Communications Engineering

, Mehdi Rezaei, Saeed Tavakoli Afshari, Farahnaz Mohanna

19. Digital Video Stabilization System by Adaptive Motion Vector Validation and Filtering

1st international Coference on Communications Engineering

, Mehdi Rezaei, Farahnaz Mohanna

20. Design Investigation of High efficient Active antenna with Harmonic Rejection

1st international confrence communication engineering

, , Farahnaz Mohanna

21. Gain Enhancement of Rectangular Dielectric Resonator Antenna Fed by Dielectric Image Line

2010 Intenational workshop on Antenna Technology Small Antennas Innovative Structures and Materials

, , Farahnaz Mohanna

22. Numerical Investigation of Rectangular Dielectric Resonator Antennas (DRAs) fed by Dielectric Image Line (DIL)

progress in electromagnetic research PIER 2009

, Neshati Mohammad Hasan, Farahnaz Mohanna

23. Comparative Investigation of Dielectric Image line-Slot and Micro strip-Slot Coupled Rectangular Dielectric Resonator Antenna

Oral prerentation and publication at the 51st international symposium ELMAR-2009

, Neshati Mohammad Hasan, Farahnaz Mohanna

24. Novel Microstrip Antena for 2.4GHZ with Harmonic Rejection

2009 International Conference on Microwave Technology and Computational Electromagnetics (ICMTCE 2009)

2004

26. 3D Non-linear invisible boundary detection filters

the 2nd International Symposium of 3D data Processing Visualization Transmission

M Petro, Farahnaz Mohanna, Vassili Kovalev

Research Project

2024