



## Masoumeh Rezaei

### Professor

Faculty : Electrical and Computer Engineering

Departments : Computer

Phone : +9854 - 31136538

Email : mrezaei@ece.usb.ac.ir

Address : Dept.of Computer, Faculty of Electrical and Computer Engineering, University of Sistan and Baluchestan, Daneshgah Ave., Zahedan, Iran.

## Education

- ✓ B.Sc, Software Engineering, Shahid Bahonar University of Kerman - 2006
- ✓ MS, Computer Engineering, Shiraz University - 2013
- ✓ PhD, Computer Engineering, Yazd University - 2019

## Courses

1. Fundamental of Computer and Programming
2. Advanced Programming
3. Principles of Computational Intelligence
4. Graph Theory and Algorithms
5. Artificial Intelligence
6. Data Structures
7. Fundamentals of Compiler Design
8. Machine Learning and Pattern Recognition
9. Evolutionary Computations
10. Applied Machine Learning

## Master Thesis

### 1. GPR System Modeling and Implementation Clutter Rejection of Buried Objects

حامد قرباني, [Javad Ahmadi Shokouh, Hamideh DashtiKhavidaki, Masoumeh Rezaei]

نیمسال دوم سال تحصیلی 00-01

### 2. Local Feature Descriptor using Deep Learning

عبدالقادر ملازهي دشتوك, [Masoumeh Rezaei, Samira Nofaresti, Pouria Jafari, Hadi Esmaeeli Darmian]

نیمسال دوم سال تحصیلی 00-01

### 3. Solving Jigsaw Puzzle using Genetic Algorithm

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

نیمسال دوم سال تحصیلی 00-01

---

## Journals Papers

---

### 2025

---

1. [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

2. [SSLA-Net: Semantic-Spatial Learning Architecture for Robust Steel Surface Defect Detection](#)

Masoumeh Rezaei, Mansoureh Rezaei, Mehri Rajaei

Volume: (3) 125 - 139

### 2023

---

3. [Foreground-Background Segmentation using K-Means Clustering Algorithm and Support Vector Machine](#)

Masoumeh Rezaei, Mansoureh Rezaei, Masoud Rezaei

Journal of Information Systems and Telecommunication Volume: (11) 65 - 74

### 2022

---

4. [توصیفگر موضعی جدید با استفاده از نگاشت مرکاتور به منظور تشخیص اشیاء سه بعدی](#)

Masoumeh Rezaei, Mehdi Rezaeian, vali derhami

Volume: (19) 111 - 124

5. [A novel local feature descriptor using the Mercator projection for 3D object recognition](#)

Masoumeh Rezaei, Mehdi Rezaeian, Vali Derhami

Volume: (19) 111 - 124

### 2021

---

6. [Local feature descriptor using discrete first and second fundamental forms](#)

Masoumeh Rezaei, Mehdi Rezaeian, Vali Derhami, Hossein Khorshidi

JOURNAL OF ELECTRONIC IMAGING Volume: (30) 023008-1 - 023008-14

### 2019

---

7. [Improving LNMf Performance of Facial Expression Recognition via Significant Parts Extraction using Shapley Value](#)

Masoumeh Rezaei, vali derhami

Journal of Artificial Intelligence and Data Mining Volume: (7) 17 - 25

8. [Deep learning-based 3D local feature descriptor from Mercator projections](#)

---

Masoumeh Rezaei, Mehdi Rezaeian, Vali Derhami, Ferdous Sohel, Mohammed Bennamoun  
COMPUTER AIDED GEOMETRIC DESIGN Volume: (74) 1-101771 - 13-101771

## 2016

---

### 9. Long- term Precipitation Prediction Using Statistical Downscaling Model

, , , , Masoumeh Rezaei

Volume: (26) 115 - 127

## 2015

---

### 10. A Fuzzy Expert System for Facial Expression Recognition

Masoumeh Rezaei, Mansoureh Rezaei

journal of telecommunication, electronic and computer engineering Volume: (7) 37 - 41

## 2014

---

### 11. در ریز مقیاس نمودن میزان بارش سالانه مدل SDSM مقایسه روش های شبکه عصبی مصنوعی و . مطالعه موردی کرمان راور و رابر-HADCM3 سازی شده با

, , , , Masoumeh Rezaei

Volume: ( ) 25 - 40

### 12. بررسی کارایی مدل ریز مقیاس نمایی آماری در پیش بینی بارش در دو اقلیم خشک و فراخشک

, , , , Masoumeh Rezaei

Volume: (28) 836 - 845

### 13. در پیش بینی پارامترهای دمایی در دو اقلیم خشک و SDSM بررسی کارایی مدل ریز مقیاس آماری . (فرا خشک)مطالعه موردی: کرمان و بم

, , , Masoumeh Rezaei,

Journal of Watershed Management Research Volume: (5) 117 - 131

## 2013

---

### 14. Using the genetic algorithm to enhance nonnegative matrix

Masoumeh Rezaei,

EXPERT SYSTEMS Volume: (31) 213 - 219

### 15. Using the genetic algorithm to enhance nonnegative matrix factorization initialization

Masoumeh Rezaei, Reza Boostani

EXPERT SYSTEMS Volume: (31) 213 - 219

## 2011

---

## 16. An Efficient Initialization Method for Nonnegative Matrix Factorization

Masoumeh Rezaei, reza boostani, mansoureh rezaei

Applied Sciences Volume: (2) 354 - 359

---

## Conferences Papers

---

### 2025

---

#### 1. Lane Detection for Self-Driving Cars Using Deep Learning

International Journal on Artificial Intelligence and Related Technologies

Rafat Moaiery far, Masoumeh Rezaei, Nik mohammad Balouchzahi

#### 2. Investigation of Clutter Removal Techniques in Ground Penetrating Radar Imaging Using Artificial Intelligence

international conference on artificial intelligence and related technologies

Hamed Qorbani, Hamideh DashtiKhavidaki, Javad Ahmadi Shokouh, Masoumeh Rezaei

### 2015

---

#### 3. Long-term precipitation prediction using Artificial Neural Network (Case study: Ravar)

International conference on sustainable development, strategies and challenges with a focus on Agriculture, Natural Resources, Environment and Tourism

Maryam Rezaei, Maryam Nohtani, Alijan Abkar, Alireza Moghadam Nia, Masoumeh Rezaei

#### 4. Forecasting of Temperature Indexes over future periods by Using A2 and B2 emission scenarios from HadCM3 model (Case study: Kerman)

Water Harvesting and Watershed Management Congress

Maryam Rezaei, Mohammad Nohtani, Alireza Moghadamnia, Masoumeh Rezaei, Alijan Abkar

### 2014

---

#### 5. Forecasting maximum temperature using least square Support Vector Regression (case study; Shahrekord)

First National Conference on Medicinal Plants, Traditional Medicine and Organic Agriculture

Maryam Rezaei, Masoumeh Rezaei

#### 6. Forecasting Maximum Temperature using Online Support Vector Regression (Case Study ; Shahrekord)

The first national conference of medicine herbal traditional medicine and organic agriculture

Maryam Rezaei, Alireza MoghaddamNia, Masoumeh Rezaei

#### 7. Forecasting of variation of precipitation During Future Decades Using Artificial Neural Network (Case study: Aliabad station)

The first national conference of medicine herbal traditional medicine and organic agriculture

Maryam Rezaei, Mohammad Nohtani, Alireza Moghaddamnia, Alijan Abkar, Masoumeh Rezaei

#### 8. Forecasting of variation of precipitation During Future Decades using statistical downscaling model (cast study: Aliabad station)

The first national conference of medicine herbal traditional medicine and organic agriculture

Maryam Rezaei, Mohammad Nohtani, Alireza Moghaddamnia, Alijan Abkar, Masoumeh Rezaei

#### 9. Forecasting variations of temperature indexes over future periods using A2 and B2 emission scenarios from HadCM3 model (Case study: Shahrebabak)

The second national conference on desert with the approach of managing arid and desert areas,

Maryam Rezaei, Mohammad Nohtani, Alireza Moghaddamnia, Alijan Abkar, Masoumeh Rezaei

#### 10. Forecasting variations of precipitation over future periods by Using A2 and B2 emission scenarios from HadCM3 model (Case study: Shahrebabak)

The second national conference on desert with the approach of managing arid and desert areas

Maryam Rezaei, Mohammad Nohtani, Alireza Moghaddamnia, Alijan Abkar, Masoumeh Rezaei

## 2013

---

#### 11. Forecasting annual precipitation using Artificial Neural Networks (Case study: Kerman synoptic station)

6th National Conference on Watershed Management and Soil and Water Resources Management

Maryam Rezaei, Mohammad Nohtani, Alireza Moghaddamnia, Alijan Abkar, Masoumeh Rezaei, Mehri Mirkazehi

#### 12. Assessment of climate change on rainfall using two scenarios A2 and B2 of HADCM3 model (Case Study; Rabor)

12th National Conference on Irrigation and Evaporation Reduction

Mohammad Nohtani, Maryam Rezaei, Alireza Moghaddamnia, Alijan Abkar, Masoumeh Rezaei

#### 13. Assessment of the effects of climate change on rainfall in the future (Case Study; Kerman)

9th National Conference on Watershed Science and Engineering Conference

Maryam Rezaei, Mohammad Nohtani, Alireza Moghaddamnia, Alijan Abkar, Masoumeh Rezaei

#### 14. Improving the Vertex Chain Method through Huffman Coding

Iranian Conference on Machine Vision and Image Processing (MVIP)

Leila Zarban, Masoumeh Rezaei, Reza Boostani

## 2010

---

#### 15. Using Genetic Algorithm to Enhance Nonnegative Matrix Factorization Initialization

2010 6th Iranian Conference on Machine Vision and Image Processing

Masoumeh Rezaei, Reza Boostani

## Executive activities

---

مشاوره دانشجویان کارشناسی

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

مشاوره دانشجویان کارشناسی

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