

Vol. 1

Special Issue 2

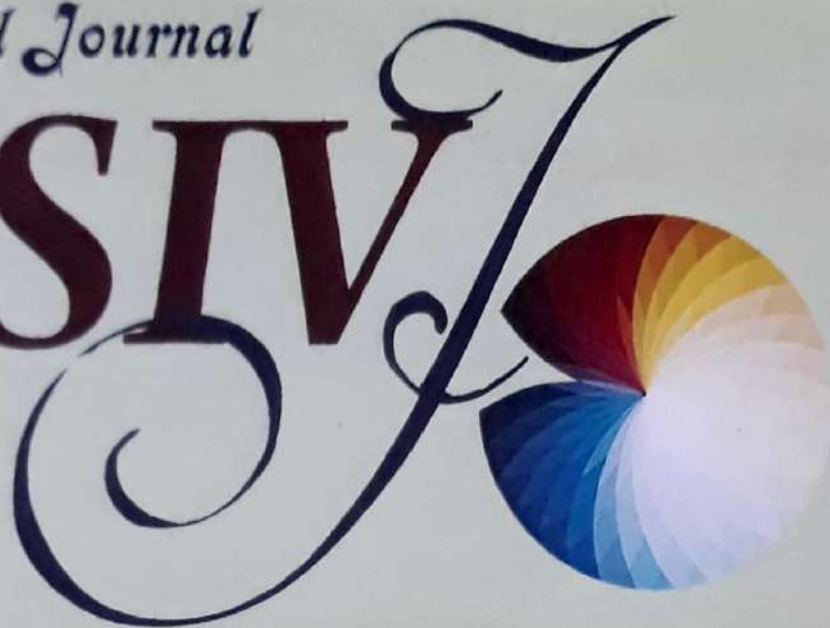
December

ISSN 2454-4558

*An International Journal*

# MASIV

*Bi-Annual*



## APPLICATION FABRICS

Vol. 1

Special Issue. 2

December

ISSN 2454-4558

*An International Journal*

# MASIV

*Bi-Annual*

MASIVJ

Madurai Sivakasi Nadars Pioneers Meenakshi Women's College

Poovanthi, Tamil Nadu, India

Email: [journmsnpioneer@gmail.com](mailto:journmsnpioneer@gmail.com)

Ph: 9843259191

FUSION OF EDGE REVEALING TECHNIQUES FOR IMAGES	S.Selvarani	119
MEDICAL IMAGE PROCESSING- BONE IMAGING	R. Suganya & J. Jenifer	125
A COMPARATIVE STUDY OF RIVEST CIPHER ALGORITHMS	T.Ramaporkalai	132
ENHANCED KNOWLEDGE REPRESENTATION FOR SECURED AND INTELLIGENT STORAGE AND EFFICIENT RETRIEVAL APPLICATION USING KBML FOR PLANT BIOTECHNOLOGY	B.Ilayaraja, G.Priscilla Sweetlin & Dr. Rachel Regi Daniel	136
A REVIEW ON FUSION OF FUZZY SYSTEMS AND GENETIC ALGORITHMS	I. Jenifer, S.Shobana	142
INTERNET OF THINGS VISION OF THE FUTURE INTERNET	T.Suganya, J.Christy Jeeva Ratna Devi & M.Hosanna	147
OPTIMIZATION OF HADOOP SCHEDULING WITH MESSY GENETIC ALGORITHM	S.Mohanambal	152
A SURVEY ON BIOMETRIC GAIT RECOGNITION: APPROACHES AND CHALLENGES	R. Meenakshi, S. Subha	158
IMAGE PROCESSING AND REMOTE INTELLIGENCE	S. Jebapriya	163
IMAGE DENOISING USING NON-LOCAL MEANS ALGORITHM	L.Savithiri	167
SUPER-RESOLUTION: A REVIEW	Iswarya.R , Ambika.N	172
ENHANCEMENT OF QOS CONSTRAINTS USING RESOURCE ALLOCATION SCHEME FOR LTE SYSTEM	R.Arasakumar, S.Vasuki & M.Iswarya	177



## IMAGE PROCESSING AND REMOTE INTELLIGENCE

S.JEBAPRIYA

Assistant Professor, Dept of MCA  
Fatima College (Autonomous), Madurai

## ABSTRACT

Remote intelligence in image processing is nowadays a mature research area. The techniques developed in the field allow many real-life applications with great societal value. For instance, urban monitoring, fire detection or flood forecasting can have a great impact on economical and ecological issues. To attain such objectives, the remote sensing community has turned into a multidisciplinary field of science that embraces physics, signal theory, computer science, electronics, and communications. This paper serves as a survey of methods and applications, and reviews the last methodological advances in remote sensing image processing.

**Keywords** - Remote sensing, machine learning, signal and image processing, survey, applications.

## 1. INTRODUCTION

Remote sensing image processing is a mature research area allowing real-life applications with clear benefits for the Society. The main goals of remote sensing are (1) monitoring and modeling the processes on the Earth's surface and their interaction with the atmosphere; (2) measuring and estimating geographical, biological and physical variables; and (3) identifying materials on the land cover and analyzing the spectral signatures acquired by satellite or airborne sensors.

Achievement of these objectives is possible because materials in a scene reflect, absorb, and emit electromagnetic radiation in a different way depending on their molecular composition and shape. Remote sensing exploits this physical fact and deals with the acquisition of information about a scene (or specific object) at a short, medium or long distance.

The signal measured at the

satellite by an imaging spectrometer is the emergent radiation from the Earth-atmosphere system in the observation direction. The radiation acquired by a (airborne or satellite) sensor is measured at different wavelengths and the resulting spectral signature (*spectrum*) is used to identify a given material.

The field of *spectroscopy* is concerned with the measurement, analysis, and interpretation of such spectra [1]. Some examples of passive sensors are infrared, charge-coupled devices, radiometers, or multi and hyper spectral sensors [2]. In active remote sensing, the energy is emitted by an antenna towards the Earth's surface and the energy scattered back to the satellite is measured [3].

The diversity of platforms and sensors implies a diversity and very articulated research area in which machine learning, signal and image processing are very active. In fact, from a machine learning