



# International Journal on Recent Researches In Science, Engineering & Technology

(Division of Civil Engineering)

A Journal Established in early 2000 as National journal and upgraded to International journal in 2013 and is in existence for the last 10 years. It is run by Retired Professors from NIT, Trichy. It is an absolutely free (No processing charges, No publishing charges etc) Journal Indexed in JIR, DIIF and SJIF.

Research Paper

Available online at: [www.jrrset.com](http://www.jrrset.com)

Chief Editor : Dr. M.Narayana Rao, Ph.D., Rtd. Professor, NIT, Trichy.

ISSN (Print) : 2347-6729

ISSN (Online) : 2348-3105

Volume 3, Issue 1,  
January 2015.

JIR IF : 2.54

DIIF IF : 1.46

SJIF IF: 1.329

---

## Skew Angle Estimation and Correction of Hand Written, Textual and Large areas of Non- Textual Document Images : A Novel Approach.

D . R . Ramesh Babu

Abstract - Skew angle estimation and correction of a document page is an important task for document analysis and optical character recognition (OCR) applications. Many approaches of skew detection can process pure textual document images successfully. But it is a challenging problem to process documents like handwritten, large areas of non-textual contents. In this direction, a novel approach for textual, large area of non-textual handwritten document skew detection is presented in this paper. Estimation of skew angle is based on finding centroid of each connected component (CC) and plotting the major axis of the ellipse of each connected component. The proposed technique was tested on variety of images including handwritten and machine printed documents. The testing results showed a successful rate more than 98% of the data set.