

# Consolidation of Indian Banks: An opportunity for Inorganic Growth

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## ABSTRACT

The composition of Indian banking is expected to go through a renovation, led by consolidation, convergence and technology. Banks in India have observed major reforms in last 18 years or so and banking sector is on a way to become global. Mergers and acquisitions (M&A) as a means for inorganic growth are increasingly being used the world over to carry out reorganization of leading business enterprises. This paper aims to elucidate the existing strengths and weaknesses of the Indian banking system and potential opportunities and threats if it undertakes consolidation by M&A as an opportunity for inorganic growth.

**Key words:** consolidation, inorganic growth, Mergers and acquisitions (M&A)

## 1. INTRODUCTION

Today, we are having a fairly well developed banking system with different classes of banks public sector banks, foreign banks, private sector banks – both old and new generation, regional rural banks and co-operative banks with the Reserve Bank of India as the fountain Head of the system. Considering the growth

prospects of India, it can easily be said that banking and financial services will be of key importance to fuel the growth in the future. The banking sector reforms undertaken in India from 1992 onwards were basically aimed at ensuring the safety and soundness of financial institutions and at the same time at making the banking system strong, efficient, functionally

# CRISPR - A Revolution in Genome Editing

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## ABSTRACT

Clustered regularly interspaced short palindromic repeats—or CRISPR raised a revolution in the genomic field. It is a new type of site specific nucleases and this technology is an important new approach for generating RNA guided nucleases such as Cas9, with customizable specificities. Genome editing mediated by the nucleases has been used to rapidly, easily and efficiently modify endogenous genes in a wide variety of biomedically important cell types and in organisms that have traditionally been challenging to manipulate genetically. The CRISPR Cas system is an acquired immune system of many bacteria and Archea which can identify the alien plasmids or phages and cut them by the cas protein. By inserting a plasmid containing Cas genes and specifically designed CRISPRs, an organism's genome can be cut at any desired locations. Gene targeting of the CRISPR/Cas system is mediated by a small RNA, which make it very easy to design and achieve multiplex genome editing.

CRISPR, a new genome editing tool, could transform the field of biology—and a recent study on genetically-engineered human embryos has converted this promise into media hype. CRISPR allows scientists to edit genomes with unprecedented precision, efficiency, and flexibility. The past few years have seen a flurry of "firsts" with CRISPR, from creating monkeys with targeted mutations to preventing HIV infection in human cells. Earlier this month, Chinese scientists announced they applied the technique to nonviable human embryos, hinting at CRISPR's potential to cure any genetic disease. It might even lead to the development of designer babies. The technology has the potential to alter not just human genome, but the entire world and all its ecosystems.

**Key words:** CRISPR/Cas, gene editing, ZFN, TALEN.

# Conventional banking to convenience banking and mass banking to class banking -A Paradigm shift in Indian Banking.

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## ABSTRACT

*During the last 41 years since 1969, tremendous changes have taken place in the banking industry. The banks have shed their traditional functions and have been innovating, improving and coming out with new types of the services to cater to the emerging needs of their customers. This article attempts to visualize the perception of banks in India in present and future taking into account the initiatives taken in Liberalisation, Privatisation and Globalisation (LPG).*

*Keywords: Liberalisation, Privatisation, Globalisation, NABARD, Green Banking*

## INTRODUCTION

Today, we are having a fairly well developed banking system with different classes of banks public sector banks, foreign banks, private sector banks – both old and new generation, regional rural banks and co-operative banks with the Reserve Bank of India as the fountain Head of the system. Across the country, the present trend in private banking has seen consumers move from traditional branch banking to more standalone tech-savvy banking. Massive branch expansion in the rural and underdeveloped areas, mobilisation of

savings and diversification of credit facilities to the either to neglected areas like small scale industrial sector, agricultural and other preferred areas like export sector etc. have resulted in the widening and deepening of the financial infrastructure and transferred the fundamental character of class banking into mass banking. There has been considerable innovation and diversification in the business of major commercial banks. Some of them have engaged in the areas of consumer credit, credit cards, merchant banking, leasing, mutual funds etc. A few banks have already set up subsidiaries

## A Study on Identifying Phished Website Using Fuzzy Data Mining Techniques

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### ABSTRACT

*Phishing refers to electronic communications that are sent with the purpose of illegally gaining access to user information. It is a new identity theft crime. The media reports stories almost on a daily basis about an organization that has customers targeted by a phishing attack. The financial organizations like bank always try to improve their security techniques in order to protect their customers. Phishes develop even more sophisticated attacking techniques. In a real time detecting and identifying any phished websites especially for e-banking, using is very complex and dynamic problem involving many factors and criteria. This paper studies Fuzzy data mining techniques used to identify phishing, the fuzzy based approach is very effective approach to identify phished website. The fuzzy logic based data mining approach provides more information for managing risks effectively by assessing and ranking website.*

**Keywords:** Phishing, data mining, e-banking, fuzzy security techniques

# A Technical Review on Tsunami Warning System

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## ABSTRACT

*Tsunamis consist of a series of very huge waves generated by any rapid large scale disturbance of the sea. It is generated because of sea floor displacements due to sea earthquakes. Tsunami can cause great destruction and loss of lives within minutes on shores and near the source also some tsunamis can cause destruction within hours across an entire ocean basin. The Indian Ocean is likely to be affected by tsunamis generated mainly by earthquakes from the two potential source regions, the Andaman-Nicobar-Sumatra Island Arc and the Makran Subduction Zone. A warning center has been established at INCOIS with all the necessary computational and communication infrastructure that enables reception of real time data from the network of national and international seismic stations, tide gauges and bottom pressure recorders (BPRs). That includes three technologies for detecting tsunami as well as warning: seismometers, coastal tidal gauges, and Dart buoys. This paper revives the functionality and literature of Tsunami Warning System.*

**Keywords:** Tsunami, Warning System, sea, Ocean, earthquakes Hazards seismometers, coastal tidal gauges, and Dart buoys.

## A Review on Rain Technology

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### ABSTRACT

RAIN is a group of nodes or clusters which are designed using specific topology with multiple interference and redundant storage. It also provide distributed data storage and protection tonetworkArchitecture. RAIN is dedicated design to improve the shortcomings of non-redundant network-attached storage systems. The concept of RAIN is derived from redundant array of independent disks (RAID), it is approximately similar to the system implemented at the disk level. Redundant array of independent nodes may also called redundant array, it is inexpensive (nodes). The main aim of RAIN technology is to address the fault management, communication as well as storage in a disturbed environment and capable of supplying the solution by decreasing the number of nodes. It provide correction or replacement facility if a node failed permanently or temporarily. It has an open architecture for storing and makes the hardware very efficient manner. The focus of this paper is describing the overview, functionalities, architecture as well as various applications.

**Keywords:** RAIN, Technology, nodes, Management Software, Cluster, network, topology, storage, memory.

### INTRODUCTION

RAIN architecture developed by combing research program of California Institute of Technology, NASA's Jet Propulsion Laboratory and Defense Advanced Research Projects Agency. The name of the technology is derived

from its original research project, i.e., RAIN, which stands for Reliable Array of Independent Nodes. Directed by Caltech professor ShukiBruck, the RAIN research team in 1998 formed a company called Rainfinity. The RAIN technology increases fault tolerance in a cluster

# Comparative analysis on various image edge detection algorithms

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## ABSTRACT

*In this modern information technology era image and image mining have some relevant role to play. In most image application uses image processing algorithms, so edge and edge identification has a curtail role. The techniques like content based image processing the edge detection have a relevant role. Edge is the basic noticeable quality of an image. Edge detection has critical role in computer vision and image analysis. It is one of the crucial parts in image processing. Edge detection refers to the process of identifying and locating sharp discontinuities in an image. Edge detectors form a collection of very important local image processing method to locate sharp changes in the intensity function. Edge detection is an important technique in many image processing applications such as object recognition, motion analysis, pattern recognition, medical image processing. Various edge detection algorithms are Roberts, Sobel, Prewitt, LOG and Canny. This paper manly studies various edge detection algorithms and evaluates the performance based on various key facts.*

**Keywords:** Image Processing, Edge Detection, Detection Algorithms, Object Recognition

## INTRODUCTION

Edge detection is a basic tool used in image processing, for feature detection and extraction, which aim to identify points in a image where brightness of digital image changes sharply and

find discontinuities. The purpose of image edge detection is significantly reducing the amount of data in an image data and preserves the structural properties for image processing. Edge detection is difficult to apply in noisy images.

## How do plants defend themselves from their natural enemies? An overview.

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### ABSTRACT

Evolution has bestowed plants with a wide range of sophisticated defense mechanisms to counter attacks by pathogens and parasites of various scales, ranging from microscopic viruses to animal predators. Both mechanical and chemical defenses are involved which allow the plant to survive in the same environment as its potential attackers. The initial response to pathogen invasion occur rapidly when specific gene products in plants as well as in microbes interact to cause cell death in the process known as hypersensitive response (HR), that restricts further invasion by the pathogen. Other than HR, the sophisticated and comprehensive defense mechanisms evolved in plants include de novo synthesis of pathogenesis-related proteins (PRs). 17 different families of PR proteins have been described till date. Systemic acquired resistance (SAR), usually follows a HR, is a heightened state of resistance in distal unaffected parts of the plant. SAR is characterized by expression of PR genes and induction of the phenyl propanoid pathway which results in extensive reprogramming of primary to secondary pathways. The plant-pathogen interaction is demonstrated by the 'zig-zag' model involving PAMP (pathogen associated molecular pattern) in pathogens and PRR (pattern recognition receptors) in plants. The initial but rather weak plant response is generated in the form of PAMP triggered immunity (PTI). Countermeasure molecules (Effectors) are produced in the pathogen that further results in much more effective response, the effector triggered immunity (ETI). Defense responses are regulated by signal transduction networks that are well interconnected with plant hormones that include salicylic acid, jasmonic acid and ethylene.

**Keywords:** plant defense, plant-pathogen interaction, PR gene, insect herbivory



# A Survey on Multimodal Human-Computer Interaction

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## ABSTRACT

The paper surveys the major aspect of human-computer interaction by exemplifying both from the user and computer perspective. The technic described mainly exploits non-verbal scenario involving body language, gestures, facial expression, eye gaze and emotions. The objective of Multimodal Human-Computer Interaction (MMHCI) system is to avoid increasing error and error resolution. Different research shows the improvements and significant role of MMHCI in computer vision, psychology, artificial intelligence etc. As a result of the interactive nature of MMHCI, it provides an interactive system in varying range of areas like psychology and cognitive science, graphic design, sociology, computer science and engineering etc., also MMCHI has vital role in improving the video indexing technique in ambient spaces. It helps in reducing the problems posed by current interfaces in the mobile/wearable. Robotics is yet another thriving application of MMHCI system. It provides the free choice of modalities resulting in naturalness of communication and it provides accuracy in communication. The main advantage of MMHCI from other forms of interactive networks is that it provides a useful platform for disabled users by using various types of sensors. This paper gives a close review on user and task modeling and extents how MMHCI has been used, multimodal fusion, highlighting the major challenges faced by this system and emerging applications in the field of Multimodal Human Computer Interaction research.

**Keywords:** Human-computer interaction, Artificial Intelligence, modalities

# A Review on Hand-written Malayalam Character Recognition Using OCR

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## ABSTRACT

OCR is used for high-powered computing which allows the development of more powerful character recognition software that can read printed as well as handwritten characters. As the language world, the dominance of English in information processing is a fait accompli. Researchers are trying to break this language supremacy by equipping local language computing. Reading printed or written document is very easy for human. OCR aims at gaining similar capabilities for machine. This paper discusses how the OCR system is functioning for handwritten Malayalam characters. Indian scripts are rich in patterns while the combinations of such patterns makes the problem even more complex and these complex patterns are exploited to arrive at the solution. This review is intended only to recognize handwritten Malayalam characters. It will not attempt to recognize characters from manuscript or non-standard sources like palm leaf, and stylized writing. The input to the system would be the scanned image of text and output is machine editable file. Initially image is pre-processed to remove noise and skew. Lines, words and characters are segmented from the processed document image then extracts features to accomplish the recognition tasks.

**Keywords;** OCR, Malayalam, Image, segmentation, skew, local language computing, Indian scripts, manuscripts

# A review on Sixth Sense Technology Based on Hand Gestures

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## ABSTRACT

Sixth Sense Technology uses gestural interface device that builds up the physical world around us with the digital information and enables the users use natural hand gestures to connect such information. It is a pendant like device that consist two main components; a data projector and a camera. The device works on the principles of gestural recognition and image processing. The name Sixth Sense was given to this technology because of light wearable device and the digital information could act in addition to the five traditional sensoryorgans such as eyes, skin, nose, ears and tongue. It can project information on any surface like wall, table or any other object and uses hand/arm movements to help us interact with the projected information/system. The device brings us closer to reality and assists us in making right decisions by analyzing hand gestures then provide the relevant information.

**Keywords:** Gesturerecognition, Image processing, Digital world, Sixth sense, Sensor, hand movements, arm.

## Introduction

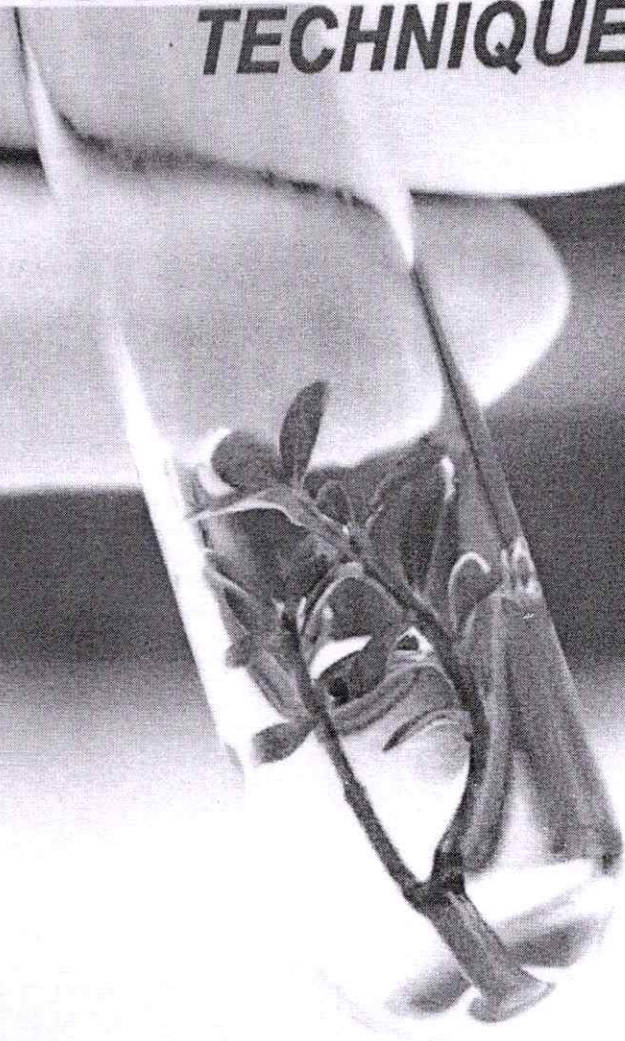
Sixth sense technology is gesture-based wearable computer, which bridges between real world and digital world, it enables user to use natural hand gestures to connect. With this Technology, people can used to carry small size

pocket devices instead of using large devices, these types of devices connect frequently to the digital world without any direct link extra digital devices like personal Computer Laptop to make an interactions with the physical world. The sixth sense technology

LABORATORY MANUAL IN

# Plant

## TISSUE CULTURE TECHNIQUES



**BIJU DHARMAPALAN**  
**ARUN K DAS**

# LABORATORY MANUAL IN PLANT TISSUE CULTURE TECHNIQUES

Biju Dharmapalan • Arun K Das

## About the Book

The **Laboratory Manual In Plant Tissue Culture Techniques** discusses basic techniques used in plant biotechnology laboratory. The book is divided into two parts. In the first part the theoretical aspects of various techniques have been explained and in the second part common experiments that are carried out in plant tissue culture lab is explained. The manual will be useful for B.Sc. and M.Sc. students



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