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INDIAN RESEARCH JOURNAL ON ADVANCED TECHNOLOGIES

*The main topic includes but not limited to:*

**Smart Computing & Information Processing**

* Signal and Speech Processing
* Image Processing and Pattern Recognition
* WSN
* Artificial Intelligence and machine learning
* Data mining and warehousing
* Data Analytics
* Deep learning
* Bioinformatics
* High Performance computing
* Advanced Computer networking
* Cloud Computing
* IoT
* Parallel Computing on GPU
* Human Computer Interactions
* Recent Trends in Microelectronics and VLSI Design

**Process & Device Technologies**

* Low-power design
* Nanometer-scale integrated circuits
* Application specific ICs (ASICs)
* FPGAs

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* Nanotechnology
* Nano electronics and Quantum Computing

**Challenges of Industry and their Solutions, Communications**

* Advanced Manufacturing Technologies
* Artificial Intelligence
* Autonomous Robots
* Augmented Reality
* Big Data Analytics and Business Intelligence
* Cyber Physical Systems (CPS)
* Digital Clone or Simulation
* Industrial Internet of Things (IIoT)
* Manufacturing IOT
* Plant Cyber security
* Smart Solutions – Wearable Sensors and Smart Glasses
* System Integration
* Small Batch Manufacturing
* Visual Analytics
* Virtual Reality
* 3D Printing

**Internet of Things (IoT)**

* IoT & IoE & Edge Computing
* Distributed Mobile Applications Utilizing IoT
* Security, Privacy and Trust in IoT & IoE
* Standards for IoT Applications
* Ubiquitous Computing
* Blockchain-enabled IoT Device and Data Security and Privacy
* Application of WSN in IoT
* Cloud Resources Utilization in IoT
* Wireless Access Technologies for IoT
* Mobile Applications and Services for IoT
* Machine/ Deep Learning with IoT & IoE
* Smart Sensors and Internet of Things for Smart City
* Logic, Functional programming and Microcontrollers for IoT
* Sensor Networks, Actuators for Internet of Things
* Data Visualization using IoT
* IoT Application and Communication Protocol
* Big Data Analytics for Social Networking using IoT
* IoT Applications for Smart Cities
* Emulation and Simulation Methodologies for IoT
* IoT Applied for Digital Contents

**Microwaves and Photonics**

* Microwave filter
* Microstrip antenna
* Microwave Link design
* Microwave oscillator
* Frequency selective surface
* Microwave Antenna
* Microwave Photonics
* Radio over fiber
* Optical communication
* Optical oscillator
* Optical Link design
* Optical phase lock loop
* Optical devices

**Computation Intelligence and Analytics**

* Soft Computing
* Advance Ubiquitous Computing
* Parallel Computing
* Distributed Computing
* Machine Learning
* Information Retrieval
* Expert Systems
* Data Mining
* Text Mining
* Data Warehousing
* Predictive Analysis
* Data Management
* Big Data Analytics
* Big Data Security

**Energy Harvesting and Wireless Power Transmission**

* Energy harvesting and transfer for wireless sensor networks
* Economics of energy harvesting communications
* Waveform optimization for wireless power transfer
* RF Energy Harvesting
* Wireless Power Transmission
* Microstrip Antenna design and application
* Wearable Textile Antenna
* Luminescence
* Rectenna

**Advance Concept of Networking and Database**

* Computer Network
* Mobile Adhoc Network
* Image Security
* Application Artificial Intelligence and machine learning in the Field of Network and Database
* Data Analytic
* High performance computing
* Pattern Recognition

**Machine Learning (ML) and Knowledge Mining (KM)**

* Regression and prediction
* Problem solving and planning
* Clustering
* Classification
* Neural information processing
* Vision and speech perception
* Heterogeneous and streaming data
* Natural language processing
* Probabilistic Models and Methods
* Reasoning and inference
* Marketing and social sciences
* Data mining
* Knowledge Discovery
* Web mining
* Information retrieval
* Design and diagnosis
* Game playing
* Streaming data
* Music Modelling and Analysis
* Robotics and control
* Multi-agent systems
* Bioinformatics
* Social sciences
* Industrial, financial and scientific applications of all kind

**Advanced Computer networking Computational Intelligence**

* Data Management, Exploration, and Mining
* Robotics
* Artificial Intelligence and Machine Learning
* Computer Architecture and VLSI
* Computer Graphics, Simulation, and Modelling
* Digital System and Logic Design
* Natural Language Processing and Machine Translation
* Parallel and Distributed Algorithms
* Pattern Recognition and Analysis
* Systems and Software Engineering
* Nature Inspired Computing
* Signal and Image Processing
* Reconfigurable Computing
* Cloud, Cluster, Grid and P2P Computing
* Biomedical Computing
* Advanced Bioinformatics
* Green Computing
* Mobile Computing
* Nano Ubiquitous Computing
* Context Awareness and Personalization, Autonomic and Trusted Computing
* Cryptography and Applied Mathematics
* Security, Trust and Privacy
* Digital Rights Management
* Networked-Driven Multicourse Chips
* Internet Computing
* Agricultural Informatics and

Communication

* Community Information Systems
* Computational Economics, Digital Photogrammetric
* Remote Sensing, GIS and GPS
* Disaster Management
* e-governance, e-Commerce, e-business, e-Learning
* Forest Genomics and Informatics
* Healthcare Informatics
* Information Ecology and Knowledge Management
* Irrigation Informatics
* Neuro-Informatics
* Open Source: Challenges and opportunities
* Web-Based Learning: Innovation and Challenges
* Soft computing Signal and Speech Processing
* Natural Language Processing

**Communications**

* Microstrip Antenna
* Microwave
* Radar and Satellite
* Smart Antenna
* MIMO Antenna
* Wireless Communication
* RFID Network and Applications
* 5G Communication
* 6G Communication

**Algorithms and Complexity**

* Sequential, Parallel And Distributed Algorithms And Data Structures
* Approximation And Randomized Algorithms
* Graph Algorithms And Graph Drawing
* On-Line And Streaming Algorithms
* Analysis Of Algorithms And Computational Complexity
* Algorithm Engineering
* Web Algorithms
* Exact And Parameterized Computation
* Algorithmic Game Theory
* Computational Biology
* Foundations Of Communication Networks
* Computational Geometry
* Discrete Optimization

**Software Engineering and Knowledge Engineering**

* Software Engineering Methodologies
* Agent-based software engineering
* Artificial intelligence approaches to software engineering
* Component-based software engineering
* Embedded and ubiquitous software engineering
* Aspect-based software engineering
* Empirical software engineering
* Search-Based Software engineering
* Automated software design and synthesis
* Computer-supported cooperative work
* Automated software specification
* Reverse engineering
* Software Engineering Techniques and Production Perspectives
* Requirements engineering
* Software analysis, design and modelling
* Software maintenance and evolution
* Software engineering tools and environments
* Software engineering decision support
* Software design patterns
* Software product lines
* Process and workflow management
* Reflection and metadata approaches
* Program understanding and system maintenance
* Software domain modelling and analysis
* Software economics
* Multimedia and hypermedia software engineering
* Software engineering case study and experience reports
* Enterprise software, middleware, and tools
* Artificial intelligent methods, models, techniques
* Artificial life and societies
* Swarm intelligence
* Smart Spaces
* Autonomic computing and agent-based systems
* Autonomic computing
* Adaptive Systems
* Agent architectures, ontologies, languages and protocols
* Multi-agent systems
* Agent-based learning and knowledge discovery
* Interface agents
* Agent-based auctions and marketplaces
* Secure mobile and multi-agent systems
* Mobile agents
* SOA and Service-Oriented Systems
* Service-centric software engineering
* Service oriented requirements engineering
* Service oriented architectures
* Middleware for service based systems
* Service discovery and composition
* Service level agreements (drafting, negotiation, monitoring and management)
* Runtime service management
* Semantic web
* Data modelling, mining and data analytics
* Aggregation, integration, and transformation
* Web and text mining
* Data mining methods, techniques, and tools
* Data analytics modelling and algorithms
* Patterns and frameworks
* Data visualization
* Knowledge systems and engineering
* Knowledge acquisition
* Knowledge-based and expert systems
* Knowledge representation and retrievals
* Knowledge engineering tools and techniques
* Time and knowledge management tools
* Knowledge modelling, integration, transformation, and management,
* Uncertainty knowledge management
* Knowledge visualization
* Mobile computing and mobile system engineering
* Mobile App design and development
* Innovative mobile applications
* Pervasive computing
* Mobile system validation and test automation
* Software & System Quality of Service
* Soft computing
* Software and system testing methods
* Quality assurance process, standards, and systems
* Software safety systems
* Software test automation and tools
* Software dependability, reliability, scalability
* Software & System Security
* Software and system security and privacy
* Mobile app security and privacy
* Encryption methods and tools
* Security service systems
* Cloud, sensor cloud and mobile cloud security
* Mobile system integrity, security, and fault tolerance
* Emergent Topics
* Cloud computing and Innovative cloud-based application systems
* Mobile cloud computing and application services
* Big data analytics application systems
* Innovative sensing cloud and systems
* Large-scale cyber systems
* IOT and smart city application systems
* Big data quality validation
* Big data application quality services
* Smart learning and innovative education systems
* Learning software design engineering
* Smart learning methods and environments
* Online learning systems
* Mobile enabled learning systems and tools

**Computer Networks and Inventive Communication Technologies**

* Addressing & Location Management
* Broadband Access Technologies
* Adhoc and Sensor Networks
* Cross Layer Design and Optimization
* Heterogeneous Wireless Networks
* High Speed Networks
* Internet and Web Applications
* Measurement & Performance Analysis
* Mobile & Broadband Wireless Internet
* Mobile Networks & Wireless LAN
* Network Architectures
* Network Based Applications
* Network Protocols & Wireless Networks
* Network Operations & Management
* Network Security Trust, & Privacy
* Next Generation Internet & Web Architectures
* Peer to Peer and Overlay Networks
* QOS And Resource Management
* Recent Trends & Developments in Computer Networks
* Routing, Switching and Addressing Techniques
* Self-Organizing Networks and Networked Systems
* Ubiquitous Networks
* Virtual & Overlay Networks
* Wireless Communications
* Wireless Mesh Networks and Protocols
* Wireless Multimedia Systems
* Personal and wearable networks
* Wireless ad hoc & sensor networks
* Information-centric networking
* Embedded networks
* Opportunistic networking
* Delay-tolerant networks
* Cognitive radio networks
* Vehicular networks
* Smart Grid communications
* Underwater sensor networks
* Cyber-physical systems
* Social networks
* Mobile and ubiquitous networking
* Green networking
* Overlay and peer-to-peer networks
* Local-area and metropolitan-area networks
* Storage-area networks
* Routing and transport protocols
* Big Data Networking
* Cloud computing and networking
* Software Defined Networking and Network Function Virtualization
* Internet of Things
* Link technologies
* Adaptive networking applications
* Authentication, authorization, accounting
* Security and privacy
* Cross-layer optimization
* Mobility and Location-dependent services
* Multimedia and real-time communication
* Machine-to-machine communications for smart environments
* Smart Cities
* Network traffic characterization and measurements
* Network management, reliability and QoS
* Performance evaluation of networks
* Testbeds for network experiments
* Network coding
* Optical and high-speed access networks

**Resent Engineering and Nano Technology**

* Advanced Computing Architectures and New Programming Models
* Bio-science and Bio-technology
* Collaborative applications
* Communication architectures for pervasive computing
* Computer Vision
* Computer Science and Its applications
* Computational Techniques in Civil Engineering
* Control and Automation
* Concrete Engineering
* CAD/CAM/CIM
* CAE
* Database Theory and Application
* Data Base Management System
* Data Mining
* Decision making
* Digital signal processing theory
* Distributed Sensor Networks
* Distributed Computing
* Mechanical Design
* Evolutionary computing and intelligent systems
* Expert approaches
* Environmental Engineering
* Fuzzy logics
* Foundation Engineering
* FEA
* GPS and location-based applications
* Grid Networking/ Computing
* GEOTECH Engineering
* Highways
* Human Computer Interaction (HCI)
* Image analysis and processing
* Information and data security
* Internet Technologies, Infrastructure, Services & Applications
* Nano Technology
* Mobile Computing and Applications
* Multimedia Communications
* Network Modelling and Simulation
* Network Performance; Protocols; Sensors
* Networking theory and technologies
* Open Models and Architectures
* Pattern Recognition
* Perception and semantic interpretation
* Production
* Real-time information systems
* Remote Sensing
* Security Technology and Information Assurance
* Soft Computing
* Software Engineering & Its Applications
* Signal Control System & Processing
* Speech interface; Speech processing
* Structural Engineering
* Thermal Engineering
* Ubiquitous Multimedia Computing
* Vision-based applications
* VLSI Algorithms
* Web Technologies
* Textile Engineering

**Recent on Mechanical Engineering and Technology**

* Fluid Mechanics
* Applied Mathematics and Mechanics
* Biomechanics
* Heat Transfer
* Solid Mechanics
* Refrigeration and Air Conditioning
* Renewable Energy Technology
* Materials Engineering
* Composite Materials
* Marine Engineering
* Petroleum and Mineral Resources Engineering
* Textile Engineering
* Industrial Engineering
* Operational Research
* Manufacturing Processes
* Machine Design
* Quality Control
* Mechanical Maintenance
* Tribology
* CAD/CAM
* Aeronautical Engineering
* Production Engineering
* Welding Technology
* Robotics Engineering
* Aerospace Engineering
* Metallurgy
* Rock Mechanics and Mining Sciences
* Solid and Structural Mechanics
* Theoretical and Applied Fracture Mechanics

**Advance Civil Engineering and Technology**

* Assemblage and System
* Behaviour of Structures
* Behaviour of Structures under Seismic Loads
* Building and Environmental Acoustics
* Building Climate Systems
* Building Energy
* Civil and Environmental Engineering
* Coastal Engineering
* Composite Materials
* Concrete Structures
* Construction Economics
* Construction Engineering
* Design and Performance of Green Building
* Design Optimization of Structures
* Earthquake Engineering
* Energy Efficient Building Technology
* Energy Saving Building Materials
* Evaluation of Building Envelope Systems under Structural and Environmental Loads
* Evaluation of Glazing Systems for Energy Performance
* Fire Engineering
* Foundations Dynamics
* Geotechnical Engineering
* Health Monitoring and Life Prediction of Structures
* High Performance Concrete
* Hydraulic Engineering
* Life Cycle Engineering
* Materials and Durability
* Materials Engineering
* Mechanics and Materials Aspects of Advanced Construction Materials
* Municipal or Urban Engineering
* Nondestructive Testing and Evaluation
* Numerical Modelling of Structures
* Optimal Design of Structures
* Properties and Mechanics of Concrete
* Residential, Commercial, Industrial and Public Works
* Seismic Evaluation of Building Nonstructural Components
* Simulation Optimization and Risk Management
* Soil-Structure Interaction
* Structural Engineering
* Structural Evaluation of Panelized and Masonry Wall Systems
* Structural Reliability Analysis
* Surveying
* Sustainable Structures
* Transportation Engineering
* Ventilation and Indoor Air Quality
* Water Supply and Drainage