CHANDIGARH GROUP OF COLLEGES

Building Careers. Transforming Lives.

INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTING

December 14-15, 2017

Editor:
Dr. Manish Mahajan
Dr. Anuj Kumar Gupta

Associate Editors:
Mr. Sunil Chawla
Ms. Vandana Mohindru

Department of Computer Science & Engineering
CGC College of Engineering
Mohali-140307, Punjab, INDIA

Abstract Book

International Conference on Innovations in Computing

December 14-15, 2017

Department of Computer Science & Engineering
CGC College of Engineering
Mohali-140307, Punjab, INDIA

Editors: Dr. Manish Mahajan, Dr. Anuj Kumar Gupta

Associate Editors: Mr. Sunil Chawla, Ms. Vandana Mohindru

Publication Partners

Technology Partners

CONTENTS

WELCOME TO ICIC 2017

Although many of you are familiar with ICIC, it is probably good to say a few words about it. This conference is based on the idea to bring together researchers, practitioners teachers, students, IT people and all interested in the topic are invited to share their results, experiences or products. The event aims to support the IT movement in order to improve tomorrow's education and research. We firmly believe that an interdisciplinary exchange of ideas and research in the field of IT and lifelong learning is of crucial importance to help solving contemporary societal problems. Furthermore, we should also not forget that we need an innovative educational and training infrastructure that is able to provide first class learning experiences to learners. In our opinion, new technology, new pedagogy and new role models in teaching and research are extremely important.

After passing through a careful round of reviews with the Program Committee, a total of 49 submissions were finally accepted from 119 submissions. Out of these, 6 were submitted and published in Scopus indexed journal and 43 in UGC approved journal. In addition, two workshops were approved and several posters will be presented in a specific session. Reviewers from around the world were involved in the review process and we would like to thank them for their valuable work.

CREDITS AND ACKNOWLEDGEMENTS

Finally, the Conference Chairs would like to express their gratitude towards a considerable number of volunteers and helpers who have devoted their time and endless patience to the organization of this conference. CGC is a powerful and ever growing learning association of many enthusiastic people who have organized this conference for the first time and we are very grateful to be a small part of it. In particular, we have to thank the chairs, who were working on a voluntary basis for a whole year to make this conference a success.

We would also like to thank the 50+ members of the International Program Committee, who provided timely and insightful reviews without complaint and little credit. Finally, we would like to thank the Advisory Board Members and Organizing Committee Members for their support in this amazing endeavor. These folks have worked incredibly hard behind the scenes to guide all the aspects of the conference. Special thanks go to S. Satnam Singh Sandhu (Chairman CGC), S. Rashpal Singh Dhaliwal (President, CGC) for giving nod to organize such an event. Also we would like to thank all those who actively took on the part of the local organizers. Last but not least we would like to thank the management of CGC and our sponsors for their very important financial support. We especially welcome conference delegates who are attending ICIC and hope you will enjoy it. We kindly ask all our ICIC "regulars" to extend a warm welcome to newcomers and students, who are now becoming a valuable part of the constantly expanding CGC community.

Warm greetings and welcome to ICIC,

Dr. Manish Mahajan
Dr. Anuj Kumar Gupta
Conference Conveners

MESSAGE

S. Satnam Singh Sandhu
Chairman, Chandigarh Group of Colleges

It's a moment of immense honour to announce that CGC College of Engineering is organizing an **International Conference on Innovations in Computing (ICIC-2017)** and going to release the proceeding during this occasion.

This International Conference is a giant forum of intellectuals which aims at bringing the best of professionals, researchers, visionaries, scholars and technologists to a common stage to discuss the latest emerging technologies.

I, in person, stand firmly by the power of computing as today's era is witnessing the advancements in each and every field vis-à-vis daily life owing to the rapid developments occurring through the perpetual use of computers.

Our prime objective is to meet expectations of the invited delegates and create networking opportunities through quality discussions and deliberations. Carrying an endeavour to achieve excellence in this one of a kind conference, this year too our efforts have gone into making this conference an enriching experience for you by making it a perfect knowledge sharing platform.

With warm courtesy, I'd like to welcome the delegates and express my whole-hearted congratulations to all the staff & students of CGC COE who have worked tirelessly to plan and execute each and every event. I wish this conference to turn out to be a grand success, inspiring sequels of the same event in the times to come.

MESSAGE

S. Rashpal Singh Dhaliwal
President, Chandigarh Group of Colleges

With a pledge to achieve a significant position in the highly competitive world of Engineering and Technology, CGC College of Engineering is organizing an International Conference on Innovations in Computing.

In order to face various emerging challenges across different fronts of Engineering and Technology, it has become indispensable to explore multifarious integrated and interdisciplinary engineering approaches. This conference focuses primarily on encouraging novel ideas and emerging technologies of the computing field and as to how this shared knowledge can be leveraged to its maximum potential.

I positively anticipate that this conference would serve as a significant platform to connect various academicians, researchers and scholars through a common motive to go beyond the borders in search of new frontiers in the field of research and development.

I wish may our efforts to promote new ideas in computing realm by facilitating intellectuals to showcase their innovations and findings end up in a highly productive outcome.

MESSAGE

Dr. P. N. Hrisheekesha
Campus Director, Chandigarh Group of Colleges

"By 2029, computers will have emotional intelligence and be convincing as people."
Ray Kurzweil

I am pleased to know about the first giant step taken by CGC College of Engineering in the form of International Conference on Innovations in Computing.

I am sure that the learning from this conference coupled with the fresh ideas, enthusiasm and vision of the hosts, will definitely make this conference a wonderful experience for all the attendees.

Computing has reduced the gap between man and machine and it is going to continue to reduce this in future too. We have to control the intervention of machines in human activities so as to avoid the possible danger to humanity. With this perspective to discuss the powers of computing and the way to control the same, we have to sit on December 14-15, 2017 at CGC-College of Engineering. I hope the talks will be fruitful and researchers and delegates attending the conference will present the useful results.

I appreciate the efforts of young staff being involved in organizing the conference and wish them all the best for successful completion of the event.

MESSAGE

Dr. Jagtar Singh Khatra
Director Academics, Chandigarh Group of Colleges

"We're entering a new world in which data may be more important than software."
Tim O'Reilly

With a significant rise CGC College of Engineering has taken a constructive step by organizing an **International Conference**.

The theme of the Conference indeed attains importance in the millennium as it will help academicians, researchers and scholars to demonstrate the key issues prevalent in technological advancements happening worldwide in industrial and manufacturing sector.

The International Conference was inspired by the need for a platform to address various emerging issues in engineering. I believe this Conference is essential to all researchers who will get real opportunities to showcase their research.

I encourage you to make this significant event part of your professional development and look forward to welcome you to the International Conference in the campus.

MESSAGE

Dr. Vikas Dhawan
Director Principal, CGC College of Engineering

"The digital revolution is far more significant than the invention of writing or even of printing."
Douglas Engelbart

It is a matter of great pleasure to see the Institute organizing its 1st International Conference in the form of ***International Conference on Innovations in Computing (ICIC-2017)*** during 14-15 December, 2017. As an academician, I have discovered that, issues and insights, held at common place amongst the scholars, like in such conferences, pave a way of evolving the talents.

I congratulate the Department of Computer Science and Engineering for organizing this conference. I could see the amount of efforts put in by the young faculty in organizing this conference. It is very much heartening to see the immense response received by the conference from the research community for its very first edition. A good number of distinguished professors and researchers have also agreed to deliver the keynote address in the conference. I am sure that young researchers participating in the conference will be immensely benefitted from this conference.

Of course, it goes without saying that understanding computing is the need of the hour as all the latest technological innovations and revolutionary stuff requires the knowledge and understanding of computing and International Conference on Innovations in Computing is going to provide a fine platform to all the participating professionals, researchers and scholars.

I welcome the delegates from various National and International Institutes and Universities to the conference. My best wishes to the organizing team.

MESSAGE

Dr. Manish Mahajan
Head, CSE, CGC College of Engineering

"There is no reason that a human mind can keep up with an artificial intelligence machine by 2035. "
Gray Scott

It is my privilege and honor to welcome to the **International Conference on Innovations in Computing** which will be held on 14-15 December 2017.

This conference provides researchers an excellent opportunity to publicize their work and share their expertise, innovations and findings so that, we, as an international community can advance towards developments and advancements through engineering & technology.

This conference will bring together academicians, researchers, administrators, industry representatives and students from key government and non-government organizations from all over the globe to share and enhance knowledge on latest advancements.

Welcome to the world of Innovations in Computing through ICIC-2017.

Dr. Manish Mahajan
Convener ICIC

MESSAGE

Dr. Anuj Kumar Gupta
Professor, CSE, CGC College of Engineering

"Ultimately, it's not going to be about man versus machine. It is going to be about man with machines."
Satya Nadella

I am glad to welcome you to the **International Conference on Innovations in Computing (ICIC-2017)** which takes place in **CGC College of Engineering, Mohali** on December 14-15, 2017. It has been a real honor and privilege to serve as the Convener of the conference.

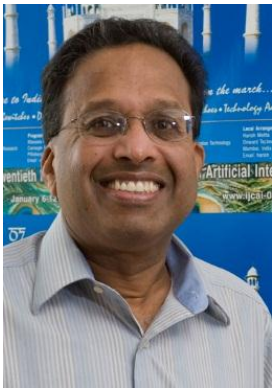
The conference would not have been possible without the enthusiastic and untiring efforts of a number of colleagues. A conference of this size relies on the contributions of many volunteers, and I would like to acknowledge the efforts of organizing committee members, technical program committee, review panel and referees for their invaluable help in successfully completion of the conference. I am also grateful to all the authors who trusted the conference as a platform to publish their work.

I look forward to the exciting couple of days of insightful presentations, discussions, and sharing of technical ideas with researchers from all around the world. I thank you for attending the conference and hope that you enjoy your visit.

I wish the conference a resounding success.

Dr. Anuj Kumar Gupta
Convener ICIC

MESSAGE



Dr. Bharat Bhargava
Professor of CS at Purdue University
Indiana, USA

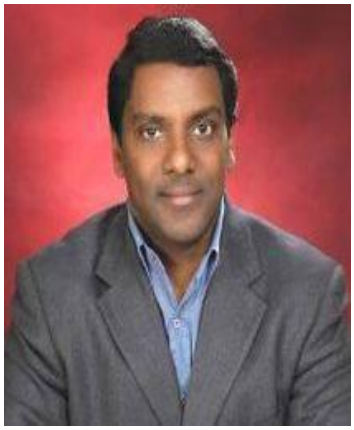
"Computing is not about computers any more. It is about living."

Nicholas Negroponte

I am delighted to learn about International Conference on Innovations in Computing (ICIC-2017) and its scope. It is of great interest to research community involved in the area of computing. Your efforts will help many research scholars in learning latest advancements in the area of computing. I hope to join you and I wish you a successful conference.

Happy Computing!

MESSAGE



Dr. Sri Parameswaran
Professor and Program Director,
Computer Engineering
University of New South Wales, Australia

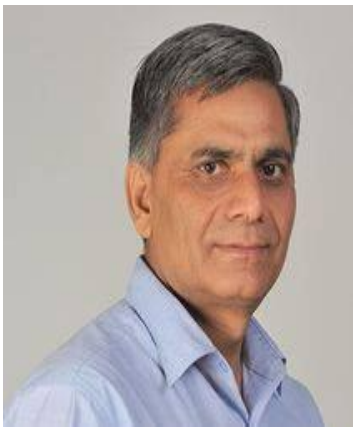
"Artificial Intelligence is about replacing human decision making with more sophisticated technologies"
Falguni Desai

It gives me immense pleasure in writing for the proceedings of the International Conference on Innovations in Computing (ICIC-2017), being organized by the Department of Computer Science & Engineering, CGC – College of Engineering, Mohali during December 14-15, 2017. This event is targeted towards researchers, professionals, educators and students to share innovative ideas, challenges, recent trends and future directions in the field of computing.

I am pleased to note that researchers from various Institutes/ Universities and Industries from different parts of the country and abroad are presenting their research papers on current innovations in the fields of Databases, Soft Computing, Machine Vision, Artificial Intelligence, Image Processing, Cloud Computing and Networks.

I am sure that this conference would greatly benefit researchers, students and faculty. Young scientists and researchers will find the contents of the proceedings helpful to set roadmaps for their future endeavors. I take this opportunity to wish you all a great success of the conference.

MESSAGE



Dr. Dharam Singh Jat
Professor, CSE,
Namibia University of Science & Technology, Namibia

"Intelligence is the ability to adapt a change"
Stephen Hawking

I am elated to know about International Conference on Innovations in Computing (ICIC-2017) and its scope. The conference provides a platform for those who wish to express their latest research results, innovative ideas, and experiences in the fields of Computing especially. The conference provides an excellent opportunity to meet experts, exchange information, and strengthen the collaboration among researchers, engineers, and scholars from both academia and industry.

I hope to join you during the conference and wish you a great success.

ORGANIZING COMMITTEE

Chief Patrons

S. Satnam Singh Sandhu, Chairman, CGC
S. Rashpal Singh Dhaliwal, President, CGC

Patron

Dr. P N Hrisheekesha, Campus Director, CGC

Honorary General Chair

Dr. Jagtar Singh Khatra, Director Academics, CGC

Program Chair

Dr. Vikas Dhawan, Director-Principal, CGC College of Engineering

Conveners

Dr. Manish Mahajan, Professor & Head, CSED, CGC College of Engineering

Dr. Anuj Kumar Gupta, Professor, CSED, CGC College of Engineering

Co-Convener

Sunil Chawla, Assistant Professor, CSED, CGC College of Engineering

Committee Members

Deepika Sood
Arwinder Kaur
Dapinder Kaur
Dishant Khosla
Gagan Singla
Gaurav Goel
Gurpreet Singh
Harneet Kaur
Jagbir Singh Gill
Jagjit Kaur
Lata Dubey
Mandeep Kaur
Manpreet Singh
Neha Sikka
Pankaj Palta
Ranjeet Singh
Reecha Sood
Seema
Shelly Garg
Simarjot Kaur
Sukhjinder Kaur
Sumit Kumar
Tanvi
Tejpal Sharma
Upinderpal Singh
Vandana Mohindru
Varinderjit Kaur
Vikas Sharma

ADVISORY COMMITTEE

International

Prof. Nik Bessis, Edge Hill University, Lancashire, UK
Prof. Worsak Kanok-Nukulchai, AIT, Thailand
Prof. M. Affam Badar, Indiana State University, USA
Prof. Valentina Emila Balas, Professor, Aurel Vlaicu University, Romania
Prof. Christos Christodoulou, University of New Mexico, Albuquerque
Dr. Rajkumar Buyya, University of Melbourne, Australia
Dr. Bharat K Bhargava**,** Purdue University, Indiana
Dr. Sanjiv K. Bhatia**,** University of Missouri, US
Dr. Ashish Seth**,** INHA University in Tashkent, Uzbekistan
Dr. Arun Kumar Singh**,** Saudi Electronic University, KSA
Dr. Azath Mubarakali**,** King Khalid University, KSA.
Dr. Dinesh Mavaluru**,** Saudi Electronic University, KSA

National

Dr. Amalendu Patnaik, IIT, Roorkee, Uttrakhand
Dr. Amod Kumar, CSIR-CSIO, Chandigarh
Dr. Kawaljeet Singh, Punjabi University, Patiala, Punjab
Dr. Yogesh Chaba, GJU, Hisar, Haryana
Dr. Rajesh Bhatia, PEC, Chandigarh
Dr. Anil Verma, Professor, Thapar University, Patiala, Punjab
Dr. Bright Keswani, Suresh Gyan Vihar University, Jaipur, Rajasthan
Dr. B. K. Mishra, C V Raman College of Engineering, Odhisa
Dr. R. R. Bhargava, IIT, Roorkee, Uttrakhand
Mr. Amit Sangroya, TCS Innovations Lab, Noida, U.P.
Dr. Ashish Oberoi, RIMT University, Mandi Gobindgarh, Punjab
Dr. Lalit Mohan Goyal, BVCOE, New Delhi
Dr. P. S. Rana, Thapar University, Patiala, Punjab
Dr. Raghvendra Aggarwal, LNCT, Bhopal, M.P.
Dr. Pradeep Kumar Singh, JUIT, Solan, H.P.
Dr. Tanupriya Choudhury, Amity University Campus, Noida, U.P.
Dr. Praveen Kumar, Amity SoET, Noida, U.P.
Dr. Sanjay Tyagi, Kurukshetra University, Kurukshetra, Haryana
Dr. K. K. Mishra, NIT, Allahabad, U.P.
Dr. Mukesh Kumar, TITS, Bhiwani, Haryana

ADVISORY COMMITTEE

National

Dr. Shakti Singh, BUSET, Solan, H.P.
Dr. Rashmi Agarwal, MRIU, Faridabad, Haryana
Dr. Paras Chawla, Chandigarh University, Mohali, Punjab
Dr. Manik Sharma, DAV University, Jalandhar, Punjab
Dr. Neelam Srivastava, IET, Lucknow, U.P.
Dr. Poonam Tanwar, Lingaya's University, Faridabad, Haryana
Dr. S.S. Dalal, SRM University, Sonepat, Haryana
Mr. Mani Madhukar, IBM Digital Ecosystem Group, Bangalore

TPC Members

Dr. Anil Verma, Thapar University, Patiala, India
Dr. Neha Gulati, Punjab University, Chandigarh, India
Dr. Amit Choudhary, MSIT, New Delhi, India
Dr. Kawaljeet Singh, Punjabi University, Patiala, India
Dr. Vishal Jain, BVICAM, New Delhi, India
Dr. Tariq Shekh, GDC, Poonch, J&K, India
Dr. Yogesh Chaba, GJU, Hisar, India
Dr. Vishal Goar, GEC, Bikaner, Rajasthan, India
Dr. V.K. Joshi, PTU, Kapurthala, India
Dr. Harsh Sadawarti, CTU, Ludhiana, India
Dr. Manish Kumar Gupta, VGU, Jaipur, Rajasthan, India
Dr. Prateek Jain, LPU, Jallandhar, Punjab, India
Dr. Saravanan K, Anna University, Tirunelveli, India
Dr. Mamta Mittal, GB Pant GCOE, New Delhi, India
Dr. Anshu Parashar, HIRD, Haryana, India
Dr. Vinay Rishiwal, MJP Rohilkhand University, Bareilly, India
Dr. Meenakshi Sharma,Chandigarh University, Mohali, India
Dr. Urvashi Mittal, HCTMTC, Kaithal, Haryana, India
Dr. Arun Jain, PMN College, Rajpura, India
Prof. Shashikant Patil, NMIMT, Shirpur, India
Dr. Venkatesh Gauri Shanker, Manipal University, Jaipur

LIST OF ACCEPTED PAPERS

ABSTRACTS

Paper ID:	8
Paper Title:	Study Of Various Cloud Service Platform: A Comparison
Authors:	Mandeep Kaur, Manpreet Singh Bajwa and Sunil Kumar Chawla
Abstract:	Cloud computing is most recent new computing paradigm where IT services, records and applications are provided over internet. It is faster to deliver on demand services. They are demanded over internet and are described as internet centric software. Cloud provides scalability for application by providing virtualized resources dynamically. Schedulers for cloud computing determine on which processing resource jobs of a workflow should be allocated. Scheduling theory for cloud computing is in advance a lot of awareness which includes increasing popularity among cloud era. In cloud environment it is known as platform as a service (PaaS). In the market there are many Cloud platform providers. Some of the biggest providers are Amazon Web Services, Google Cloud platform, Windows Azure platform etc. In this paper, we present a comparative study between these platforms to select the best suited one for deployment and research development in the field of cloud computing. The goal of this paper is to provide the new cloud customer with the knowledge of various platforms so that they can choose whichever is suitable to them.

Paper ID:	12
Paper Title:	A Novel Method To Improve Performance Of The Keystroke Dynamics Based User Authentication
Authors:	Mehmet Gürdal and İbrahim Soğukpinar
Abstract:	Biometric methods for personal authentication are becoming more convenient and more accurate than other methods. Keystroke Dynamics is a behavioral biometric method that authenticates individuals based on the keystroke rhythm that typing on the keyboard. The Keystroke Dynamics has become one of the key research subjects in authentication because it does not need extra hardware other than a keyboard and its cost is very low. In this work, a new method is proposed to increase the performance of typing rhythm based authentication system by preprocessing using wavelet transform. Experimental results given in this paper show that keystroke rhythm based authentication schemes can be improved using our method.

Paper ID:	18
Paper Title:	Moving Towards Cloud To Green Cloud: A Review
Authors:	Sheenu and Gurpreet Singh Chandi
Abstract:	Cloud computing become a most famous and trendy concept of present days. Cloud computing is an emerging modal which delivers its services/product over the internet and fulfil the demand/s of user. The meteoric growth of cloud computing model has led to establishing countless data centers around the world wide that consumes huge amounts of power-energy. The energy consumption and the emission of co2 become the major issue in data centers. Our researchers continuously working onto find the solution of this problem. One of the most popular and adapted solution is virtualization which is adopted by IT companies and its data centres' to reduce the emission of carbon dioxide and power consumption by applying efficient techniques. The main objective of this paper to introduce different techniques of VM placement in comparative way which is used in distributed data centers with PUE's value and different carbon footprint rates.

Paper ID:	21
Paper Title:	Fast And Dynamic Privacy Preserving Multi-Keyword Search Over Encrypted Cloud Data
Authors:	Upinder Kaur and Pushpa Suri
Abstract:	The cloud computing motivates the data owners to outsource their data to the cloud servers. Because of security of outsourced data, encrypt the data before sending to the cloud server. Earlier research works were focused on single keyword search, and some consider the multi-keyword search on encrypted data, but none of them consider the dynamic updating of the index and keywords in the documents. In this paper proposed the fast and secure multi-keyword search over the encrypted cloud data. This scheme uses a hybrid data structure, "skip graph bloom filter" for the fast index management. It also added an algorithm that handles the dynamic updates by the end user by keeping the status, version and modification dates. Performance evaluation and analysis are done to demonstrate the effectiveness of proposed search scheme.

Paper ID:	22
Paper Title:	Secure Nearest Neighbor Search over Encrypted Data in Cloud Environment using Skip Graph
Authors:	Upinder Kaur and Pushpa R Suri
Abstract:	Nearest neighbor search is the most general search queries on large data sets, location base services, spatial databases, graph applications, etc. With the growth of cloud computing, the trend of outsourcing the sensitive data demands the fast and secure nearest neighbor solutions over the existing solutions. In our paper, propose a new secure and efficient nearest neighbor search for encrypted data with mOPE(mutable order preserving encryption). In our proposed model, use the probabilistic data structure skip graph for the efficient indexing. Then, encrypt the indexes using mOPE for efficient nearest neighbor search. With the thorough analysis of our scheme achieve a perfect balance between security and nearest neighbor search query compared to another scheme.

Paper ID:	23
Paper Title:	A Critical Analysis On Cloud Security
Authors:	Madhvi Popliand Gagandeep
Abstract:	Cloud computing is an important paradigm that aims to provide reliable, customized and quality services to users using internet via service providers. The security issues in the cloud have gained the attention of many researchers and have become one of the important subjects of discussion. This paper mainly discusses the cloud computing, issues and challenges faced by users and the techniques used by various authors and the major aspects covered. As client's data can be accessed by any other client in cloud this arises many security issues in cloud. To maintain the data confidentiality and integrity, cryptography is one of the suitable solution that is widely used to secure data. Encryption Algorithms are used to secure data and to provide security and to make trusted cloud server.

Paper ID:	37
Paper Title:	Computational Approach For Various MAC Protocols In Wireless Sensor Networks
Authors:	Amanpreet Kaur and Anuj Kumar Gupta
Abstract:	This paper proposes S-MAC, a medium-get to control (MAC) convention intended for remote sensor systems. Remote sensor systems utilize battery-worked processing and detecting gadgets. A system of these gadgets will team up for a typical application, for example, natural observing. We anticipate that sensor systems will be sent in a specially appointed manner, with singular hubs remaining to a great extent dormant for drawn out stretches of time, yet then ending up plainly abruptly dynamic when something is distinguished. S-MAC utilizes three novel procedures to diminish vitality utilization and bolster self-design. To lessen vitality utilization in tuning in to a sit still channel, hubs occasionally rest. Neighboring hubs frame virtual groups to auto-synchronize on rest plans. Enlivened by PAMAS, S-MAC additionally sets the radio to rest amid transmissions of different hubs. Not at all like PAMAS, it just uses in-channel flagging. At last, S-MAC applies message going to lessen dispute dormancy for sensor-arrange applications that require store-and forward preparing as information travel through the system.

Paper ID:	39
Paper Title:	Review On Integrated Cloud Computing And Wireless Sensor Networks: Problem And Challenges
Authors:	Mallika Mehta and Gaurav Goel
Abstract:	Cloud computing is the new term in the world of internet that will exist logical rather than physical. The cloud computing is the area that will similar to computer networks, Grid computing-- but this area is provide virtual environment to the clients. Cloud computing has defined in different layers i.e. software, Platform and Infrastructure. Each layer has its own work and every layer is independent work to another layer. In another famed area is wireless sensor networks, this network environment deploys the sensors on number of locations and then gather the information accordingly. The sensors are small in size and capable to capture the current information—transfer to the nearest server. This server gave the information to the concerned person and authority. The paper aims to review the two important technologies, to combine it, and used in number of exist applications. In addition, PaaS also facilitates integrating cloud applications and sensor networks, and easier management across and switching between on premise data center and public cloud.

Paper ID:	55
Paper Title:	A Study On Modern Teaching Methodology Of Secondary School For Student
Authors:	Tejinder Singh
Abstract:	In this paper, it shows concentrate on new showing technique of different student and teachers use for making a more successful line of study. Some other reasons, one of the biggest problem during student course is high failure rate in the various subject knowledge and twice the time student having needed to pass this course. This Phenomenon is reflected mainly to further graduation course during rapidly discourage before conventional classes. In the background as indicated by Federal Council of Engineering, in Brazil, the Engineers shortfall is assessed at 20,000 every year on a few territories of designing. There is finding the actual meaning of e-learning of given various researchers and what type of role e-learning in secondary school education relation with teaching and learning processes. In the current time, everyone is considering development and Educational Improvement. In this exploration paper advancement through E-learning in India is watched mostly in Secondary Schools. On the off chance that it arranged appropriately at that point, appropriate outcomes are influencing emphatically.

Paper ID:	63
Paper Title:	MOEA And SPEA Protocol Performance Analysis For Wireless Mesh Networks
Authors:	Himani and Lal Chand Panwar
Abstract:	The remote work arranges is the self-designing sort of system in which versatile hubs can join or leave the system when they need. In this type of network routing is the major issue because many nodes may join or leave the network any time. The various type of routing protocols is used which are generally categorized into reactive, proactive and hybrid type of routing protocol. In this work, MOEA, SPEA routing protocol is compared under various parameters like delay, packet loss and throughput. It is been analyzed that SPEA protocol performs well as compared to other protocols.

Paper ID:	66
Paper Title:	Analysis On Causes And Prevention Of DDOS Attacks In Cloud Computing
Authors:	Gaurav Gupta, Gurjit Singh Bhathal, Davandeep Kaur and Avneet Kaur
Abstract:	Cloud computing is the rising technology that utilizes a combination of hardware and software to deliver services to the end users over the internet. As the internet is always prone to security threats, reliability and safety in cloud computing environment become a crucial concern. DDOS(Distributed Denial of Service) attack is the biggest threat to all the cloud computing users which is being used at present. The main motive behind the DDOS attack is to prevent the target users from utilizing the network resources efficiently. With the changes in the cloud computing environment, significant changes have been seen in techniques to prevent the DDOS attack. In this paper, we will focus on the cloud computing architecture and how DDOS attacks affect cloud computing environment. Along with this, different kind of DDOS attacks are explored, and various defense mechanism against these attacks are presented.

Paper ID:	67
Paper Title:	Assessment Of Sports In Academics And Determining The Effectiveness Of Modernity Of Medical Equipment Using Data Mining Techniques
Authors:	Gaurav Gupta, Gurjit Singh Bhathal, Amarjot Singh Ghai and Arshika Sachdeva
Abstract:	Data Mining is extraction of useful information or Knowledge by analyzing, managing and making decision on large amount of data from various resources. The data mining has been included in addition to grow into each field of human being. Data mining technology provides a user habituate approach to hidden data within the information. Data mining can be studied in any field to get the hidden or useful information. It has also superior in the field of engine education data bogus aptitude databases and sketch credit etc. The effects of sports on the career of sportsperson as compare to regular students are a emerged issue now a days. Hence a survey is done basis of this and the results are shown in this paper. Along with this a review is done that introduces to explore and assess prevailing ideas about modernity in traditional medical equipment's. The data set will be formed through survey. The aim of this paper is to analyze the effectiveness of Modernity medical equipment's through clustering techniques and also finding the effects of sports on academics using association techniques. This study confirmed that Sports activities are very helpful and supportive for enhancing the academic assignment of colleges and the modern equipment's are much better than the older methods

Paper ID:	68
Paper Title:	Evaluation On Clustering And Classification Data Mining Techniques For Therapies and Electronic Library Applications
Authors:	Gaurav Gupta, Kanwal Preet Singh Attwal, Taranpreet Kaur And Harmandeep Kaur
Abstract:	IT is penetrating their roots by leaps and bounds. Data mining or knowledge discovery is the computer-assisted process of digging through and analyzing enormous sets of data and then extracting the meaning of the data. This paper is an approach to enlighten the perspective on therapies over medicinal treatment and increasing usage of Electronic library using clustering and classification. A survey has been conducted which are responded by doctors, patients, students, librarians, faculty and people from rural areas and urban areas for the comparison between medicinal treatment and therapies and electronic libraries and traditional libraries. In the Contemporary epoch, the mortals can easily understand the effectiveness of therapies over medicinal treatment and also bring the e-books with them by using pen drives etc. in the journey which is easy to carry than hardcopy books.

Paper ID:	69
Paper Title:	From Business Oriented Rules To SBVR
Authors:	Deepak Kumar Sharma, Naveen Prakash and Dheerendra Singh
Abstract:	It is argued that business rules to be incorporated in a system have their source in rules as defined in the business and are in accordance with the Business Motivation Model. We use a business rules meta model to express BMM business rules and their properties. This expression uses courses of actions and conditions in rules antecedents and courses of actions in rule consequents. It also introduces notions of preference and priority as business rule properties. Business rules are structured into atomic, complex, and abstract rules. We propose to convert these rules into an abstract representation Language, ARL, in which hierarchical rules structures are converted to flat structures and business properties are expressed using AND, OR, NOT logic. In the final step, ARL expressions are converted into SBVR expressions by replacing all antecedents that use courses of actions by antecedents with conditions. The foregoing two-step process is illustrated by an example.

Paper ID:	82
Paper Title:	Comparative Study Of Multilayer Architecture To Reduce Energy Consumption Of Wireless Sensor Networks
Authors:	Harpreet Kaur, Sachin Majithia and Jaskiran Kaur
Abstract:	Wireless Sensor Network is the collection of sensor nodes uses to gather and transfer the data. The WSN network adopts cluster architecture. In the WSN the clustering techniques are used to build the clusters. In this architecture cluster head used to collect the data from the sensors and the cluster head process and transfer the data to base station. As per literature survey, there are many challenges and issues in the WSN architecture. The main challenges are energy consumption and data gathering. The clustering algorithms are introduced to overcome these issues. The clustering algorithms make the communication better between the clusters and within the clusters. The algorithms always keep track on the energy consumption, network lifetime, data transfer ratio, etc. The clustering protocols LEACH, PEGASIS, ant colony algorithm, particle swarm optimization (PSO) and multilevel hierarchical clustering algorithm with simulated results are briefly explained. In this paper, the study gaps and problem formulation of multilevel hierarchical clustering protocols are also explained. A methodology is also proposed in this paper to overcome the issues of multilevel hierarchical clustering protocol.

Paper ID:	100
Paper Title:	A Comparative Study Of Various Approaches For Sentiment Analysis Of Twitter Data
Authors:	Anchal Kathuria and Avinash Sharma
Abstract:	Today is an era of internet and social media. The advancement of web technology and social media has steered the way people express their views about anything and everything. It has led to the generation of humongous amount of relevant content on the internet and social media that can be analyzed by the businesses and the concerned beneficiaries for their own benefits. Nowadays people express their opinions about a product, service etc. on online forums, blog posts, twitter, Facebook etc. These reviews can be valuable for the customers in making the decisions to buy a product or use a service and also for the companies in obtaining the honest feedback and further assisting in the planning process. Considering the enormous amount of relevant data to be utilized for profit making, there has to be efficient automotive techniques to analyze the sentiments of the data. Extracting the user's actual feelings or emotions called sentiment analysis, from a highly unstructured tweet on twitter or a status update on Facebook is a highly tedious task. This paper provides a comparative of various techniques of opinion mining like Naive Bayes, Machine learning techniques specifically for twitter data. Various applications and challenges of sentiment analysis are also discussed.

Paper ID:	102
Paper Title:	Comparative Analysis Of Machine Learning Algorithms On Different Datasets
Authors:	Kapil Sethi, Ankit Gupta, Gaurav Gupta and Varun Jaiswal
Abstract:	Machine learning algorithms can figure out how to perform important tasks by generalizing from examples. This research aims at comparing different algorithms used in machine learning. Machine Learning can be both experience and explanation-based learning. In this study most popular algorithms were used like Neural Network (NN), k-Nearest Neighbor (KNN) and Support Vector Machine SVM and two datasets were used to check the efficiency of algorithms. Comparative analysis of the classifiers shows that SVM outperforms the other methods with a high accuracy.

Paper ID:	92
Paper Title:	Computer Assisted Bone Age Assessment Of Hand Wrist Dataset Using Clustering And BPNN Classification Approach
Authors:	Mayukh Banathia and Parveen Kumar Sharma
Abstract:	BAA is used to evaluation the skeletal maturity of children. Evaluating BAA is a significant way of the diagnostic and organization path in the children with the growth and endo-crime disorder. BAA techniques are famous to evaluate the growth rate of the child. The Bone Age Assessment is used to search hormone issues like diabetes, thyroid and search the genes dis-orders like removing of genes, chromosomes abnormal. The main issue is growth is determined by the dissimilar between a SBA (Skeleton Bone Age) and the age from the birth. In this research work, BAA is different techniques are used to evaluate BA (bone age) such as SIFT (Scale Invariant Feature Transform), FCM (Fuzzy C Mean Clustering) and Classification to detect the age based on the bones using Back Propagation Neural Network. In this proposed work is utilized to extricate the element in view of standard segment examination. It removes the one of kind properties of the separated picture. It produces two sorts of the component separating in surface structures i.e. key focuses. At that point they arrange the separated element utilizing Back Engendering Neural System. In BPNN calculation produces the two stage's i.e. preparing and testing stage, in preparing state we recognize the execution in light of ages, times and approval checks. Moreover, the related element examination for different stages is talked about to give a precise quantitative assessment of particular components for the last BAA. Evaluate the performance parameters like root means square error, mean square error and accuracy.

Paper ID:	41
Paper Title:	Fuzzy Logic Based Analysis Of Node Selection Criteria In Energy Efficient Multipath Routing
Authors:	Jaideep Atri and Shuchita Upadhyaya
Abstract:	Multi-path routing exploits the benefit of having multiple alternative paths between source and the destination. Alternative paths are responsible for providing reliable communication in case of route failure. The Ant Colony Based Energy Efficient Multipath Routing (ACBEEMR) is a protocol proposed to deal with the issues of energy efficiency and multipath routing in Mobile Ad-hoc Networks. Best path or the optimal path onto which source should send data packets cannot be decided only on the basis of route length factor. Energy state of the intermediate nodes must also be considered while routing the packets through them. ACBEEMR presented the criteria for selecting the next node in finding the energy efficient optimal path. In this paper the criteria for node selection has been analyzed by using the fuzzy logic tool of MATLAB.

Paper ID:	3
Paper Title:	On Cloud Security using Biometric Cryptographic Techniques
Authors:	Sunil K. Chawla, Punit Soni, Vijay Lamba and Surender Jangra
Abstract:	Cloud computing is one of the best on-demand network access service to large shared pool of computing resources in today's world. There are several widely recognized economic benefits of cloud computing. Cloud computing helps users avail combined benefits of three computing models storage (Infrastructure as a Service), operating system (Platform as a Service) and software(s) (Software as a Service) at their own premises without need to have them at their own hardware level. Apart from these economic benefits, public clouds still haven't seen widespread adoption, especially by enterprises. Most large organizations today run private clouds, in the sense of virtualized and geographically distributed data centers, but rarely rely primarily on externally managed resources. The major reason behind this is the security concerns involved in existing cloud infrastructures which includes hardware failures, software bugs, power failures, misconfiguration of servers, malware and insider threats. The paper focuses on various biometric cryptographic techniques for cloud security and to compare them on various parameters possible.

Paper ID:	106
Paper Title:	A Review on Heuristic Algorithms for Server Consolidation in Cloud Computing
Authors:	Pardeep Singh, Jyotsna Sengupta and P K Suri
Abstract:	Cloud computing is growing day to day, cause of its pay-as-you-use model, which facilitates easy payments for using infrastructure. It is developing across the world because of its favorable service oriented features. Some people are having perception that cloud computing is just another name of Internet. Cloud computing users are increasing rapidly. In cloud computing, huge numbers of users are powerfully handled and it can be accessed by them, anytime & anywhere. Data centers consumes huge amount of energy leads to increase cost and carbon emission. Large numbers of data centers are easy to build, but not good for environment. Cloud computing facilitates different virtualized resources to perform the users task, and these resources should be scheduled and managed among the users optimally. Resource Scheduling place a vital role for improving various performance metrics related to data centers. In this paper various such scheduling algorithms are reviewed by taking different parameters. Energy efficiency is the main factor considered and researched the methods to resolve the issue of energy consumption. These methods resolve the issue of scheduling in servers, either during assigning virtual machines to various servers or during the distribution of dynamic tasks among different virtual machines. Some approaches are also described briefly in which further improvement can be done in order to make it more energy efficient algorithm.

Paper ID:	103
Paper Title:	Authentication of Real Iris Images by Detection of Parallel Eyelid Blinks on Both Eyes
Authors:	Vijay Kumar Sinha, Anuj Kumar Gupta and Ravinder Khanna
Abstract:	In recent days biometric authentication is establishing as the most convenient, authentic and robust which we need not to remember. The Iris recognition system is the most innovative amongst them. However, it can be scanned or printed or duplicated by scammers. Even the person is authentic and real it's not a guarantee that his consent is with the purpose of authentication as he/she might be unconscious or even not live which scammers can fool the machine. The available algorithms not care for the parallel natural blinking of both eyelids at the same time. As both eyelids move parallel in same direction. Both eyelids open or close at the same time. We consider this feature as the main feature for liveliness detection of human iris as well as fake iris detection. We successfully detected and enhanced the security features of Iris recognition system for full proof of authentication. Success ration obtained 99.81 % with a distance of 2 meter.

Paper ID:	104
Paper Title:	Detection of Iris Dilation on Both Eyes as a Potential Biomarker for Fake Iris Detection
Authors:	Vijay Kumar Sinha, Anuj Kumar Gupta and Ravinder Khanna
Abstract:	Iris dilation is a potential biomarker for fake iris diction. As iris can be spoofed and duplicate printed iris can make fool of machine to breach the security of biometric identification system, it's necessary to identify and detect the potential hazards of being used of fake iris for fake login attempts. Most of the work found on pupil dilation but no any work available on iris dilation for detection of fake iris. The objective of current research is to use the feature of iris sensitivity (shrinking / expanding) on fluctuation of light intensity. Iris expands in darker light and shrinks in intense light exposure. We successfully established and used a full proof fake iris detection system. As fake iris or images can't dilate with changes of light so it can be easily detected a fake iris by machine. It can also detect the liveliness of iris. If the iris is not live then it can detect the false user even if the biometric pattern duly matches.

Paper ID:	113
Paper Title:	Towards Data Intensive Scientific Computing in Defence and Security: A Review
Authors:	Amandeep Kaur, Mamta Mittal, P.K Khosla and Neerja Mittal
Abstract:	Data intensive scientific computing is an emerging paradigm of science after experimental, theoretical and computational sciences. It refers to the extraction of knowledge from huge amount of data that is being generated with the proliferation of sensors and other computing devices in various areas like medical, engineering, military, defense and security, manufacturing, information technology, astronomy etc. This paper focuses on the various aspects of data intensive science in reference to defense and security. With the rise of smart warfare like drones equipped with missiles, smart bullets, robot soldiers and laser guns, the use of data acquisition, storage, processing, analysis, mining and visualization techniques have collectively envisioned the huge significance of data intensive science in this area. In this paper, the emergence of data intensive scientific computing as a new research paradigm and its significance in defense and security domain has been discussed along with some of the technological advances that account for the applicability of data intensive computing in this domain.

Paper ID:	46
Paper Title:	Resource Provisioning and scheduling algorithms based on deadline for systematic Progress on Clouds
Authors:	Harpreet Kaur and Manish Mahajan
Abstract:	For the workflow execution in cloud platform, a significant resource scheduling in cloud computing is utilized owing to its relation with execution cost and time. Several workflow scheduling models has been proposed by the researchers for meeting the deadline constraint and cost minimization requirement as discussed in the literature reviewed. Great applicability along with the deadline meeting condition capability is analyzed. In this paper, a review on the workflow resource scheduling model is done, on the bases of their deadline meeting constraint and cost minimization.

Paper ID:	85
Paper Title:	A Review on sentiment Analysis
Authors:	Nitika Sharma and Manish Mahajan
Abstract:	In this paper, we have reviewed four algorithms based on sentiment analysis of Twitter. All the papers follow different methods and classifiers to classify tweets and data from the twitter. In these papers, we analyzed the tweets for product review and data about American stock market and review of movies from the viewers.

Paper ID:	38
Paper Title:	Various Filtering Methods for Image Noise Reduction using De-Noising Algorithm
Authors:	Gourav Chalotra, Tejpal Sharma and Upinderpal Singh
Abstract:	Evacuating noise starting with a picture due to quality degradation happens clinched alongside propelled portraits toward the debasement of Different sorts about noise such as pepper noise, Gaussian noise, and speckle noise thus. It displays itself similarly as sparsely going on white Also dull pixels previously, a picture. Gaussian noise is those genuine noise Hosting a probability thickness worth of effort (PDF) equal to that of the average appropriation, which may be Overall known as the Gaussian coursing library. In the perspective at a picture is transformed over beginning with particular case outline that point onto those next, for example, examining, transmitting, digitizing. We need should improve the yield following expansion of different commotion done a picture. This overview displays that Execution assessment about four diverse de-noising channel routines salty noise, drive noise, Gaussian noise, what's more spot by utilizing execution Parameters. Those objective paper may be should represent able an alternate de-noising algorithm to decreasing noise proportion from the picture.

Paper ID:	112
Paper Title:	Analysis of food Price Crisis in India Using Twitter
Authors:	Mamta Mittal, Lalit Mohan Goyal and Ajay K. S. Singholi
Abstract:	The inflation in food prices especially price of staple food like rice or wheat poses a threat to household food security. Inflation in food prices also has a direct effect on purchasing capacity of large part of Indian population. It is the Indian government's concern to respond to this food price inflation and deal with the crisis as early as possible. By making use of social media, the food price crisis can be tackled. Twitter is a platform that can be used to analyze public opinions as millions of users share their tweets. This analysis can be used for decision making in various domains. This paper focuses on the techniques to analyze the sentiment of the Indian population over food price changes using twitter data.

Paper ID:	114
Paper Title:	Data Acquisition System: An Experimental Setup to Study Thermocouples
Authors:	Aakash Saini, Mamta Mittal, Shweta Singh and Ayush Sharma
Abstract:	In this proposed work a data acquisition experimental setup has been developed to study the linear thermal range of different types of thermocouples. A cheap and efficient acquisition system has been developed. The acquisition system has been divided into modules by the authors to ensure compatibility with different types of thermocouples. The modular design not only provides the compatibility but also enables us to upgrade any module at any point of the time. The data acquisition system has been divided into three parts that are signal conditioning unit, a processing unit, and data aggregator unit respectively. In signal conditioning unit, an amplifier with a low pass filter is printed on a circuit board. The second unit, processing unit has been implemented with the help of PIC16F887 micro-controller unit on another circuit board. It has three primary functions that are analog to digital conversion, computation and conversion to digital signals to RS-232 communication standard respectively to make communication possible with a data aggregator system. The last unit is the data aggregator system, which collects the digitally processed information and plots it to find the linear thermal curve for different types of thermocouples. Simulations have been done on Proteus circuit simulator before implementation. Experimental work has been carried out on various types of thermocouples with the help of implemented modules for the acquisition of temperature data sets. The collected information has been processed in the MATLAB. The linear temperature curve for different thermocouples have been plotted, and the thermal range is studied. It can be used as a low-cost alternative to the advanced thermal sensors with expensive integrated circuit technology in the applications requiring moderate accuracy.

Paper ID:	107
Paper Title:	OFDM Modulation Technique& its Applications: A Review
Authors:	Dishant Khosla, Sohni Singh, Rashwinder Singh and Sumeet Goyal
Abstract:	OFDM is becoming the chosen modulation technique for wireless communication to reduce multipath fading effects and to provide large data rates. OFDM is a multicarrier transmission system thatuses the technique of splitting smaller subcarriers of frequencies to deal with multipath problem. Multipath distortion and Radio Frequency interference are minimized through this technique. OFDM has been used to develop the capacity of CDMA systems and fulfils the wireless access technique for 4G systems. OFDM is supposed to achieve in a superior way in case of frequency selective fading or narrowband interference. OFDM cuts the extent of crosstalk in signal broadcasting.

Paper ID:	36
Paper Title:	Image Enhancement Techniques in Spatial and Frequency Domain: A Review
Authors:	Harsmeet Singh, Jagpreet Singh and Jagbir Singh Gill
Abstract:	Major goal of the image enhancement is to prepare the image keeping in mind the end goal to deliver an image that is better in a few or the other perspective than the first one for a particular reason. Enhancing the visual appearance of images in zones like medicinal images, elevated and satellite images is important to enhance the differentiation level and evacuate the clamor to build the image quality. Despite the fact that enhancement procedures vary in different routes relying on its target, they are comprehensively arranged into: Spatial domain and Frequency domain enhancement. In this paper, we will give the audit of the image enhancement systems in spatial and also frequency domain and will attempt to assess its deficiencies and the dynamic ranges of research.

Paper ID:	7
Paper Title:	Performance Assessment of Edge Preserving Filters
Authors:	Kamireddy Rasool Reddy, Madhava Rao Ch and Nagireddy Kalikiri
Abstract:	Denoising is one of the important aspects in image processing applications. Denoising is the process of eliminating the noise from the noisy image. In most cases noise is accumulating at the edges. So that prevention of noise at edges is one of the most prominent problem. There are numerous edge preserving approaches available to reduce the noise at edges in that Gaussian filter, bilateral filter and non-local means filtering are the popular approaches but in these approaches denoised image suffer from blurring. To overcome these problems, in this paper a Gaussian/bilateral filtering (G/BF) with wavelet thresholding approach is proposed for better image denoising. The performance of proposed work compared with some significant edge-preserve filtering algorithms such as bilateral filter, Non-Local Means Filter in terms objective quality assessments. From the simulation results, it is found that the performance of proposed method is superior than bilateral filter and Non-Local Means Filter.

Paper ID:	72
Paper Title:	Hybrid Method for Maximum Power Point Tracking in Photovoltaic Cell using Perturb Observe and Least Mean Square
Authors:	Amandeep Kaur, Manish Kumar and Parveen Singla
Abstract:	At a geographical location of Indian sub-continent, solar energy has been recommended and implemented as an alternative to traditional methods of electricity generation. It allows direct conversion of sun photonic radiations to electrical energy. This is conceivable due to Photo-Voltaic (PV) systems, boost converters and maximum power tracking control system. An effective photovoltaic system should operate at its best i.e. should extract maximum power from the system with least fluctuations in voltages/currents. The tracking becomes complicated due to solar irradiance level &temperature, varieties in the maximum power point and the non-linear conduct of PV systems. Maximum Power Point Tracking (MPPT) can be accomplished in the PV cells at particular operating point but it needs good control at the output boost converter side by using an effective control technique. There are many techniques available i.e. Perturb-Observe (PO) etc. but they do not consider the predictive or future power in making decisions for IGBT on/off operation; hence have slow initial start points and fluctuations as well. Here, a hybrid technique is proposed that make use of perturb-observe at output and Least Mean Square (LMS) for filtering to get the predictive power values which results in maximum point tracking and has lesser oscillations.

Paper ID:	86
Paper Title:	A review on Substrate Integrated Waveguide for mmW
Authors:	Manvinder Sharma and Harjinder Singh
Abstract:	Emerging 5G technology use frequency spectrum from 28 GHz to 100 GHz, which can be achieved using mm-Wave in which frequency ranging from 30 GHz to 300 GHz. But limitations of this mm-Wave include attenuation due to metal waveguide, atmospheric attenuation and Rain fade etc. An improved waveguide method is adapted known as Substrate Integrated Waveguide. SIW is transition between micro-strip antenna and Dielectric filled Waveguide antenna. SIWs are planar structures so they can be fabricated over PCBs and can be easily integrated with supplementary transmission lines. Design parameters along with cut off frequency, resonant frequency and quality factor of the SIW is discussed in the paper.

Paper ID:	9
Paper Title:	A Review on Cluster Head Selection Algorithms in Mobile Ad-Hoc Networks
Authors:	Simarjot Kaur, Manpreet Singh Bajwa and Mandeep Kaur
Abstract:	Mobile adhoc networks consists of mobile nodes which communicates with every alternative with none fastened topology. Cluster head selection, energy consumption and security is a great challenge for MANET recently. Optimizing Cluster head selection minimizes the energy consumption in a specific network and additionally reduces the data transmission overheads. There are many algorithms for cluster head selection which are based on several parameters. For better utilization of energy, bandwidth, secure and fast transmission with less network traffic there must be an economical algorithmic program for cluster head selection. In this paper we study different cluster head selection algorithms for security and energy consumption of a selected cluster that maintains the lifespan of the network.

Paper ID:	11
Paper Title:	Modified Error Data Normalized Step Size Algorithm Applied to Adaptive Noise Canceller
Authors:	Shelly Garg, Manpreet Singh Bajwa, Reecha Sood and Reecha Sharma
Abstract:	A new Modified Error Data Normalized Step Size (MEDNSS) algorithm is introduced in this paper. Its time varying step size depends upon normalization of both error and data vector. An Adaptive Noise Canceller (ANC) is used to boost up the system performance in the presence of signal leakage components or signal crosstalk. It consists of three microphones and two adaptive filters which are automatically adjust their filter coefficients by using MEDNSS algorithm. The first adaptive filter abolishes the signal leakage components and second adaptive filter abolish the noise. The performance of the MEDNSS algorithm discussed, simulated and also compared to the Error Data Normalized Step Size (EDNSS) algorithm in stationary and non-stationary environments using various noise power levels. Computer simulation results are used to demonstrate the significant improvements of the MEDNSS algorithm over the EDNSS algorithm in reducing the signal distortion, Excess Mean Square Error (EMSE), low maladjustment factor and also SNR.

Paper ID:	75
Paper Title:	An Efficient and Congestion Aware Fuzzy Based Output Selection Strategy For On Chip Router
Authors:	Ashima Arora and Neeraj Shukla
Abstract:	The network performance of an adaptive router largely depends on well-designed selection strategy. The selection function selects one of the accepted output directions returned by the routing function. The effectiveness of any selection strategy relies on its congestion free traffic distribution mechanism for each incoming packet. In this paper, we have proposed a fuzzy based output selection strategy that considers the congestion information from both neighboring routers as well as routers on global path. The strategy efficiently balances the traffic load by using the knowledge base of fuzzy controllers. Performance evaluation is carried out using a cycle accurate simulator under synthetic traffic conditions. The experimental results show that the fuzzy based selection strategy improves the performance by increased throughput and reduced packet latency when compared with other traditional selection strategies.

Paper ID:	83
Paper Title:	Performance Comparison of Manet Routing Protocols on Hybrid Wireless Grids
Authors:	Debashreet Das and Chitta Ranjan Triapthy
Abstract:	A wireless network is a collection of self-configuring and adaption of wireless links between communicating devices that forms a Wireless Grid structure. In a wireless grid network, simulative analysis is a significant method to understand the performance of a routing protocol. In this paper, the comparison of three important routing protocols for wireless Grids has been done. The protocols considered are: Destination Sequenced Distance Vector (DSDV), Ad-hoc On Demand Distance Vector (AODV) and Dynamic Source Routing (DSR). Extensive simulations are done by varying the number of nodes and taking different Quality of Service (QoS) parameters, both for wireless non-mobile (static) and wireless mobile (dynamic) grid networks on a hybrid topology. A comparative analysis among the above said protocols are made based on the results of simulation.

Paper ID:	97
Paper Title:	A Survey on using Nature Inspired Computing for Fatal Disease Diagnosis
Authors:	Prableen Kaur and Manik Sharma
Abstract:	Genetic Algorithm (GA), Ant Colony Optimization (ACO), Particle Swarm Optimization (PSO) and Artificial Bee Colony (ABC) are some vital nature inspired computing (NIC) techniques. These approaches have been used in early prophecy of various diseases. This paper analyzes the efficacy of various NIC techniques in diagnosing diverse critical human disorders. It is observed that GA, ACO, PSO and ABC have been successfully used in early diagnosis of different diseases. As compared to ACO, PSO and ABC algorithms, GA has been extensively used in diagnosis of ecology, cardiology and endocrinologist. In addition, from the last six years of research, it is observed that the accuracy accomplished using GA, ACO, PSO and ABC in early diagnosis of cancer, diabetes and cardio problems lies between 73.5%-99.7%, 70%- 99.2%, 80%-98% and 76.4% to 99.98% respectively. Furthermore, ACO, PSO and ABC are found to be best suited in diagnosing lung, prostate and breast cancer respectively. Moreover, the hybrid use of NIC techniques produces better results as compared to their individual use.

Paper ID:	53
Paper Title:	A survey to nature inspired soft computing
Authors:	Deepak Wadhwa, Sushil Kumar, Rohit Bansal and Parveen Singla
Abstract:	Swarm Intelligence (SI) and bio-inspired techniques shape in vogue topic in the advancements of latest algorithms. These algorithms can work on the basis of SI, physical, chemical and biological frameworks. We can name these algorithms as SI-based, inspired by biology, physics and chemistry as per the basic concept behind the particular algorithm. In spite of the fact that not every one, a couple of calculations have ended up being exceptionally effective and consequently have turned out to be mainstream devices for taking care of real-world issues. The reason for this survey is to show a moderately complete list of the considerable number of algorithms in the research article in order to boost up the research in these algorithms. This paper discusses Ant Colony Optimization (ACO), Cuckoo Search, Firefly Algorithm, Particle Swarm Optimization and Genetic Algorithm in detail. For ACO a real time problem known as Travelling Salesman Problem is considered while for other algorithms min-sphere problem is considered, which is well known for comparisons of Swarm techniques.

Paper ID:	84
Paper Title:	Data Security Threats Arising in Nexus Between Cloud and Its Users
Authors:	Parneet Kaur and Anuj Gupta
Abstract:	Cloud computing is a new approach that is emerging nowadays with greater extent. With Cloud computing, internet has become a computing platform which provides computing power, network, storage etc. Cloud computing also plays a vital role in transforming IT industry completely. It provides various characteristics like on demand applications, utility based pricing, resource pooling etc. which attracts users towards its usage. Despite these advantages, cloud is still associated with some security related risks. One major issue is the data security over cloud which is restricting the growth of cloud computing. Therefore, to accelerate its growth and to make it widely acceptable data security risks are to be resolved. This paper discusses that how the different security risks involved in cloud computing can be classified. It also describes the major hurdle that is restricting the growth of cloud computing i.e. Data security risks and the different solutions proposed by different researchers to cater out those risks.

Paper ID:	78
Paper Title:	Cloud Security based on Data Fragmentation and Advance Encryption for Optimal Performance
Authors:	Diljit Kaur and Dapinder Kaur
Abstract:	In adoption of cloud computing technology, the data security of the customer data is a prime research in these days. The user's get access of the cloud resources that are hosted over the internet that can be hijacked by the attacker. In a one example, the access of the virtual machine (VM) as dedicated resource is given to the end user by the CSP and when the end user is accessing these resources through an internet connected PC, there is a possibility of security violation by the attacker and he can take full control of the data. Most of the intrusion detection and prevention system implemented over the cloud infrastructures is being rule based so called signatures and therefore they are only capable to detect the known threats. There are research challenges such as a) only using these traditional security mechanisms may lead extra overhead over the cloud network b) hosting the data over the public internet may make the data directly accessible as end user is not aware about the technology. This research work addressed the security problem by a) selection of optimal data security algorithm b) data fragmentation and distribution of data blocks over the multiple cloud nodes that make difficult to guess about the actual data and its location. The major advantage of the data fragmentation in cloud network is to anonymize the originality of the data to make more harden to guess about the original data by the attacker and he will not be able to identify the real location of the data hosted over the cloud nodes. Then by applying another layer of security in a way of optimal encryption algorithm with strong key size make it worst for the attacker to find the actual piece of data. For simulation purposes, Microsoft .NET Framework using Visual Studio 2008 is being used in the implementation and its in-built cryptography library. The performance readings have been taken in an iterative manner by applying and selection of optimal algorithm for data encryption.

Paper ID:	115
Paper Title:	A Study of Various Air Quality Prediction Models
Authors:	Jasleen Kaur Sethi and Mamta Mittal
Abstract:	Pollution is one of the effects of the growth of population. It causes adverse effects to humans, plants and animals. A recent study has estimated that 3.3 million annual premature deaths in the world are caused due to air pollution. Thus, Air Quality Prediction is important as it will help lower the effect of air pollution on human health. In this paper, the various models used to predict air quality have been discussed.

Paper ID:	116
Paper Title:	Remedial Based Decision Support System to identify the causes of Infertility
Authors:	Lalit Mohan Goyal, Sunil Chawla, Mamta Mittal and Dolly Sharma
Abstract:	In the Indian setup where there is a strong emphasis on child bearing, infertility leads to trauma and stress. Infertility has number of medical, psychological and financial implications. Infertility has remained a apprehension through ages and is also a substantial clinical issue which touches 8 to 12 % couples in the world. In this paper, a system to predict the cause of infertility in Indian population has been proposed taking into account both the male and female factors that affect infertility using various data mining techniques.

Paper ID:	59
Paper Title:	Comparative analysis of texture classification using local binary pattern and its variants
Authors:	Richa Sharma and Madan Lal
Abstract:	Texture classification is an important issue in digital image processing and the Local Binary pattern (LBP) is a very powerful method used for analysing textures. LBP has gained significant popularity in texture analysis world. However, LBP method is very sensitive to noise and unable to capture the macrostructure information of the image. To address its limitation, some variants of LBP have been defined. In this paper, the texture classification performance of LBP has been compared with five latest high performance LBP variants like Centre symmetric Local Binary Pattern (CS-LBP), Orthogonal Combination of Local Binary Patterns (OC LBP), Rotation Invariant Local Binary Pattern (RLBP), Dominant Rotated Local Binary Pattern (DRLBP) and Median rotated extended local binary pattern (MRELBP) using the standard images Outex_TC_0010 dataset. From the experimental results it is analyzed that DRLBP and MRELBP are the best method used for texture classification.

Paper ID:	110
Paper Title:	An Energy Efficient Trust Aware Reliable Opportunistic Routing Protocol for Wireless Sensor Networks
Authors:	Nagesh Kumar and Yashwant Singh
Abstract:	As the wireless sensor networks (WSN) are gaining popularity the need of reliable delivery of data packets becomes more important. The reliable delivery is only possible when the routing protocols are efficient and secure. Because of lack of resources it is not possible to use existing cryptosystems to provide security in WSN. But, trust aware routing can provide the security with lesser resources, which become popular in last three to four years. In this paper, a new energy efficient and trust aware reliable opportunistic routing (TAEROR) protocol is proposed. The protocol consists of a trust metric and also a relay selection algorithm. The trust aware metric detects the malicious nodes on the basis of forwarding sincerity, energy consumption and acknowledgement sincerity. Relay selection algorithm avoids these malicious nodes to get selected in the routing process. The protocol is simulated and compared to existing trust aware routing protocols. Proposed protocol TEAROR presets better results than the other compared protocols.

Paper ID:	111
Paper Title:	Routing Protocols in Wireless Sensor Networks: A Brief Review
Authors:	Nagesh Kumar and Yashwant Singh
Abstract:	Routing in WSN is very challenging task due to lack of resources. For efficient communication and increase in lifetime of WSN there is a great need of optimal path selection. Data forwarding in optimal routes saves a lot of transmission energy of sensor nodes. This will result in increment in lifetime of the network. Many routing protocols have been proposed by researchers in recent years to save the energy and other resources like memory for WSN. Routing protocols mostly depend on applications and architecture of WSN. This paper presents the classification and analysis of routing protocols for WSN and concludes with open research issues in routing strategies in WSN.

Paper ID:	118
Paper Title:	QoS for a Hybrid Satellite DVB Wireless Network with Fade Mitigation
Authors:	Deepika Sood, Sukhjinder Kaur, Pankaj Palta and Dishant Khosla
Abstract:	Hybrid satellite communications and wireless network architectures support high bandwidth services and applications for users. Next generation satellite communication networks are being designed to be all IP-based and support multimedia traffic. Exploitation of cross-layer protocol optimization and engineering leads to efficient performance and to end-to end QoS provisioning. We study the effect fading of rain fading on QoS parameters such as delay and jitter. The system architecture used for these simulation experiments consists of DVB-S2 for the forward link and DVB-RCS for the return link of satellite network segment. The new DVB-S2 standard, introduced by ETSI (European Telecommunication Standard and Institute), is mainly based on three key concepts: best transmission performance, total flexibility and reasonable receiver complexity. The Adaptive coding and Modulation (ACM) scheme is the technique allowing achieving these main goals.

Paper ID:	119
Paper Title:	Overview of Global Positioning System for Tracking and Positioning
Authors:	Dishant Khosla, Tejpal Sharma, Sukhjinder Kaur and Deepika Sood
Abstract:	The GPS (Global Positioning System) data is likely a standout amongst the most essential information that is utilized for earth perception, auto route, building and development businesses and numerous different applications. GPS a space-based radio route framework possessed by the United States government and worked by the United States Air Force. For volcanic and structural checking, information are gathered at the field and transmitted to a PC server dwelling at the server farm for additionally handling. The GPS is helpful while doing extensive overviews in light of the fact that the region can be secured quicker than when utilizing an aggregate station. GPS additionally takes into account studies to be done in areas that already were distant. The same number of these observing stations is situated at remote locales, satellite correspondence is regularly utilized for information telemetry. In this paper, an overview of the GPS history and portions of the worldwide situating framework, working of its application and framework how its function gives great comprehension of these advances.