



ICCDW - Quo Vadis
2020

Proceedings of INTERNATIONAL CONFERENCE ON CONVERGENCE TO DIGITAL WORLD-QUO VADIS ICCDW-Quo Vadis: 2020

(Multidisciplinary International Conference) Mumbai, India

Technically Co-Sponsored by



Dates: 18th-20th Feb 2020

Conference Theme: Digital World



Organized By
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(Approved by AICTE, Recognized by DTE and Affiliated to University of Mumbai, ISO certified, NAAC Accredited)

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1st IEEE INTERNATIONAL CONFERENCE
ON



CONVERGENCE TO DIGITAL WORLD-QUO VADIS ICCDW-Quo Vadis:2020

(1st IEEE Multidisciplinary International Conference) Mumbai, India
Technically Co-Sponsored by IEEE Bombay Section
Dates:18th-20th Feb 2020



Organized By

AET's

ATHARVA COLLEGE OF ENGINEERING,MALAD

Venue:

Atharva Educational Complex, Malad Marve Road,
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ICCDW – 2020 Conference Proceedings

This is proceedings of a conference entitled “ International Conference on Convergence to Digital World- Qua Vadis ICCDW-2020 ”, which was co-sponsored by IEEE Bombay Section and organized by Atharva College of Engineering, Malad (W), Mumbai on 18th to 20th of Feb 2020.

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ICCDW-2020 Conference Proceeding

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Instruction to authors:

Paper to be considered for publication is not submitted for elsewhere, contains results that are new significant and of interest to a wide section of engineering and science community. Editors may invite papers on special topics of current interest.

International Conference on Convergence to Digital World- Qua Vadis ICCDW-2020

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Message from Executive President Atharva Group of Institutes



Hon. Shri Sunil Rane
Patron

It gives me immense pleasure that Atharva College of Engineering is organising the 1st IEEE International Conference on Convergence to Digital World - Quo Vadis (ICCDW-2020) during 18th - 20th Feb 2020. The central theme of the conference is Digital World and the conference offers a platform for global experts to gather and interact intensively on the topics of Digital environment, Health in Digital world, Energy Efficient Systems, Digitization in industries, Advanced Research in Science and Technology and E-Learning .

I hope eminent speakers will cover the theme Digital Transformation from different perspectives. I would like to state that this conference will definitely offer suitable solutions for critical needs and challenges of Digital world. The success of this Conference is solely on the dedication and efforts of innumerable people who started working on the preparations for almost two years in many ways to make this conference a reality. I hope that this unique international and multidisciplinary conference will provide our participants with a truly transformative experience through a variety of knowledge and perspectives so that the complex problems in our society can be improved. I express my special appreciation to organizing committee members. I wish ICCDW- Quo Vadis 2020 all the best for its success.

Executive President
Atharva Group of Institutes
Malad(West), Mumbai

**DIRECTORATE OF TECHNICAL EDUCATION
MAHARASHTRA STATE**

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Date : 9th January, 2020



Dr. Abhay Wagh

Patron

It is my great pleasure to welcome you on behalf of the 1st IEEE International Conference on Convergence to Digital World - Quo Vadis 2020 (ICCDW'20) which is being organized from 18th to 20th Feb 2020 at Atharva College of Engineering, Malad, Mumbai.

In the Digital world, where technology is rapidly changing, collaboration of technology and expertise is highly essential to solve existing issues and foster the next generation Research & Development. This multidisciplinary conference will address the needs and challenges of the Digital World covering areas such as Health in Digital World, Digital Environment, Energy Efficient Systems, and Digitalization in Industries and Advanced Research in Science Technology & e-Learning.

ICCDW-20 would bring together the government, scientists and academicians from different parts of the world and it will be a major contribution for the development and consilience of knowledge.

We look forward to welcoming you in Mumbai, India. We hope you will join us to make this IEEE International Conference a memorable event.


(Dr. Abhay Wagh)
Director

Directorate of Technical Education M.S.
Mumbai - 400 001



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MESSAGE

I am pleased to know that Atharva College of Engineering, Mumbai is organizing an International Conference on "*Convergence to Digital World – Quo Vadis*" from 18th to 20th February, 2020.

I hope that the International Conference will bring together industry and academia from various disciplines in a global forum to present new research, innovative technologies and build collaboration to solve critical needs and challenges of the digital world. The conference will also provide an opportunity for the students and faculty members to assimilate the latest industrial trends. It is expected that the conference will yield constructive results.

I extend my best wishes to the organizers of the international conference and the participants.


(Prof. D.P. Singh)

13th December, 2019



Message from Director's Desk



Dr. P. N. Nemade
Conference Chair

It gives me great pleasure to invite you all for the 1st IEEE International Conference on Convergence to Digital World - Quo Vadis(IEEE-2020) being organized during 18th- 20th Feb 2020 at Atharva College of Engineering(ACE), Malad, Mumbai.

ACE Campus is a camouflage wealth of knowledge, innovation and technology that lies within. The events in the conference are targeted towards researchers, practitioners, professionals, educators and students to share their experiences, innovative ideas, issues, recent trends and future directions in the field of Engineering and Science and Technology.

This conference will provide a unique opportunity for exchange of innovative ideas, technical expertise for technological advancements. It includes keynote addresses from Academicians and paper/poster presentation by research scholars. It is a matter of joy for us to welcome the participants to this conference.

I hope that this conference will provide you with many opportunities to meet and interact with a diverse range of people. I am very grateful to the Conference Committee members, students as well as all our colleagues for all their preparation and hard work to ensure a stimulating and enjoyable experience for us all. I wish IEEE'20 a grand success.

Director

Atharva College of Engineering

Malad(West),Mumbai



Message from Principal's Desk



Dr. Shrikant Kallurkar
Conference Chair

It gives me immense pleasure to invite you all to be a part of the 1st IEEE International Conference on Convergence to Digital World - Quo Vadis(ICCDW-2020).

The conference intends to bring together scientists, industry personnel, officials, government and academia from various disciplines and build collaborations to solve critical needs and challenges of the Digital world.

I take this opportunity to welcome all the delegates of the conference. On behalf of the whole IEEE-2020 team, I would like to thank all the authors, sponsors, delegates and keynote speakers for their support and cooperation. The rapid development in technologies and changes in lifestyle impose various issues in many countries. The conference IEEE-2020 has been crafted to challenge the hurdles and we are fortunate to have leading speakers to share their experiences and perspectives to achieve smart solutions through their innovations.

I hope that the conference serves as a locus for interdisciplinary, a space for discourse and collaboration. Last but not the least; I would also congratulate the staff, the teachers, the organisers and the students for their contribution in successfully organising and managing this conference and wish the conference all the success.

I welcome you all to this conference and hope this event will act as a medium for all of us present here to ponder upon the topic of discussion, challenge us to strive towards it and inspire us at the same time. I hope all the participants will have a fruitful and beneficial experience.

Thank you!

Principal

A handwritten signature in black ink, appearing to be "S. K. Kallurkar", written in a cursive style.

**Atharva College of Engineering
Malad(West), Mumbai**



Ms. Karuna Nikum
Organizing Chair

It is my pleasure to welcome all the delegates, participants and attendees for the 1st IEEE Conference on “**Convergence to Digital World**”- Quo Vadis 2020 in Atharva College of Engineering, Malad (West) Maharashtra, India on 18th - 20th Feb 2020. This scenario is an ideal place to collaborate and to meet new players in the emerging fields. Scholars from academia not only can share their knowledge with their peers but also can establish collaborations with industries and even with other research groups.

We should take the ICCDW 2020 event as an excellent opportunity to share our advances in the field, to create synergies between different researchers in academia and industry, to analyze how technology is evolving, and finally to motivate our young engineers to do it better than us.

This program includes one day for two parallel Pre-conference workshops followed by two days of the conference. The Pre-conference workshops cover vital regions of ‘Machine Learning’ and ‘Block chain’. Also, there is an informative Panel Discussion on “Digital world: challenges & opportunities”, which is an excellent platform for discussions, debate and exchange of ideas on current topics.

We thank Honorable Shri. Sunil Rane sir and Dr. Abhay Wagh for his vision and leadership. This conference would not have been possible without the support and hard work of my core organizing committee. We are also grateful to all the authors for their valuable contributions to and thanks to all the reviewers who ensured good quality of selection process with their opinion and experiences on related topics.

A handwritten signature in black ink, appearing to read 'Karuna', written over a horizontal line.

Mrs. Karuna Nikum
Atharva College of Engineering



Mrs. Kavita Bani
Co-Organising Chair

On behalf of the Conference Organizing Committees and IEEE Bombay Section, it is our pleasure to welcome you all to the “International Conference on Convergence to Digital World”- Quo Vadis 2020 in Atharva College of Engineering, Mumbai and we are pleased to host it here.

This year’s theme is “Convergence to Digital World - Quo Vadis”. It was chosen to bring attention to new concepts and technologies that are being developed, deployed, and integrated in the Health in digital world, Digital Environment/world, Energy Efficient Systems & Digitisation In Industries, Smart Grid and thus of the integrated power system of the future.

ICCDW 2020 is an international forum for the presentation of peer-reviewed papers, presentations, and other learning opportunities related to power and energy research, development, and applications. It presents an opportunity for experts from academia, industry, government and other interested organizations from INDIA and abroad to present and discuss the latest developments, trends, and issues, including those on the potential societal impact.

Sincerely,

A handwritten signature in blue ink that reads "Kavita".

Mrs. Kavita Bani
Co-Organising Chair



Ms. Nileema Pathak
Publication Chair

The efforts taken by Shri Sunil Rane, Executive President-AGI; in the field of Science and technology has encouraged today's youth to think innovatively. On behalf of the organizing team of ICCDW 2020, I would like to wish all authors, patrons, and readers a very Happy, Harmonious, and Prosperous Year 2020! Conferences have a strong zest to bring researchers together to discuss and enhance their knowledge in the respective domain. ICCDW is not just a conference but a great meet up for all the technocrats. Such meet-ups always help us to collaborate with the people of interest.

It gives me immense pleasure to write as a Publication Chair of this 1st IEEE international conference on **“Convergence to Digital World – Quo Vadis (ICCDW -2020)”** at Atharva College of Engineering, Mumbai.

Feb 2020, turned out to be vibrant and zealous because of ICCDW. I am stunned and amazed by this flamboyant aura of technology and happy to see the efforts taken by the current generation and of course the diversity was something that left me awestruck. I appreciate the efforts taken by all the researchers and wish them best of luck for their future success.

A handwritten signature in black ink, appearing to read 'Nileema', written over a horizontal line.

Mrs. Nileema Pathak

Department of Information Technology
Atharva College of Engineering



Mr. Sachin Gavhane
Editor

With the zest to support digital India and to boost Research and Development at international platform, Atharva college of engineering has organized its 1st IEEE International Conference on “Convergence to Digital World Quo Vadis (ICCDW – 2020)”, from 18th to 20th Feb 2020. It gives me immense pleasure in writing this message as an Editor of this conference.

The objective of the conference is “to solve critical needs and challenges of the digital world”. The proceedings of *ICCDW* includes abstracts for oral presentations provided by enthusiastic students, practicing researchers, industry personalities and academicians. I extend my warmest thanks to the authors for their interest, enthusiasm and timely submission of research papers and participation in this mega event of more than 400 delegates.

ICCDW is a great platform for all the technocrats. The idea behind *this conference* was to help and motivate researchers to carry forward their work to the next level. As Editor of ICCDW 2020, I anticipate that these proceedings would be of immense value and will definitely be useful to researchers in their practice or thinking process. This collection will also offer a window for new perspectives and directions in the respective horizons.

Happy Tech 2020!!!

A handwritten signature in black ink that reads "Sachin" in a cursive style.

Mr. Sachin Gavhane
Editor – ICCDW 2020
Assistant Professor
Department of Information Technology
Atharva College of Engineering

**MESSAGES FROM INTERNATIONAL ADVISORY
COMMITTEE**



Prof. R. P. Mahonty

I have a great pleasure in wishing all the participants who are participating in the IEEE International Conference on “**Convergence to Digital World- Quo Vadis**” (ICCDW 20) held at Atharva College of Engineering, Mumbai a very productive and learning opportunity.

I am confident that the deliberation will be of high standard to expand the knowledge base of all the delegates.

I am sure under the leadership of Dr. Shrikant Kallurkar, this international conference will attend its stated objective.

A handwritten signature in blue ink that reads "R. P. Mahonty" followed by the date "14.11.2019".

Prof. R. P. Mahonty
Former Vice Chancellor,
Siksha 'O' Anusandhan (SOA) University,
Odisha, India



Prof. Arun Patil

The world is evolving rapidly and progressing faster in the field of science and technology. I am sure that the “IEEE International Conference on Convergence to Digital World - Quo Vadis” (ICCDW 20) will bring together expertise with diverse opinions resulting in the best outcome to make the world a better place to live in. My heartiest congratulations to Atharva College of Engineering for organizing this conference which will attract several participants with common area of interest to nurture fruitful discussion on convergence to digital world in which we are living today.

Adjunct A/Professor
Deakin University, Australia
Vice-Chancellor and President,
Amity University, Rajasthan, India



Mr. A. Ajayaghosh(PhD)

I am extremely happy to know that Atharva College of Engineering, Mumbai is organizing an International Conference on Convergence to Digital World -Quo Vadis (ICCDW-2020) providing an ideal platform for academicians, innovators and technocrats to come together to provide an innovative and comprehensive overview of latest research developments in engineering and technology. As technology is developing at fast pace, we experience new development in every moment. Hence it is necessary to have event like this to share information on the recent innovations and state-of-the-art technologies.

I hope that this conference would certainly induce innovative ideas among the participants about new technologies in the engineering sector. I wish success to the participants and the conference ICCDW-2020.

Director,
CSIR-NIIST,
Trivandrum, Kerala,India



Dr. Jonathan Joshi

Francis Bacon said, “Reading make a full man; conference a ready man; and writing an exact man”. Conferences bring together people of varied experiences and provide an opportunity for everyone to share their thoughts.

The “**International Conference on Convergence to Digital World – Quo Vadis (ICCDW-2020)**” is a great initiative which focused on the future industrial aspects available for Engineering professionals in general and Electronics, Computers and Communications in particular. The Conference provides an open forum for scientists, researchers and engineers to discuss nascent innovations and research advancements in the different areas of engineering fields. It will be a wonderful opportunity for delegates to gain quality input useful for their future research in this knowledge based society.

I congratulate the organizers and wish the conference a great success.

C.E.O at Edivance

Mumbai, Maharashtra, India



Dr. Sanjay S.Dambhare

A conference is a place where true meetings of minds happen and the research foster further. Researchers, who would have done a good deal of thinking about their idea, will come forward and share their thoughts with fellow researchers. The beauty of a conference such as “**Convergence to Digital World – Quo Vadis (ICCDW-2020)**” is that it allows such exchanges which in turn will ignite more ideas and ways of improving the presented ideas. I thank and congratulate the organizing team Atharva College of Engineering for enabling innovation through a conference such as ICCDW-2020.

With the blurred boundaries between domains, technologies getting merged and less compelling technologies practically disappearing, we need to be updated on how our world is evolving and changing. We can use ICCDW-2020 to add value to ourselves, our research and our communities. I wish every success for a great ICCDW-2020.

Dr. Sanjay S. Dambhare
Professor and Head,
College of Engineering, Pune,
India, Maharashtra



Dr. Yashwant V. Joshi

I believe an international conference is an ideal place to collaborate and to meet new researchers in different domains. Academicians not only can share their knowledge with their peers but also can establish collaborations with companies and with other research groups. At the same time, students have the opportunity to understand the emerging trends in technology.

We should take the “**Convergence to Digital World – Quo Vadis (ICCDW-2020)**” event as an excellent opportunity to share our advances in the field, to create synergies between different researchers in academia and industry, to analyze how technology is evolving, and finally to motivate our young engineers to do it better than us.

I wish you the best experience.

Dr. Yashwant V. Joshi
Director, SGGSIET Nanded,
India, Maharashtra

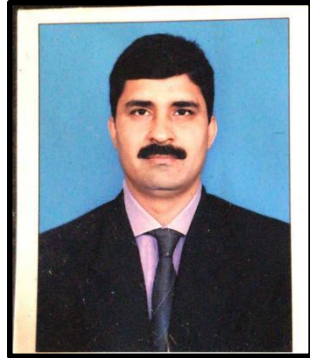


Dr. K G Narayankhedkar

The conferences are necessary to inculcate the culture of information exchange and feedback on developing trends in technologies. I am delighted to note that the Atharva College of Engineering is organizing the International Conference “**Convergence to Digital World – QuoVadis**”. I believe this type of conference not only brings all the researchers, students at one platform, but it also fosters the research culture among the entire fraternity of Education.

I hope that this conference would certainly induce innovative ideas among the participants paving way for new inventions and technologies in all fields of engineering.

Formar Prof. & Dean IIT Bombay
Ex Director VJTI , Mumbai



Mr. Deepak Kotecha

The science and engineering research conducted in academic institutions and elsewhere plays a major role in raising our standard of education, creating jobs and providing for national security and development. I am extremely happy to note that Atharva College of Engineering is organizing the International Conference “**Convergence to Digital World – QuoVadis**”.

I am sure that the conference of this type will inculcate the much needed research culture among the students and teachers and it will lead to increase the interactions among researchers to exchange the ideas of recent advances in the fields of Engineering.

I wish the conference a grand success.

Mr. Deepak Kotecha
Deputy General Manager,
L&T, Mumbai, Maharashtra, India



Mr. Pravin Rajpal

Growth of an individual as well as a group depends on innovation happening around them and how they respond to it. As it is said, change is the only constant thing in the world and a conference such as this provides a platform to share and review changes. In the era of digitization, the topic selection of conference “**Convergence to Digital World – Quo Vadis**” proves its point.

I believe ICCDW-2020 will bring together experts, professionals, researchers & students from all over the world to share and express their views on the latest advances in technology and stimulate inter-disciplinary interactions. I congratulate Atharva College of Engineering and the team members involved in organizing this conference for their efforts and wish the conference all success.

Founder,
INNOVATIONEXT
India



Prof. Y. S. Rao

The “**International Conference on Convergence to Digital World – Quo Vadis (ICCDW-2020)** is an excellent initiative by Atharva College of Engineering to lead on the culture of new discoveries and designs that will bring innovative changes throughout the world. I certainly believe that the conference would help the participants to assimilate the latest industry trends, appreciate and understand its relevance in today’s world and thus position them to bring forth new ideas fuelling growth at international level. Best wishes to all the team members and participants of the conference.

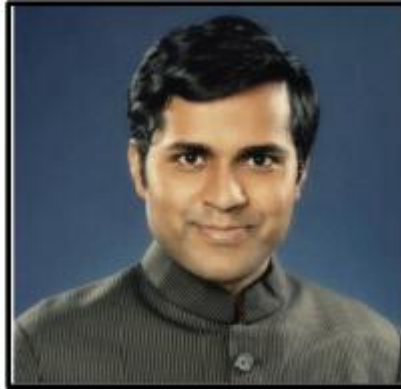
Prof. Y. S. Rao
Professor, SPIT,
Mumbai,India



Dr. Rakesh Saxena

It gives me immense pleasure to know that Atharva College of Engineering is organizing an International Conference on “**Convergence to Digital World – Quo Vadis**”. I believe ICCDW-2020 will serve as a platform to share and review new perspectives in the area of Science and Technology around the globe. I am sure that the interaction of participants and internationally renowned counterparts will go a long way in knowledge sharing to help industry and society to explore, grow and compete globally. My best wishes to all the organizers and participants of the conference.

Dr. Rakesh Saxena,
Director, SGSITS,
Indore, Madhya Pradesh, India.



Mr. Akshay Rathore

To improve quality along with the innovation in processes and to maintain consistency, it's a preliminary step to organize events to integrate diverse ideas. And I believe that the “**IEEE International Conference on Convergence to Digital World -Quo Vadis” (ICCDW 20)**” organized by Atharva College Of Engineering, Mumbai aims to achieve such a perspective. High quality contents delivered to encourage and mold the abilities of the individuals in a right direction through such a platform is of prime importance in the education field. Regardless of the age constraint, when minds collaborate to establish and invent ideas to shape the future, it enhances the ability to create a positive learning atmosphere. I convey my heartiest congratulations to all looking forward to this conference and wish that you make the best out of it.

Mr. Akshay Rathore (PhD)

Associate Professor,

Concordia University Montreal,

Canada

**MESSAGES FROM TECHNICAL PROGRAM
COMMITTEE**



Dr.VenkataYaramasu

The technology used in various fields of engineering is advancing at a tremendous pace every passing day. There has been a boom in the usage of the internet and the demand for high speed access to video and data is ever increasing. 10 years before, 3G and 4G were a distant dream, but today a lot of research is going on in the field of 5G as well.

In such a scenario, organizing such a conference is of paramount importance. This will enable researchers from different domains to share their views on a common platform. In Particular, I would like to congratulate Atharva College of Engineering (ACE), Mumbai for taking such a promising initiative. This will not only help the students by opening the vistas of opportunities in various fields of engineering, but also promote learning and sharing of ideas for the faculty members. I am confident that this conference will indeed generate a lot of interest among the students to explore and pursue the area of research, thereby bringing laurels to your institute and developing our society as a whole.

Dr.VenkataYaramasu,

Assistant,Professor,

Dept. of Electrical & Computer Engineering

Northern Arizona University, US



Dr. Aditya Abhyankar

The advanced digital transformation which is going on around has created new jobs, new associations, and even new parts of the economy. So I accept that the determination of conference theme "**Convergence to Digital World – Quo Vadis**" demonstrates its point. ICCDW-2020 will be the meeting to give chances to experts, scientists and understudies from everywhere throughout the world to share and express their perspectives on current time. By sensible suspicion I can say that, Atharva College of Engineering will be unquestionably one of those gatherings focused on structure a superior advanced, inquire about situated world for all.

The meeting "ICCDW-2020" will function as impetus for the equivalent. I wish the gathering an incredible achievement.

Dr. Aditya Abhyankar

Dean,
Savitribai Phule Pune University,

Maharashtra,India



Dr. Anoop Arya

The “**International Conference on Convergence to Digital World – Quo Vadis 2020**” (ICCDW 2020) is an excellent initiative by Atharva College of Engineering to lead on the culture of new discoveries and designs that will bring innovative changes. I certainly believe that the conference would help the participants to assimilate the latest industry trends, appreciate and understand its relevance in today’s world and thus position them to bring new ideas fuelling national growth.

I am confident that this conference will enrich high-quality research in all aspects of communications and digital world, and will foster interaction and exchange of ideas.

I look forward to an exciting week of insightful presentations, discussions, and sharing of technical ideas with colleagues and students from around the world.

Dr. Anoop Arya
Associate Professor,
MANIT Bhopal, India



Dr.S.G Bhirud

The conference titled "Convergence to Digital World – Quo Vadis 2020" gives a stage to dialog on different specialized points identified with building just as science and innovation. This is a meeting of global importance. The procedures speak to insightful work of cutting edge and inventive scholars and researchers from around the globe. It is felt that it is just through the trading of data that one can plan to stay aware of the quickly changing world around us.

I wish every one of the representatives, an incredible instructive and useful involvement with the gathering. My best wishes to the coordinators of the gathering.

Dr. S. G. Bhirud
Professor
Department of Computer Engineering and IT
VJTI, Mumbai, India



Prof. Faruk A. S. Kazi

Computerized advances are making a major buzz on the planet today. Digital transformation is the most recent crucial move in innovation. Researchers can focus on SMAC, Internet of Things, Automation and Sensor systems, Industry 4.0. These are a emerging fields and researchers can upgrade their insight and carry on research in these fields.

My all the best to all understudies, researchers of the meeting to make the most out of this occasion by learning the uses of advances. I am sure this conference titled "Convergence to Digital World – Quo Vadis" will explore new horizons of research in Digital transformation.

Prof. Faruk A. S. Kazi
Dean-Research,Development & Consultancay
Electrical Engineering Department,
VJTI, India



Dr. Aashish Mathur

The “**International Conference on Convergence to Digital World – Quo Vadis**” provides a platform for discussions on various technical topics related to engineering as well as science and technology. IEEE conferences have international significance. The proceedings represent scholarly work of advanced and innovative researchers and educators from around the world. I am sure this conference will explore new horizons of research in digital transformation.

I wish all the delegates, a great educational and informative experience at the conference. My best wishes to the organizers of the conference.

Dr. AashishMathur
Assistant Professor,
Dept. of Electrical Engg.
Indian Institute of Technology Jodhpur,India



Dr. Sabharaj Arya

It gives me enormous joy to invite all of you to The International Conference on “**Convergence to Digital World – Quo Vadis 2020**”. The platform will give significant experiences on worldwide advancement patterns, and features the difficulties looked by scientists in keeping up or improving their innovation.

I salute the college and the organizing team for their endeavors in arranging and taking an interest in this gathering and wish the conference all the achievement.

Dr. Sabha Raj Arya
Associate Professor,
SVNIT Surat, India



Prof. Tripta Thakur

The conference titled "**Convergence to Digital World – Quo Vadis 2020**" gives a stage to discourses on different specialized points identified with designing just as science and innovation. I want to compliment Atharva College of Engineering (ACE), Mumbai for taking such a promising activity.

This won't just assistance the understudies by giving information of upcoming patterns in different fields of designing but also advance learning and sharing of thoughts for the researchers. I am sure that this gathering will undoubtedly produce a great deal of enthusiasm among the understudies to investigate and seek research in different horizons.

Prof. Tripta Thakur
Professor,
Maulana Azad National Institute of Technology,
Bhopal, India.



Dr. Rakesh Maurya

It gives me delight to know that Atharva College of Engineering is organizing International Conference on “**Convergence to Digital World – Quo Vadis 2020**”. I am positive that this gathering will provide ground-breaking ideas to beat note-worthy issue showing up in the society by the creative thoughts and advancements of innovators and understudies.

I wish the conference an incredible achievement.

Dr. Rakesh Maurya
Associate Professor,
SVNIT Surat, India



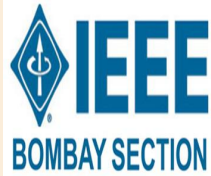
Ms. Priyanka Paliwal

I am delighted to be a part of the "**Convergence to Digital World – Quo Vadis 2020**". The occasions in the conference are focused towards analysts, specialists, experts, instructors and understudies to share their experience, imaginative thoughts, issues and future bearings in the field of Engineering and Science and Technology.

My best wishes to all understudies of the conference to make the most out of this occasion by collaborating and learning advances in engineering and technology.

Ms. Priyanka Paliwal
Assistant Professor
Electrical Engineering Department,
MANIT Bhopal
India

INTERNATIONAL CONFERENCE ON



CONVERGENCE TO DIGITAL WORLD- QUO VADIS 2020

Theme Paper on Digital World

Technology can become the 'wings' that will allow the educational world to fly farther and faster than ever before. Today, necessity of emerging world is Digital Transformation. It involves numerous layers of technology adoption and revolution management. Owing to the need to adapt and move fast, companies leverage latest technologies such as Artificial Intelligence, Virtual Augmentation, Machine Learning, IoT, Mobility and Cloud to build disruptive products and reinvent business models. The International conference at Atharva College of Engineering, aims to spark discussion on the convergence to digital world in the field of Engineering and Technology by incorporating innovative ideas and employing advanced technologies. Emphasis is laid on the recent development which contributes to digital world in the field of Electrical, Electronics, Telecommunication, Mechanical, Computer Engineering and Information Technology covering various aspects.

In the field of applied computing and Computer Engineering, the focus will be on IoT and Nano sensors, Big Data, Analytics, Cloud Computing, Artificial intelligence and robotics, Human computer interaction, Formal semantics, Computer and System Security, Knowledge Acquisition and Expert systems, Algorithmic Information theory, Design Automation, Smart materials & Intelligent systems, Speech synthesis, Usability Engineering, Android Technology, Data mining and Algorithm analysis.

The innovations in the area of Robotics, Artificial Intelligence (AI), 3D printers, Embedded Systems, RF and microwave, has made the world closer to technological developments and the economical growth. The landscape of this digital age is increasingly being driven by innovations in e-communications, e-commerce and ever increasing deployment of the internet to create massive communication using high technology.

The field of Digital health promises to change the face of healthcare, growing interest in the digital health space such as Tele-health, Telemedicine, Remote Patient Monitoring, Digital Therapeutics, Diabetes Management and Smart Home. These technologies include both hardware and software solutions and services.

Energy technology providers are playing a key role in digitizing the industry, releasing a suite of smart turbines and panels, and sensors for commercial infrastructure. They are also developing connectivity platforms for industrial, commercial and retail customers via digital connectivity. As the sector continues to adapt to the various transformations taking place, digitization must be a key

priority, and, indeed, can support development of new business models to respond to these industry shifts. Smart Cities, Smart Grids, Smart Agriculture are no more hypothetical.

Digitisation is one of the most important topics for the mechanical engineering sector as it looks to the future. It offers immense benefits for companies in terms of productivity and performance. The sector's 'cloudification' is facilitating the access of Small and a medium-sized enterprises (SMEs) to cloud-based high-performance computing that is highly customisable and cost-saving. To unlock the full potential of the cloud and data for SMEs, more action is needed to standardise data treatment and scale-up investments in digital infrastructure. The digitalisation of the mechanical engineering industry has been progressing steadily. Essential functions of its value chain are increasingly being digitalised thus enhancing the industry's product portfolio with digital functionalities and introducing innovative, data-based services.

IoT is the paradigm empowered by the advancement of a number of distinctive technologies, including the internet, wireless communication technologies; cloud computing, sensors, big data analytics and machine learning algorithms.

Data Sciences is another field which was once just all about gathered information, run analytics and unearthed information that could help with future decisions. The scenario has grown to identify insights for immediate decisions and enable faster and better decision making. As the advancements in these fields are growing leaps and bounds, performance and security has also become a matter of concern. Cyber crime and data compromises are growing rapidly as Information and

communications Technology are employed on a large scale. Thus the gravity of developing internet - secure environment is on high demand.

This conference aims to bring together researchers, practitioners, academicians, industrialists, professionals with multi-disciplinary interest related to all discipline and provide a platform to meet and interact for fruitful debate and discussions. Thus, it will be possible to share the scientific and industrial activities in these fields, to contribute the industry-institute cooperation.



18th& 20th February-2020

International Conference on Convergence to Digital World - Quo Vadis

IEEE CONFERENCE ID #45521

SCHEDULE

Day-1:- 18/02/2020 (Pre-Conference Workshops)		
TIME	SCHEDULE	VENUE
08:30A.M Onwards	Registration for Workshops	Phase-I Ground Floor
Pre-Conference Workshops		
Workshop on " Machine Learning " (For Students only)	Workshop on " अधिम तन्त्र ज्ञान " – Advanced System Ingenuity (For Professionals only)	
SPEAKER: 1 Mr. AkashKhamkar Time: (10:30 A.M to 12:00 P.M) SPEAKER: 2 Mr. Arjun Pukale Time: (12:00 P.M to 01:30 P.M) Venue: (CC lab, 5 th Floor)	Workshop is sponsored by Datagami Company SPEAKER 1 : Mr. Manoj Singh Time: (11:00 A.M to 01:00 P.M) SPEAKER 2: Mr. Kaushal Shah Time: (02:00 P.M to 04:00 P.M) Venue: (Smart Classroom -2 , 5 th Floor, Phase-I)	

19th& 20th February-2020

1st IEEE International Conference on Convergence to Digital World - Quo VadisIEEE

CONFERENCE ID #45521

SCHEDULE

Day-1:- 19/02/2020		
Time	Schedule	Venue
08:30 A.M Onwards	Registration	Phase-I, Ground Floor
08:30 A.M - 09:30 A.M	Breakfast	Phase-III, Ground Floor
INAUGURATION		
09:30 A.M - 09:35 A.M	Lighting of Lamp	Phase-III, Seminar Hall, 4 th Floor
09:35 A.M - 09:40 A.M	Welcome Address Dr. P. N. Nemade, Director, ACE	
09:40 A.M - 09:45 A.M	Opening Remarks Ms. Karuna Nikum, Organizing Chair	
09:45 AM - 09:55 AM	Address by Patron Shri. Sunil Rane, Executive President, Atharva Group of Institutes	
09:55 AM - 10:10 A.M.	Address by Guest of Honor Mr. R. P. Deshpande, Chief Information Officer, Teleperformance, DIBS, Mumbai	
10:10 A.M. - 10:20 A.M.	Address by Chief Guest Prof. S. S. Mantha, Former Chairman, AICTE, New Delhi	
10:20 A.M. - 10:25 A.M.	Concluding Remarks Dr. S. P. Kallurkar, Principal, ACE	
10:25 A.M. - 10:30 A.M.	Vote of Thanks Dr. Mamta Meena	
10:30 A.M. - 11:00 A.M.	Tea Break	
11:00 A.M – 11:15 A.M	Group Photograph of all Participants and Members	
11:15 A.M – 12:45P.M	Keynote session Mr. R. P. Deshpande	Phase-III, Seminar Hall, 4 th Floor
12:45 P.M. - 01:00 P.M	Inauguration of Poster Presentation by Chief Guest Prof. S. S. Mantha	Phase-I, 1 st Floor
01:00 P.M - 02:00 P.M	Lunch	Phase-III, Ground Floor
02:00 P.M - 03:30 P.M	Parallel Session of Paper/Poster Presentation	Phase-I
03:30 P.M - 03:40 P.M	Tea Break	
03:40 P.M - 05:00 P.M	Parallel Session of Paper/Poster Presentation	

1st IEEE International Conference on Convergence to Digital World- Quo Vadis (ICCDW-2020)

Day-2: 20/02/2020		
Time	Schedule	Venue
08:30 A.M Onwards	Registration	Phase-I, Ground Floor
09:00 A.M - 09:30 A.M	Breakfast	Phase-III, Ground Floor
09:30 A.M - 11:00 A.M	Parallel Session of Paper/Poster Presentation	Phase-I
11:00 A.M - 11:10 A.M	Tea Break	
11:10 A.M - 01:00 P.M	Parallel Session of Paper/Poster Presentation	
01:00 P.M - 02:00 P.M	Lunch	Phase-III, Ground Floor
02:00 P.M – 02:45 P.M	Keynote Session 1: Dr. Aditya Abhyankar, Dean, Faculty of Technology, Savitribai Phule University,Pune	Phase-III 4 th Floor, Seminar Hall
02:45 P.M - 03:30 P.M	Keynote Session 2: Mr. Amit Nikum, CEO and Founder, SNAS IoT Laboratories Pvt. Ltd.	
03:30 P.M – 04:00 P.M	Panel Discussion on: “Digital World- Challenges & Opportunities” Dr. Aditya Abhyankar Dr. Deepak Waikar , Dean, Faculty of Tech. University of Pune Vice-Chair, IEEE Education Society, Singapore Mr. Gulrez Khan, Mr. Ashish Gangrade, SNAS IoT Lab Pvt. Ltd., Pune BDO INDIA LLP. Mumbai Ms. Deepali Maste, Mr. Pranav Nerurkar, HOD-INFT, ACE, Mumbai Asst. Prof. NMIMS, Mumbai Ms. Neha Singh, Mr. Prem Raval ACE, Mumbai Student Representative, ACE	
04:00 P.M – 04:10 P.M	Tea Break	Phase-III, Ground Floor
VALEDICTORY		
04:10 P.M - 04:15 P.M	Welcome Address Ms. Kavita Bani, Co-organizing Chair	Phase-III, 4 th Floor, Seminar Hall
04:15 P.M - 04:20 P.M	Report of Rapporteur Mr. Sachin Gavhane	
04:20 P.M - 04:25 P.M	Views of Participants	
04:25 P.M - 04:30 P.M	Address by Guest of Honor Dr. Aditya Abhyankar	
04:30 P.M - 04:35 P.M	Address by Chief Guest Dr. Deepak Waikar	
04:35 P.M - 04:40 P.M	Concluding Remarks Dr. S. P. Kallurkar, Principal, ACE	
04:40 P.M - 04:55 P.M	Vote of Thanks Ms. Karuna Nikum, Organizing Chair	
04:55 P.M - 05:00 P.M	Distribution of Prizes for Paper & Poster Presentation	
05:00 P.M - 05:05 P.M	Group Photograph of all Participants and Members	

CONTENT

Sr. No.	Paper ID	Title & Author
1	165	Sakshi Gunde, Sudha Gupta, Annu Abraham, <i>”Evolution of technical advents in Fundus Camera to detect Diabetic Retinopathy”</i>
2	192	Pooja Khatri, Sushma Kadge and Uday Chhatre, <i>”Review on different applications using Visual Vibration Analysis”</i>
3	134	Kavita Bani and Vaishali Kulkarni, <i>”Simulation & Analysis of IEEE 802.22 Cognitive Radio Network”</i>
4	175	Mr. Rishabh Sanghai, Mr. Prashant Saundalkar, Mr. Jasim Mallick and Dr. Bhavin Shah, <i>Sort-X’ “Consignment Sorting System”</i>
5	178	Dr. Bhavin Shah, Prof. Kunal Shriwas, Prof. Nilesh Gode and Prof. Mohan Kumar, <i>”Preparation of clean, moisture free, oil & dirt free Compressed Air using Quarter Water Vessel Mechanism, Silica Layers Chamber & Rollers with fins & Filters Chamber”</i>
6	181	Saras Wadhonkar, Raj Raorane, Sayali Patil and Prajakta Borole, <i>”Health Monitoring System Using Wearable Sensor Network For Workers In Industry”</i>
7	191	Prajakta Borole, Dr. Shrikant Kallurkar and Dr. Pravin Nemade, <i>”Massive Open Online Course -The Innovative Way to groom students for Employment”</i>
8	185	Ranjit Roy, Tanmay Das and Kamal Krishna Mondal, <i>”Optimal Reactive Power Dispatch for Voltage Security using JAYA Algorithm”</i>
9	274	Anirban Chowdhury, Ranjit Roy and Kamal Krishna Mondal, <i>”Optimal allocation of wind based DG for enhancement of technical, economic & social benefits using Jaya Algorithm for radial distribution networks”</i>
10	5	Karuna Nikum, Abhay Wagh, Rakesh Saxena and Priti Singh, <i>”Economical Approach for SVC Systems to Improve Power Quality using Fully Indigenous Technology”</i>
11	249	Garima Gurjar Unhale, Priyanka Sharma, Rashmi Chaugule and

		Priyanka Tripathi, <i>Review of Hybrid Electric Vehicle and it's optimization using MPPT Algorithms</i>
12	57	Advait Rane, Prathamesh Nate, Chirayu Kushalkar, Pranav Pawar, Suraj Bharadwaj Tripathy and Garima Gurjar, <i>Design of Boost converter using PID controller for efficiency maximization</i>
13	60	Darshan Makwana, Shubham Gamre, Divyesh Khandhedia, Shankar Warang and Karuna Nikum, <i>Gravitator - A gravity based power generator</i>
14	63	Dhirendrakumar Rajak, Yash Nandgaonkar, Omkar Lamkhade and Samihan Raje, <i>A comparative Analysis of energy storage on Fuel cell and Lithium ion battery : A case study</i>
15	78	Shreyas Kulkarni, Namrata Walavalkar and Harshali Sapkal, <i>Applications of CHP Concept in Major Indian Industries</i>
16	155	Nitin Shekapure and Dr. Shrikant Kallurkar, <i>Significance of business incubation in practice</i>
17	22	Abhilasha Saini, Dr. Sudhir Bhardwaj, Dr. Bright Keswani, Dr. P.N. Nemade and Ajit Somani, <i>Global measurements in relativistic collisions in terms of rapidity density</i>
18	35	Dr. Jyoti R. Amare, <i>Characterization of carbon nano-tubes in liquid crystal mixtures</i>
19	218	Dr. Ritu Sharma, Dr.P.N. Nemade and Dr.S.P Kallurkar, <i>Group Discussion: As an innovative tool to be employable in professional industry</i>
20	248	Dr.Nidhi Gupta, <i>Software Reliability Estimation with ART Network of Artificial Neural Network Using Execution Time Model</i>
21	283	Sameer Katakdounde and Dr. Udai Chandra Jha <i>Significance of six sigma tools for industrial application based on full pledge manufacturing activities - A Review</i>
22	296	Priyanka Patel, Dr. Pravin Nemade, Dr. Bhushan Sonawane and Dipa Patel, <i>Oraganic – Inorganic hybrid coating using silica-sol</i>
23	298	Dipa Patel, Dr. Pravin Nemade, Dr. Bhushan Sonawane and Priyanka

		Patel, <i>Review work on adsorption of metal ions by employing coir pith</i>
24	258	Prabhat Gupta, Megha Bhat, Vinaya Khamkar, Gauri Tandel and Gauri Salunkhe, <i>Resin 3D Printer</i>
25	259	Komal Patole, Priyanka Karan, Deepak Gupta and Sujit Mishra, <i>A comparative study of conventional and vedic multipliers</i>
26	268	Shikha Malik and Ruchi Chauhan, <i>Securing the Internet of Things using Machine Learning: A Review</i>
27	278	Nivedita Gadade, Aditi Parab, Rinku Choudhary, Yashita Gaikwad and Mohan Kumar, <i>Holographic display with gesture control</i>
28	288	Ruchi Chauhan, Jyoti Kolap and Shikha Malik, <i>A Survey on Mitigation Techniques of Denial of Service Attack on Internet of Things</i>
29	16	Jyoti Dange, R.P.Singh R.P.Singh and Vikas Gupta, <i>Beam Scheduling scheme for Interference Suppression in Millimeter-Wave Cellular Network toward 5G</i>
30	28	Mahalaxmi Palinje, <i>FinFET based PLL</i>
31	69	Gauri Vaidya, Ketki Vaidya and Kishor Bhosale, <i>Text Recognition System for Visually Impaired using Portable Camera</i>
32	73	Supriya Dicholkar and Deepthi Sekhar, <i>Review-IOT Security Research opportunities</i>
33	144	Harshraj Pardhi, Mahesh Chavan, Kirtan Shirodkar, Yash Nikam and Jyoti Kolap, <i>3D Printed Bionic Arm</i>
34	162	Jyoti Mali, Dr Pravin Nemade and Dr Shrikant Kallurkar, <i>Active Learning & E-learning in Engineering Education</i>
35	163	Shweta Mahadev Chavan, Suraj Sanjay Patil, Shreeraj Sanjay Palande, Satish Abhangrao Rajnale and Jyoti Mali, <i>Advanced Military Wearable Technologies</i>
36	182	Pawan Badsewal, Kunj Bhatt, Darshil Chheda, Harsh Vaghani and Jyoti Mali, <i>TechTreat using Machine Learning</i>
37	228	Gauri Salunkhe, Akansha Bhargava and Jyoti Dange, <i>Review of Tools & Teaching techniques utilized for improvement of undergraduate Digital Signal processing course</i>
38	246	Vivek Ramakrishnan, <i>Exposure Fusion using Particle Filtering Techniques</i>
39	247	Nilesh Gode, Bhavin Shah and Jyoti Gurav, <i>Imbalanced Classification</i>

		<i>in Predictive Modelling simulate with R</i>
40	250	Mohan Kumar, Bhavin Shah, Nilesh Gode and Vivek Ramakrishnan, <i>"Efficient use of Electricity at home by the use of technology and consumer behavior"</i>
41	36	Nileema Pathak, <i>"Bridge Health Monitoring using CNN"</i>
42	84	Tanvi Kapdi, <i>"Blended learning for enhancing student's learning experiences"</i>
43	151	Renuka Nagpure, Sumita Chandak and Nileema Pathak, <i>"Breast Cancer Detection using Neural Network Mammogram"</i>
44	19	Udit Doshi and Vaibhav Barot, <i>"Emotion Detection and Sentiment Analysis of Static Images"</i>
45	20	Lavany Jadhav, Kapil Parekh, Vikas Gupta and Sumita Chandak, <i>"Using Virtual Reality for therapeutic treatment of phobia"</i>
46	27	Natasha Ambre, Arpita Bhagat, Ninad Chavan and Deepali Maste, <i>"Augmented Reality Application to ameliorate learning experience using psychological traits"</i>
47	62	Kapil Parekh, <i>"Technical Analysis Test for a Weak-form of Efficient Market Hypothesis"</i>
48	147	Shrajna Shetty, Shubham Shetty, Varsha Vishwakarma and Smita Patil, <i>"Review paper on various Door Lock Security Systems"</i>
49	60	Darshan Makwana, Shubham Gamre, Divyesh Khandhedhia, Shankar Warang and Karuna Nikum, <i>"Gravitator - A gravity based power generator"</i>
50	123	Sidharth Dhiman, Rohan Thakur, Asavari Kamble and Kalpita Saggam, <i>"The Wastewater treatment plant"</i>
51	128	Anjali Jawale, Mayuri Malvankar, Anagha Padte and Sarita Chauhan, <i>"Electric Vehicle: Indian Government Policies and Challenges"</i>
52	194	Aaditya Pandey, Rutuja Borkar, Suraj Kumbhar, Pranali Ghunke and Pragya Jain, <i>"Comparison of Power Electronic Converters with Sliding Mode Control and Open Loop Control"</i>
53	206	Vanya Goel, Romesh Chandra, Amitava Roy and Namita

		Maiti," <i>Electrostatically and Electromagnetically Focused 60kW Electron Gun for High Voltage Applications</i> "
54	208	Priti Singh, A. Majumder, Dr. A. K. Pulhani, Dr. G. Sridhar and Dr. Namita Maiti," <i>Methods of High-Density Plasma Generation</i> "
55	227	Kshipra Pandey, Sangeeta Kotecha and Nirajkumar Pandey," <i>Automatic Estimation of Equivalent Circuit Parameters of Induction Motors for Drives</i> "
56	239	Harshali Sapkal, Sanjana Wagh, Prachi Talokar and Uday Vishvekar," <i>Review of Isolated DC Microgrid coalescing Maximum Power Point Tracking and PV Array to produce electric energy</i> "
57	244	Shreyas Kulkarni, Namrata Walavalkar, Varoon Chhatre, Pratiksha Singh and Priyanka Sharma," <i>Review of Optimization of Charge on VRLA Battery And Lithium Ion Operated Bike</i> "
58	267	Suresh Deshmukh and Prasannati Kulkarni," <i>To Optimize the Conduct of a Photovoltaic Structure Using different DC-DC Conversion Topologies with Emerging Methods for Control Algorithms</i> "
59	272	Apurva Khachane," <i>Torque Ripple Minimization of Switched Reluctance Motor and Comparison of Controllers for Electric Vehicle Application</i> "
60	152	Ajay Kumar, Abhishek Kumar, Abhijeet Thakare, Mansi Shah and Aruna Pavate," <i>Landmines Detection Using Migration and Selection Algorithm on Ground Penetrating Radar Images</i> "
61	102	Sachin Gavhane, Amruta Pokhare and Sanjay Shitole," <i>Non-Parametric Method for enhancement of darker portion in an image</i> "
62	297	Venkata Sai Krishna Vanama, Sanjay Shitole and Y. S. Rao," <i>Urban flood mapping with C-band RISAT-1 SAR images: 2016 flood event of Bangalore city, India</i> "
63	90	Kungumakarhikeyan Venkatachalam, Uddhabendra Maity, Atharv Shetty, Dr. Sameer Nanivadekar and Prof. Vishal Badgujar," <i>Autonetics and Administration for IT Laboratories</i> "
64	92	Sameer Dev, Yogendra Kokamkar and Sudama Jaiswal," <i>Voice Based Smart Assistive Device for Visually Impaired People</i> "

65	94	Chaitanya Bysani, Ajinkya Huddar and Chintan Suchak, <i>"Dexter- The College FAQ Bot"</i>
66	96	Srinivas Vishwanath and Saurabh Sharma, <i>"Vehicle Parking Management System"</i>
67	113	Sujatha Ramesh and K. Natarajan, <i>"A Study of Satellite Networks and Educational Technologies for Ubiquitous Education"</i>
68	121	Harshit Singh, Dhyanikumar Palan, Ruhi Shinde and Mudra Doshi, <i>"Health Monitoring and Analysis System using IPFS and Blockchain."</i>
69	125	Sanyog Vyawahare and Kaustubh Chakradeo, <i>"Chatbot Assistant for English as a Second Language Learners"</i>
70	129	Advait Maduskar, Aniket Ladukar, Shubhankar Gore and Neha Patwari, <i>"Health Monitoring and Analysis System using IPFS and Blockchain."</i>
71	139	Prajwal Ravishankar and Geethakumari, <i>"Classification of IoT Binaries in Resource Constrained Environments"</i>
72	294	Mayank Vyas, Priya Khanzode, Sunita Sanap, Jidnesh Mhatre and Vivek Ramakrishnan, <i>"IOT Based ICU Patient Monitoring System"</i>
73	299	Joslyn Gracias, <i>"Prospective Synthesis for Evaluation System of EMG Information Signal- An Overview"</i>
74	4	Shreya Tembe, Smita Pawar and Saher Khan, <i>"Design of an affordable pH module for IoT based pH level control in Hydroponics Applications"</i>
75	114	Harish Yadav, Sneha Choudhary, Aishwarya Verma, P.B. Karandikar, A.P. Karandikar and R.M. Holmukhe, <i>"Techno Commercial Solutions in Road side Distribution Transformers"</i>
76	135	Ravindra Sonavane and Adhyayan Sonavane, <i>"Classification of Brain Tumor and Mammogram Images Using Adaboost and Learning Vector Quantisation Neural Network"</i>
77	215	Minal Fegade, Harshprabha Paliwal, Dr. Navneet Agrawal, Ajay Singh and Suriti Gupta, <i>"Design a microstrip patch 5G antenna with modified defective ground structure"</i>
78	223	Atharva Ajaonkar, Shriniket Vichare, Rohan Badgujar, Manisha Bansode, Deepak Karia and Abhay Bambole, <i>"Remote Structural Health Monitoring"</i>
79	225	Karuna Gamare and Ranjan Bala Jain, <i>"Cancer Cell Detection using 2D Photonic Crystal"</i>
80	230	Bonthula Swetha, Jamparangi Veda Srith and Azees Maria, <i>"Efficient Anonymous Authentication and Key Management Schemes for Secure Service Provision In VANETs"</i>
81	275	Ameya Kulkarni and Neha Rai, <i>"Cluster Based Object Tracking System"</i>

		<i>Using Triangulation With Improved Energy Efficiency”</i>
82	160	Deepa Chakravarty and Debasish Pradhan, <i>”Segmentation of Images with Tubular Features based on Tight-Frame Technique”</i>
83	187	Yasmeen Shaikh, Vasudev Parvati and Sangappa Biradar, <i>”Role of IoT and Bigdata Analytics in Healthcare for Disease Prediction”</i>
84	189	Rishikesh Kadam, Vishakha Vidhani, Anushree Bane, Bhavika Valecha and Nupur Giri, <i>”Land Records System Using Hybrid Blockchain”</i>
85	190	Dr. Sharvari Sane and Gururaj Chaughule, <i>”Application Of Business Modelling Tools In The Analysis Of Business Case.”</i>
86	198	Sahil Jobanputra, Varsha Kukreja, Mukesh Jha and Dr. Radha Shankarmani, <i>”Universal Research Portal”</i>
87	207	Akshata Churi and Dr. Vinayak Shinde, <i>”Alphanumeric database security through digital watermarking”</i>
88	211	Sandhya Vijayasathy and Abhishek Murkute, <i>”Federated Learning – A Review”</i>
89	219	Vinayak Bharadi and Geetanjali Sawant, <i>”Permission Blockchain based Smart Contract utilizing Biometric Authentication as a Service: A Future Trend”</i>
90	221	Anisha Poojary, Avinash Chourasiya, Karan Jha and Prof Satish Ranbhise, <i>”Biometric Authentication System using Hand veins”</i>
91	222	Zhouyu Yang, Ningyue Peng and Chengqi Xue, <i>”Exploratory Search Behaviors in Linear List Visualization”</i>
92	224	Purnima Ahirao, Srijan Das, Rishabh Rupani and Suyash Jadhav, <i>”Prevention Technique for Social Engineering based Internet Banking fraud”</i>
93	226	Vinayak Bharadi and Pravin Jangid, <i>”Evolving Authentication Design Consideration and BAAS Architecture for Internet of Biometric things”</i>
94	1	Sanket Sawant, Aniruddha Patil, Pratik Mahale and Nikhil Nair, <i>”Implementation of an Energy Efficient BLDC Motor in a Ceiling Fan”</i>
95	138	Deepali Maste, Nikita Patil and Mamta Meena <i>”Review of Health Care database”</i>
96	233	Akansha Bhargava, Gauri Salunkhe and Kishor Bhosale <i>”A Comprehensive Study and Detection of Anomalies for Autonomous Video Surveillance Using Neuromorphic Computing and Self Learning Algorithm”</i>
97	273	Jonas Robin, Mehul Soni, Rishabh Dubey, Nimish Datkhile and Jyoti Kolap <i>”Computer Vision for Hand Gestures”</i>
98	277	Jyoti Dange, Shravani Mhashelkar, Geetanjali Gajare, Mahindra Patel and Mehul Chavan <i>” Heuristic- Based Phishing Site Detection”</i>
99	310	Samuel Jacob, Mandar Warde and Pratibha Dumane <i>”Impact of Augmented Reality as an ICT tool to Deliver Engineering</i>

		<i>Education Content</i>
100	311	Monika Shah and Dr. Preeti Mehta , <i>“C field perfect fluid cosmological model in LRS Bianchi type-I universe”</i>
101	313	Gajendra Raut, Aditya Raut, Jeevan Bhagade, Jyoti Bhagade and Sachin Gavhane <i>“Deep Learning Approach For Brain Tumor Detection And Segmentation”</i>
102	122	Neha Singh, Neha Kunte and Sinu Mathew <i>“Impact of income level of an individual on his BMI and performance analysis using various Machine Learning Approaches on ATUS Survey 2014-16”</i>

ABSTRACTS

Sr. No.	Paper ID	Title
1	165	Sakshi Gunde, Sudha Gupta, Annu Abraham <i>Evolution of technical advents in Fundus Camera to detect Diabetic Retinopathy</i>

Abstract— In the field of ophthalmology, fundus camera has gained interest in current years for retinal screening. It is a specialized medical device which facilitates the user to capture the interior surface of the eye consisting of the retina, optic disc, macula and posterior pole (fundus). Fundus imaging helps in diagnosis of various ocular diseases among which Diabetic Retinopathy (DR) is currently one of the prime sources of blindness. Depending on the severity of the disease, various imaging modalities are required for understanding of the disorder and its management. Fundus camera has shown evolution with reference to its design principle which includes a field of view angle, state of the pupil (dilated or not), portability and other additional features. This field of fundus imaging is evolving quickly with several advents in the enhancement of treating the DR patients as well as for the ease of use for the operator. The paper is aimed to highlight the technical advents of mainly three type of fundus photography for the retinal imaging and screening where retinal abnormalities are taken into account to detect DR, providing a gist of technologies which will be helpful for the researchers and product designers in the area of ophthalmology and optical system designing.

Sr. No.	Paper ID	Title & Author
2	165	Sakshi Gunde, Sudha Gupta, Annu Abraham <i>Evolution of technical advents in Fundus Camera to detect Diabetic Retinopathy</i>

Abstract— In the field of ophthalmology, fundus cameras have gained interest in current years for retinal screening. It is a specialized medical device which facilitates the user to capture the interior surface of the eye consisting of the retina, optic disc, macula and posterior pole (fundus). Fundus imaging helps in diagnosis of various ocular diseases among which Diabetic Retinopathy (DR) is currently one of the prime sources of blindness. Depending on the severity of the disease, various imaging modalities are required for understanding of the disorder and its management. Fundus camera has shown evolution with reference to its design principle which includes a field of view angle, state of the pupil (dilated or not), portability and other additional features. This field of fundus imaging is evolving quickly with several advents in the enhancement of treating the DR patients as well as for the ease of use for the operator. The paper is aimed to highlight the technical advents of mainly three type of fundus photography for the retinal imaging and screening where retinal abnormalities are taken into account to detect DR, providing a gist of technologies which will be helpful for the researchers and product designers in the area of ophthalmology and optical system designing.

Sr. No.	Paper ID	Title & Author
3	192	Pooja Khatri, Sushma Kadge and Uday Chhatre <i>Review on different applications using Visual Vibration Analysis</i>

Abstract— Humans are not able to detect all kinds of visible objects' movement. The human eyes can detect large motions like passing of vehicles, trains, waves of water, etc. and their ears

are capable of catching smaller and faster movement of sound. So the human can notice the motion that are large and that can change the average shape or location of objects. The motion that does not change the average shape or location of the object is unnoticed or unseen by the naked human eye. These small and minute motions of the visible object are known as vibration. The unnoticed movement of the visible object are silent but carry an enormous amount of information and that is unknown by humans. The objects surface vibrates when a wave of sound hits an object or when it is under the influence of some unknown forces or wind. The information from these vibrating objects surface can be gathered with the use of many traditional vibration sensors. With the technological advancements in the field of computer vision and graphics shows how a camera can serve as a tool for extracting and analyzing the vibrations from the visible objects surface. This information from the vibrating visible objects surface can be very useful in many applications ranging from audio recovery to structural health monitoring and non- destructive testing of the civil structures. This review paper focuses on the use of the camera as a vibration sensor for extracting the information from vibrating objects surface and explains how this extracted information can be useful in numerous applications such as Extraction of the sound from video, recovery of speech, CCTV surveillance, structural health monitoring of the various objects, non-destructive testing, approximating the material properties of the various fabrics, predicting the properties of the various rods or objects under the influence of unknown forces and many more.

Sr. No.	Paper ID	Title & Author
4	134	Kavita Bani and Vaishali Kulkarni <i>Simulation & Analysis of IEEE 802.22 Cognitive Radio Network</i>

Abstract—Demand of wireless users are increasing day by day, available spectrum resources should be utilized effectively. Cognitive Radio is wireless technology which configured dynamically to adapt environmental changes and change its parameters according to vacant channels. IEEE 802.22 is a standard defined for Wireless Regional Area Networking (WRAN) to utilize TV white band channels. Under the NETSIM environment, Cognitive radio network topology is made up and analyzed its various parameters like simulation time, packets transmitted, packets errored, various codecs, and throughput.

Sr. No.	Paper ID	Title & Author
5	175	Mr. Rishabh Sanghai, Mr. Prashant Saundalkar, Mr. Jasim Mallick and Dr. Bhavin Shah <i>Sort-X' Consignment Sorting System</i>

Abstract—State of the art sorting systems operated by global freight carriers or e-commerce giants are large, complicated and cost-prohibitive. Some low-cost systems are based on pneumatics and have consignment weight limitations while manual intervention is an inefficient sorting option. In this work, we are presenting ‘Sort-X’ as a system for low cost, flexible, and reliable consignment sorting system with MIMO (multiple inputs multiple outputs) sorting scheme. The inputs to Sort-X are through feed conveyor belts. These belts converge into a master feed where the consignments pass through a 2D scanner. The master feed connected to the sorting hub uses parameters such as postal code, address, shipping speed, and weight enlisted on the consignment in QR format to decide the sorting action. The hub is composed of numerous compact motorized displacement cells. Each cell has three programmable omnidirectional wheels to direct consignments to their respective destinations. Complex material flows can be accomplished in a small space using all the degrees of freedom on the displacement cells. Consignments of numerous shapes and sizes can be handled as long as

they're underneath the maximum weight capacity. The gadget is designed to be bendy on the hardware and the firmware level to adapt to different sorting requirements. Individual Sort-X units can also be cascaded to obtain complex, multi-nodal sorting topologies. The mathematical technique utilized in machine design for a particular sorting operation is mentioned in this proposed research.

Sr. No.	Paper ID	Title & Author
6	178	Dr. Bhavin Shah, Prof. Kunal Shriwas, Prof. Nilesh Gode and Prof. Mohan Kumar <i>Preparation of clean, moisture free, oil & dirt free Compressed Air using Quarter Water Vessel Mechanism, Silica Layers Chamber & Rollers with fins & Filters Chamber</i>

Abstract—The proposed paper focuses on preparation of clean, moisture free, oil and dirt free compressed air for various applications. Compressed air is used as one of the best inputs to control gripper for various mechanical systems, medical applications, and various other applications. The major challenge while using compressed air directly is the moisture, oil & dirt particles available in it. There are various air dryers available in market which is very costly. The proposed paper focuses on economical system designing of air dryer for preparation of clean, moisture free, oil & dirt free compressed air using air filters, water, hot & cold chamber, pressure release valve & moisture separator.

Sr. No.	Paper ID	Title & Author
7	181	Saras Wadhonkar, Raj Raorane, Sayali Patil and Prajakta Borole <i>Health Monitoring System Using Wearable Sensor Network For Workers In Industry</i>

Abstract—In recent years, the industries are focusing more on the safety and health of workers. The healthcare system is going through a transformation in which continuous monitoring of inhabitants is possible. There is a demand for innovative solutions that incorporate emerging technologies. Proposed system is an IOT based solution. Wearable sensor network can detect abnormal and unforeseen situations by monitoring physiological and environmental parameters. Wearable sensors on different subjects can communicate with each other and transmit the data to gateway. They provide warnings when health parameters of individuals and environmental parameters go beyond permissible limit. A smart IOT gateway can be implemented to provide data processing, local web server and cloud connection. It can forward the data to IOT cloud for further storage, processing and visualization.

Sr. No.	Paper ID	Title & Author
8	191	Prajakta Borole, Dr. Shrikant Kallurkar and Dr. Pravin Nemade <i>Massive Open Online Course -The Innovative Way to groom students for Employment</i>

Abstract—We come across the fact that students are not ready for cooperate world. The conventional classroom learning alone proved to be insufficient for developing students for employability and so there is a great need of using different innovative ways to educate. One such innovative way is MOOCs (Massive Open Online Course). MOOCs support learning process by enhancing the skills and knowledge. This paper discusses, how MOOCs was introduced and implemented in Atharva College of Engineering and influenced students to complete the MOOC course so that it helps student to build a strong resume and ultimately grooming them for cooperate life. **Keywords**—MOOCs, innovation, motivation, employability, cooperate life.

Sr. No.	Paper ID	Title & Author
9	185	Ranjit Roy, Tanmay Das and Kamal Krishna Mondal <i>Optimal Reactive Power Dispatch for Voltage Security using JAYA Algorithm</i>
<p>Abstract—The optimal reactive power dispatch (ORPD) is one of the most critical problems in power system engineering which is solved to minimize power loss and voltage deviation in the system. This helps in obtaining a more economic and secure operation of the system. Here, this complex and non-linear optimization problem has been formulated as a single objective, with two different objectives, which are optimized one at a time. The objectives considered here are the minimizing both the transmission line losses and the total voltage deviation of the system. This problem can be solved by determining the optimal solution of the different control variables by optimizing the objective functions. In this paper, a newly proposed optimization technique named the JAYA algorithm has been used for solving the ORPD problem. The standard test cases considered in this paper for solving the objective functions are IEEE 14 and IEEE 30 bus systems. The results obtained from the simulation were compared with those from different other already developed and widely used optimization techniques. The comparison of the results proved the superiority of the proposed algorithm amongst others.</p>		
Sr. No.	Paper ID	Title & Author
9	274	Anirban Chowdhury, Ranjit Roy and Kamal Krishna Mondal <i>Optimal allocation of wind based DG for enhancement of technical, economic & social benefits using Jaya Algorithm for radial distribution networks</i>
<p>Abstract— The active power losses in a radial distribution network are higher than transmission network due to high R/X ratio. The depletion of fossil fuel-based resources is one of the growing concerns for the network operators. The harmful pollutants from fossil fuels is a major threat to the environment. Thus, in this period of energy crisis, renewable energy resources like PV, wind are very good alternative to meet up energy demand. This paper presents improvement of a constrained multi-objective function based on voltage stability, economy and emission using Jaya Algorithm for wind energy integrated radial distribution network. Wind based distributed generators (DG) are injected at single, double and triple points of standard IEEE 33 bus and 85 bus test systems and the results have been compared with PSO and its different variants.</p>		
Sr. No.	Paper ID	Title & Author
10	5	Karuna Nikum, Abhay Wagh, Rakesh Saxena and Priti Singh <i>Economical Approach for SVC Systems to Improve Power Quality using Fully Indigenous Technology</i>
<p>Abstract— The question of power quality issues are rapidly increasing and require new technologies to deal with these power quality issues in industries. Flexible alternating current transmission systems (FACTS) are modern devices in power system for maintaining power factor and stability. This paper deals with a modified switching and design of static var compensator (SVC). The proposed SVC model is designed which is economical, highly reliable, and uses fully indigenously developed technology. The design of SVC with harmonic filters has been discussed with a new switching concept.</p>		

Sr. No.	Paper ID	Title & Author
11	249	Garima Gurjar Unhale, Priyanka Sharma, Rashmi Chaugule and Priyanka Tripathi <i>Review of Hybrid Electric Vehicle and it's optimization using MPPT Algorithms</i>
<p>Abstract: With rising oil prices and growing concern for the environment, cleaner and more compatible energy solutions are needed. Current transportation provides a great deal of energy consumption and pollutant emissions. The combined effect of the driving forces of an internal combustion engine (ICE) and an electric motor in a hybrid vehicle is examined in this paper. As per the structural design and module of hybrid electric vehicles (HEV) such as the motor, engine, battery, bi-directional converter and maximum power point tracker (MPPT). This paper shows a comprehensive review of the main components used in HEV, such as their structural designs with pros and cons. Hybrid electric vehicles (HEV) are in trend for their capability to attain performance relative to gasoline vehicle. Significantly gives less emissions and enhanced efficiency in terms of fuel consumption</p>		
Sr. No.	Paper ID	Title & Author
12	57	Advait Rane, Prathamesh Nate, Chirayu Kushalkar, Pranav Pawar, Suraj Bharadwaj Tripathy and Garima Gurjar <i>Design of Boost converter using PID controller for efficiency maximization</i>
<p>Abstract— In traditional boost converter, the output voltage fluctuates between a specific range, which is undesirable. In this paper an advanced digital control technology has been designed using PID control methodology using a feedback closed control system. Hence a PWM gate pulse is created which varies as per the desired voltage range, which is to be achieved. In this paper a boost converter is designed with an input voltage range of 8 Volt to 10 Volt with an output voltage of 20 Volt. A closed loop control topology is designed using integral, derivative and proportional controller to create the PWM gate pulse with a variable on-time control as per the desired output. Here ATMEGA328P microcontroller is used to generate the control algorithm. The entire model is designed to operate with a switching frequency of 500kHz. The transfer function of a traditional boost converter is designed and compared with the transfer function of the boost converter with advanced PID control topology. The equations for the boost control operation in various time intervals is designed with advanced mathematical modeling and the result is analyzed in MATLAB and Simulink. PSPICE software is preferred for an advanced and real time simulation. The efficiency calculated using the advanced PID control topology is found to be 5 to 8 percent more than the traditional control methodology.</p>		
Sr. No.	Paper ID	Title & Author
13	60	Darshan Makwana, Shubham Gamre, Divyesh Khandhedia, Shankar Warang and Karuna Nikum <i>Gravitator - A gravity based power generator</i>
<p>Abstract— The electricity requirement of the world including India is increasing at an alarming rate and the power demand has been running ahead of supply. In the current scenario electricity generation in the world, 60% by conventional sources and remaining by renewable sources. The main limitation of renewable energy sources on various geographical conditions to generate electricity is fluctuating power and conventional resources present in a limited quantity. It is important to solve the problem of conventional and renewable power sources in order to reduce the amount of electricity used from conventional power plants leads to reduce the burden on fossil fuels. This paper is about generation of electricity from gravitational energy called</p>		

‘GRAVITATOR’ which increases reliability and its power generation is inexhaustible. The proposed solution includes the development of a mechanical design model for gravitator. The arrangement converts the gravitational energy into mechanical energy and resulting in electrical energy.

Sr. No.	Paper ID	Title & Author
14	63	Dhirendrakumar Rajak, Yash Nandgaonkar, Omkar Lamkhade and Samihan Raje <i>A comparative Analysis of energy storage on Fuel cell and Lithium ion battery : A case study</i>

Abstract— With rising demand of energy in power sector, scarcity of resources and increase in pollution, we have to shift our focus on the alternative and green energy for energy production and their storage. Hydrogen Fuel cell and Lithiumion batteries are good alternatives for storage methods. Here we compare the performance, economical point of view and efficiency of the Fuel cell and Li-ion batteries and its impact on environment, and reason why Li-ion batteries are preferred over the hydrogen Fuel cells and what are problems facing in development of Fuel cell and what are the problem faced Li-ion battery. For economic point of view the Fuel cell is more expensive than the other sources. On the other-hand Life of a Fuel cell plant is more as compared to Li-ion battery. Whereas both technologies have lower burden from LCA (life cycle assessment) results.

Sr. No.	Paper ID	Title & Author
15	78	Shreyas Kulkarni, Namrata Walavalkar and Harshali Sapkal <i>Applications of CHP Concept in Major Indian Industries</i>

Abstract— Combined Heat and power (CHP) is an emerging trend in World. The conventional energy generation sources have efficiency of 35%. Coalescing Heat and Power or Cogeneration makes the use of heat that is produced as by-product of a process for local and domestic uses. The current energy requirement of India is short by 23%. There are multiple heat producing industries in India like the sugar industry, pulp and paper industry, waste treatment industry, cement industry, etc. In order to meet the demand of electricity in the year 2050, India has to raise its dependency on renewable (solar) by up to 50%. Thus, the focus has also shifted to Photo-voltaic CHP technology as efficient method to obtain thermal energy. Discussions on the applications of CHP concept in the above-mentioned industries is carried out in the present paper.

Sr. No.	Paper ID	Title & Author
16	155	Nitin Shekapure and Dr. Shrikant Kallurkar <i>Significance of business incubation in practice</i>

Abstract— Besides all the efforts done globally to make innovations in the product or process technologies, keeping these innovative attempts has always been a growing concern. Due to the set targets, geographical characteristics of each incubator, and the needs of the incubated companies, business incubation processes for different incubators are quite different. Related to the evolution of business incubators, experts suggests that one of their primary contributions is to promote the dispersal of knowledge, ideas, technologies to start-up companies via their business incubation networks. An area not specifically addressed in existing business incubation but it also impacts on helping new enterprises to build longterm assessment through the creation and growth of intellectual capital. Business intimidating is the brief, facilitative help gave to fire up ventures through the conveyance of complex administrations and unique condition with the point of improving their opportunity of survival in the early period of the expansion and setting

up their expectation in later development.		
Sr. No.	Paper ID	Title & Author
17	22	Abhilasha Saini, Dr. Sudhir Bhardwaj, Dr. Bright Keswani, Dr. P.N. Nemade and Ajit Somani <i>Global measurements in relativistic collisions in terms of rapidity density</i>
<p>Abstract_The impinging amidst the particles at sub-atomic levels endows the deeper understanding to study the theory of Quantum chromo-dynamics and expected that a novel plasmonic stage of nuclear stuff is subsisted under elevated thermal condition and densities[6-11].This plasmonic phase is “Quark-Gluon Plasma”(QGP):a liberated phase of quarks and gluons.</p> <p>Thus it offers an option for studying Quantum chromo dynamics under stipulation, normally unavaible while dealing with rudimentary particle’s interplays and prompts exploration bulky ion’s collision field through the RHIC as well as the LHC experimentation's. The imperative thing is to know about the preliminary accessible energy,required to produce particle yield. This can be dealt via assessing the rapidity density of difference of baryonic particle to antibaryonic count. This paper is dealing with the illustration to overview the alternation in collision dynamics at AGS,SPS and RHIC energies.</p>		
Sr. No.	Paper ID	Title & Author
18	35	Dr. Jyoti R. Amare <i>Characterization of carbon nano–tubes in liquid crystal mixtures</i>
<p>Abstract— Phase transitions of Thermotropic Liquid crystals are very important for many applications. Thermotropic liquid crystal occurs at definite phase transition temperature. In our study, new mesophases have been detected by optical method viz Polarising Microscopy studies (PMS), Fabry perot scattering studies (FPSS), Data thermal Analysis (DTA), and Fourier Transform Infra Red (FTIR). It is observed that new phase transition temperature (PTTs) occurs along with the known temperatures. Type of phase, varies textures are observed at different temperature. DTA techniques are used to confirm PTTs found in FPSS as well as PMS. Functional group or structural group analyzed for pure liquid crystal (LC) as well as for doped liquid crystal. Doped liquid crystal are used in display application such as LCD monitor with color variation and so many others.</p>		
Sr. No.	Paper ID	Title & Author
19	218	Dr. Ritu Sharma, Dr.P.N. Nemade and Dr.S.P Kallurkar <i>Group Discussion: As an innovative tool to be employable in professional industry</i>
<p>Abstract : Group Discussion as a teaching-learning method for enhancing the basic interpersonal skills of students at the graduate level. The graduate students require the basic interpersonal skills to be successful in their personal life and be employable in the global market of employment. The present paper attempts to give a panoramic view of a paradigm shift in the pedagogical approach of imparting skill-based education from the teacher-centric approach to the participative student-centric approach of teaching in today’s modern education. It has been found that the collaborative methods improve the level of students’ participation in the learning process. Group Discussion is one of the most effective collaborative methods which allow students to learn basic interpersonal skills in a real set up.</p>		

Sr. No.	Paper ID	Title & Author
20	248	Dr.Nidhi Gupta <i>Software Reliability Estimation with ART Network of Artificial Neural Network Using Execution Time Model</i>
<p>Abstract— For estimating the software reliability, it is required to observe its failure intensity. As failure intensity depends upon the number of faults, so to find the number of faults we are using the adaptive resonance theory (ART) of ANN, which is based on the best match strategy of competitive learning. The ART is able to incorporate the two different modes i.e. plasticity and stability [1]. This method provides the direct mapping between existing similarities so that the networks find the sufficiently closed match with the input pattern and the corresponding number of faults can be estimated. If the unknown prototype input pattern belongs to any generated category of the network then network displays the accretive behavior. In this case the corresponding number of faults will be same as the already defined number of faults for that group through the predictive unit. If the presented prototype input pattern does not belong to any generated category of the network that the network shows the interpolative behavior, the corresponding faults for this prototype input pattern can be determined from the average of the faults in the neighboring groups of already trained pattern. This new group will be neighbor of all the groups that shows the approximate same orientation.</p>		
Sr. No.	Paper ID	Title & Author
21	283	Sameer Katakdounde and Dr. Udai Chandra Jha <i>Significance of six sigma tools for industrial application based on full pledge manufacturing activities - A Review</i>
<p>Abstract - The full pledge manufacturing industry is defined as the utilizing the resources and producing the better quality products. To achieve the better quality of products the manufacturing industry must undergo some improvement in processes. The improved manufacturing processes must be implemented, developed, modified, and gives the desired quality requirements. This article focused on improvements in the quality of product and processes, by implementing the lean manufacturing tools like six sigma. To reach the goal of understanding the significance of six sigma tools in industrial applications the selective case studies were discussed in the following article. In this report, the implementation on DMAIC six sigma method is reviewed. The lean principles of manufacturing and the six sigma methodology identified each other for changes within manufacturing efficiency</p>		
Sr. No.	Paper ID	Title & Author
22	296	Priyanka Patel, Dr. Pravin Nemade, Dr. Bhushan Sonawane , Dipa Patel <i>Organic – Inorganic hybrid coating using silica-sol</i>
<p>Abstract— Organic inorganic hybrid coating possess superior coating properties. In the current paper studies have been carried out to compare the coating properties of pure organic polyurethane and inorganically modified polyurethane. By changing the concentration of Si in polyurethane matrix various results were compared for hardness, flexibility, adhesion, scratch resistance, storage stability. Our results concluded that inorganically modified polyurethane with 8% Si has optimum coating properties.</p>		

Sr. No.	Paper ID	Title & Author
23	298	Dipa Patel, Dr. Pravin Nemade, Dr. Bhushan Sonawane , Priyanka Patel <i>Review work on adsorption of metal ions by employing coir pith</i>
<p>Abstract—In present scenario many water resources are polluted by sources including household and agricultural waste and industrial processes. Many adsorbents are used widely for removal of metal ions because of its convenient use. This paper reviews the methods of preparing adsorbent coir pith and its applications as capable component for removal of metal from waste water. It analyses the work of researchers in this field to adsorb metal using coir pith. The study of effectiveness of coir pith is inspected.</p>		
Sr. No.	Paper ID	Title & Author
24	258	Prabhat Gupta, Megha Bhat, Vinaya Khamkar, Gauri Tandel and Gauri Salunkhe <i>Resin 3D Printer</i>
<p>Abstract- Stereolithography - often known as SLA 3D printing – is one of the most popular, emerging and widespread technology in the world of additive manufacturing. This technique basically works with the help of a high powered ultraviolet laser, which is used to harden the liquid resin present in a tank to create the desired 3D shape. In essence, this process transforms photopolymer liquid resin into 3D solid models by adding progressive layers undersurface of the emerging structure using a high-power laser and photo polymerization. Our SLA 3D printer is generally composed of five main sections: 1) A tank filled with photopolymer resin. The liquid resin is usually a synthetic liquid that solidifies when reacted with a hardening agent. 2) A built-in platform submerged in a tank: The platform is placed at the bottom part inside the tank and it can move in vertical to and fro fashion, according to the input provided during the printing process. 3) An ultraviolet laser which serves as a medium to solidify the resin. 4) Raspberry Pi and Arduino Uno supervise the platform along with the movements of the laser depending upon user input. 5) LCD screen for providing input to printer or controlling its actions. Our printer employs a hybrid approach of 3D-printing in which a modified LCD is used as a barrier between the UV LED and resin tank. The LCD screen acts as a stencil for shaping the layers of the 3D model. The ultraviolet light from light source shines directly, in a parallel fashion, onto the build area in order to create the desired 3D model in a layer-by-layer fashion</p>		
Sr. No.	Paper ID	Title & Author
25	259	Komal Patole, Priyanka Karan, Deepak Gupta and Sujit Mishra <i>A comparative study of conventional and vedic multipliers</i>
<p>Abstract— Multipliers play the key role in Arithmetic and logical circuits. These circuits create foundation to various Applications like digital signal processing ,microprocessors etc .Generally multiplying action is carried out by various conventional methods like standard modified booth algorithm ,Wallace tree algorithm, array algorithm etc .Various methods have been made and several new techniques are being worked upon multiplier . Similarly Vedic mathematics provides the oldest mathematical tricks and techniques based on ancient Indian teachings called “Veda”. These methods are fast, efficient and easy to learn and use .Hence Vedic mathematics has increasingly found acceptance all over the world. Vedic Mathematics is founded with 16 sutras and was rediscovered in early 20th century. These sutras are efficient in calculations and can be used for suitable applications. Conventional algorithms like Booth’s algorithm, Wallace tree algorithm, Array Multiplier and Column multiplier with some Vedic sutras used in multipliers which are Nikhilam method, UrdhvaTiryagbhyam method and Anurupaye method are discussed and compared those multipliers using the parameters of speed, power</p>		

consumption, delay and time. These paper studies various types and important properties of Vedic multipliers and their usages in arithmetic circuitries.

Sr. No.	Paper ID	Title & Author
26	268	Shikha Malik and Ruchi Chauhan <i>Securing the Internet of Things using Machine Learning: A Review</i>

Abstract—The Internet of Things facilitates integration of massive group of devices into networks to provide data for an ever-growing number of applications. The current and future IoT applications holds promise to improve the convenience and comfort for the user but are prone to various types of security threats. Therefore, it becomes crucial to address these security challenges. In this paper, we discuss major security threats that exist at IoT layers and review Machine Learning based IoT security systems with a focus on Supervised Learning.

Sr. No.	Paper ID	Title & Author
27	278	Nivedita Gadade, Aditi Parab, Rinku Choudhary, Yashita Gaikwad and Mohan Kumar <i>Holographic display with gesture control</i>

Abstract—Our paper focuses on displaying 3D videos holographically. Raspberry Pi based microcontroller is used in which videos are first loaded into the SD card and then projected on the acrylic prism. We have also included a human interface system by which user can input gesture for navigating between the videos. 3D holograms are the newest trend in technology which can be applied to different fields like engineering, medical, trainings, augmented reality, virtual reality, etc. With huge demands in the industry comes the huge financial factor associated with it. The expensive lasers with heavy machineries are involved for display of 3D holograms. Our project eradicated the huge and bulky cost associated with the existing holographic systems that are being used. Instead of using expensive lasers we are using light bending technique and viewing videos from different view angles. Our project delivers the same results as the existing one except its economical, portable and very handy.

Sr. No.	Paper ID	Title & Author
28	288	Ruchi Chauhan, Jyoti Kolap and Shikha Malik <i>A Survey on Mitigation Techniques of Denial of Service Attack on Internet of Things</i>

Abstract— IoT is a new technology which is finding its presence in many domains which includes industry, home appliances, and automobile sector etc. One of the foremost aim of IoT devices is to capture data and exchange the same seamlessly into information network. Vulnerability of IoT network to many attacks leads to major concern of security in IoT devices. One such attack is Denial of service attack which blocks the authentic user from accessing network and makes network resources unavailable for an uncertain period of time. To extenuate Dos attack some technique is required which can sense the attack and prevent it from damaging the network. This paper aims to review different methods and techniques used to attenuate DoS attack on IoT.

Sr. No.	Paper ID	Title & Author
29	16	Jyoti Dange, R.P.Singh R.P.Singh and Vikas Gupta <i>Beam Scheduling scheme for Interference Suppression in Millimeter-Wave Cellular Network toward 5G</i>
<p>Abstract—Now a days IOT is become main contributor to a drastic and rising wireless communication. Millimeter wave communication instigate to be a obligatory alternative for the next generation system .The purpose of this paper is to give focus on the problem of interference and its impact on performance metric during scheduling .This problem of interference become more complicated and significant when two technologies partially blended. In particular, this recent technologies of wireless communication need a data transmission from more than single user that can not co-exist successfully in the same time slot ,but adjusting the transmission power and bit rate ,several user can communicate successfully simultaneously .Advance beam scheduling technique SINR is proposed in this paper to achieve more enough resource allocation. Comparing new scheduling described below and basic RR (Round Robin) scheme ,simulation experiment were carried out for comparing their ability to restrain the interference between beam at millimeter wave pico station [10].To solve the above interference issue ,we tend to plan beam scheduling technique in this paper .Specifically signal to interference noise ratio (SINR) simulation result for performance indicator, indicate that cell latency and throughput shows the improvement in their performance in respective UE(user equipment).In 5G mm wave network, competent data retransmission and better bandwidth resource with lower latency and higher throughput are the best outcomes of scheduling scheme described in this paper .The simulation result described that the proposed scheme significantly perform better than that basic round robin scheduling scheme .The SINR achieve the gain 70% at 60 GHZ over the Round Robin scheme</p>		
Sr. No.	Paper ID	Title & Author
30	28	Mahalaxmi Palinje <i>FinFET based PLL</i>
<p>Abstract — The demand for low power based circuits increases as the size of channel length decreases. But as channel length decreases it is difficult to use CMOS based circuits due to problems in its fundamental material, short channel effect and high leakage. Thus as an alternative to classical MOSFET, FinFET technology can be used to achieve low power application. The effectiveness of various Double Gate in Mixed Signal(MS) circuit level design is less explored. Phase Locked Loop (PLL) is one of the important MS circuit and are integral part of many electronic system. Extracting advantages of FinFET over above mentioned issues in PLL, this paper proposes two design of PLL using novel device DGMOS FinFET at 32nm technology. The first design of FinFET based PLL uses FinFET in shorted gate (SG) mode & the second design uses FinFET in independent gate (IG) mode for the design of Phase Frequency Detector (PFD) block. The circuits are designed & simulated using HSPICE by Synopsis with 32nm FinFET technology with 0.8V supply voltage. Performance of designed PLL are analyzed at operating frequency of 500MHz. The comparative analysis of all the designs of PLL shows that Modified FinFET based PLL at 32nm shows better performance in terms of faster locking period at 38.34ns, high frequency operation from 500MHz to 11GHz with smaller area requiring lesser no. of transistors & having power dissipation of 86.36 μW which is comparatively low.</p>		

Sr. No.	Paper ID	Title & Author
31	69	Gauri Vaidya, Ketki Vaidya and Kishor Bhosale <i>Text Recognition System for Visually Impaired using Portable Camera</i>
<p>Abstract— Text detection in natural and complex images play an important role in analysis of image. Text information appears everywhere like product labels, documents, scene images etc. It will be very difficult for visually impaired person to find text region in an image. This problem should be addressed because it cannot assume that the captured image contains only text. This paper presents camera based text reading framework which helps visually impaired people to read texts in natural scenes, product labels etc. Here, task is divided into two steps i.e. text detection and text recognition. Text detection involves text localization phase. Firstly we binarize the image. Geometric and stroke width filtering removes non text regions in an image. Segmented text region in a cluttered scene is binarized and recognized by optical character recognition. Recognized texts are output to the visually impaired people in speech. Experimental result shows that proposed method offers better performance in text recognition.</p>		
Sr. No.	Paper ID	Title & Author
32	73	Supriya Dicholkar and Deepthi Sekhar <i>Review-IOT Security Research opportunities</i>
<p>Abstract- Internet of Things is used for home automation, smart parking electronic toll collection system since many years. With growth of Industry 4.0, IoT is used in industry for smart manufacturing, predictive maintenance, smart grids and statistical evaluation. With IoT revolution, IoT devices will produce large amount of data on cloud. Security of IoT data is main hurdle in industrial automation using IoT. In this paper, we discussed limitation of IoT, IoT architecture, IoT enabling technologies, IoT and security attacks and different approaches for securing IoT network</p>		
Sr. No.	Paper ID	Title & Author
33	144	Harshraj Pardhi, Mahesh Chavan, Kirtan Shirodkar, Yash Nikam and Jyoti Kolap <i>3D Printed Bionic Arm</i>
<p>Abstract—EMG sensor electrodes are used to extract the signals from the muscle fibers and generate the required output. The basic step in EMG signal processing is signal amplification and filtering. This low costed bionic arm is 3D printed which has its own advantage. The acquired signal is passed through various stages of filters and amplifiers for amplification and noise reduction. The analog signal is converted into digital signals. These digital signals are used to control the servo motors by using microcontroller. Specific features are extracted from the obtained EMG signals. The EMG electrodes are connected to the servo motors which are fitted inside the 3D designed arm. Mostly PLA plastic is used as a 3D printed filament.</p>		
Sr. No.	Paper ID	Title & Author
34	162	Jyoti Mali, Dr Pravin Nemade and Dr Shrikant Kallurkar <i>Active Learning & E-learning in Engineering Education</i>
<p>Abstract—Innovation interceded instruction or e-learning is becoming all inclusive both in scale and conveyance limit because of the huge dissemination of the pervasive data and correspondence advancements which is known as InformationCommunication- Technology</p>		

(ICT) by and large and the web advances specifically. The reason for the paper is to distinguish different categories or recognize for tending to the necessities of scholastics in advanced education foundations and organizations. Development-based and Problem-based learning (PBL) are dynamic and student focused approaches in which understudies build up their insight and skills by following a critical thinking process, generally dependent on genuine circumstances. The known edges for designing and innovation understudies region unit good improvements in vital, horizontal and inventive reasoning, critical thinking techniques, inborn inspiration, bunch cooperation, relational abilities, business, and incorporation with society. The paper additionally describes the most teaching ways of the active learning approach that might be enforced in engineering education

Sr. No.	Paper ID	Title & Author
35	163	Shweta Mahadev Chavan, Suraj Sanjay Patil, Shreeraj Sanjay Palande, Satish Abhangrao Rajnale and Jyoti Mali <i>Advanced Military Wearable Technologies</i>

Abstract— This project is a mixture of multi-purpose components that could give soldiers better situational awareness such as positioning, safer raiding and taking control, faster and effective decision making and much more. It is an embedded system that consists of GPS technology, Thermal sensing and Heads up display. For a fighter working under cover of night in the foe domain, the greatest issue is an unknown route from a new region and absence of effectively recognizable landmarks on the ground. The accessibility of GPS will expand the gathering of exact information important for speedy and precise map updating. This would modernize the military workforce to use the map to precisely affirm the areas. Thermal imaging is an aid to the armed forces including every one of the three units; ground forces, naval forces, and flying corps because of its 24 hours working ability and aptitude to perform well in every single condition. Thermal detectors catch the infrared emission produced by all surfaces higher than zero-degree temperature. A helmet has a heads-up display on which a video projection of the output through a thermal camera is displayed. This could help soldiers to find the enemy presence so that necessary action can be taken.

Sr. No.	Paper ID	Title & Author
36	182	Pawan Badsewal, Kunj Bhatt, Darshil Chheda, Harsh Vaghani and Jyoti Mali <i>TechTreat using Machine Learning</i>

Abstract—Now-a-days the world is transcending towards ecommerce, where people get products delivered at the doorstep. This paper presents an innovative method to simplify the treatment process of a patient by using Optical Character Recognition (OCR) technique. OCR extracts the text present in an image after scanning. This can be used to identify the text written for a input image, when a doctor's prescription is given as input, the medicine name prescribed by the doctor can be identified and on that account the medicine can be shopped by using the application seemingly. The extracted text from prescription can also be used to create the reminder to take the medicine on timely manner, similarly reminding to buy the medicines again when the set or packet is about to end. This would additionally help the patient to track his medicine consumption by analyzing the graph generated by the app. Furthermore by scanning the medicine name with OCR technique, one can detail of the medicine and also the purpose for which the person consumed.

Sr. No.	Paper ID	Title & Author
37	228	Gauri Salunkhe, Akansha Bhargava and Jyoti Dange <i>Review of Tools & Teaching techniques utilized for improvement of undergraduate Digital Signal processing course</i>
<p>Abstract— Engineering applications and studies heavily rely on Signal processing as the core operation. With digitization of technology, automation and use of computer as a primary tool everywhere, it's now Digital Signal Processing (DSP) that has become key of the applications handling signals. Though the course DSP is related to basic concepts of quantities like signals, systems and various processing methods applied on these quantities, it entails metaphysical concepts & uses complex mathematical models. To ensure that undergraduates recognize and appreciate the importance of the course, apply the concepts effectively for real life situations and opt for research in this field, many effective teaching methods are discussed and applied. We investigate these innovative tools developed by educators and newly invented teaching methods to enhance the quality of education. We successfully implemented some of these teaching strategies at Atharva College of Engineering (ACE) to reach our goal of excellence in education. Use of Course Networking, a web based LMS to design effective DSP course is discussed in brief.</p>		
Sr. No.	Paper ID	Title & Author
38	246	Vivek Ramakrishnan <i>Exposure Fusion using Particle Filtering Techniques</i>
<p>Abstract— The filtering based approach for exposure fusion; relies basically on natural spatial statistics of the images rather than on parameter extraction based approaches. The basic advantage of the particle filtering based approach is its linearity and quick convergence. This method is based on stochastic principles for de-noising. We treat the particle filtering based approach as an image de-noising problem in the spatial domain in this paper.</p>		
Sr. No.	Paper ID	Title & Author
39	247	Nilesh Gode, Bhavin Shah and Jyoti Gurav <i>Imbalanced Classification in Predictive Modelling simulate with R</i>
<p>Abstract -In this paper we tried to explain Machine Learning's one of the important algorithm classification, as data contains different class in the dataset having different skewness, kurtosis depending on that the data is normally distributed, if not it has to be arranged normally by applying different methods, sometimes dataset contain unlabeled data so it will be the data scientist role to assign class to this unlabeled data & do predictive classification. It is known as imbalanced classification where known classes are bias or skewed. This minority imbalance class create problem in predictive model building and leads to a serious problem in poor performance of predictive modeling, minority class have same importance in this paper we will try to discuss this with some solutions for imbalance classification</p>		
Sr. No.	Paper ID	Title & Author
40	250	Mohan Kumar, Bhavin Shah, Nilesh Gode and Vivek Ramakrishnan <i>Efficient use of Electricity at home by the use of technology and consumer behavior</i>
<p>Abstract— Energy needs are increasing at a very fast pace. There is a large gap between demand and supply of electricity in India. Smart homes are helpful in decreasing energy consumption. This will in turn save money of the consumer and decrease the carbon footprint. A smart home basically has a very good system for energy management. This is achieved by using</p>		

the latest technology in consumer electronics and electricity grid. In this paper we are discussing the technologies that can be used in smart homes for efficient electricity management. The use of smart energy meters has also been discussed. We are also discussing how the concept of Internet of things can be used to decrease the energy consumption. We are also discussing about consumer behavior with respect to electricity usage

Sr. No.	Paper ID	Title & Author
41	36	Nileema Pathak <i>Bridge Health Monitoring using CNN</i>

Abstract— Structural Health Monitoring of various constructions like long bridges, high rise buildings, heritage structures etc is the need of the hour in metro cities today. The condition of these structures deteriorates due to many reasons like over utilization of the public structures, poor maintenance, improper use of materials etc. Preventive maintenance has to be planned and executed after the monitoring phase, so as to avoid disasters and accidents. Monitoring the bridge structure for visible cracks and damage can be done by periodically collecting the images of bridge, processing the images to detect anomaly. In image processing methods like texture analysis, segmentation and Support Vector Machines (SVM) are used to identify the cracks on the surface area images. Convolution Neural Network (CNN) is the latest technology that can be used for image classification. CNN gives accurate results when there is a huge dataset of images for a particular area that needs to be analyzed for presence of cracks and damage. Setting up the CNN is a tedious task when the in-depth analysis is required, but its major advantage is that it can learn the features of an image automatically.

Sr. No.	Paper ID	Title & Author
42	84	Tanvi Kapdi <i>Blended learning for enhancing student's learning experiences</i>

Abstract— The reason for this paper is to give a dialog of the change capability of mixed learning with regards to difficulties confronting advanced education. In view of a portrayal of mixed learning, its potential to help profound and significant learning is discussed. A move to the need to reexamine and rebuild the learning encounters happens and its change potential is analyzed. Blended learning is steady with building instruction foundations and thus have demonstrated the possibility to improve both the viability and effectiveness of learning encounters

Sr. No.	Paper ID	Title & Author
43	151	Renuka Nagpure, Sumita Chandak and Nileema Pathak <i>Breast Cancer Detection using Neural Network Mammogram</i>

Abstract- Now-a-days Breast cancer is one of the serious issues for women when compared to all other cancers. In India Breast cancer risk revealed that 1 in 28 women cause to grow and become more mature breast cancer during her lifetime[1]. Breast cancer begins when cells in the breast use to grow or starts to grow out of control and it advanced from breast tissue. These cells usually form a tumor that can often be seen on a mammogram or felt as a lump. If cells can grow into (invade) surrounding tissues or spread (metastasize) to distant areas of the body then the tumor is malignant(cancer). Breast cancer occurs in both women and men. In India the average age of the very great extent of cancer in the age group of 43-46 years unlike in the Western where women aged 53-57 years are more likely to suffer from breast cancer[1]. This paper includes uses of various Data Mining along with neural networks to identify the presence of breast cancer at early stages and diagnose it efficiently.

Sr. No.	Paper ID	Title & Author
44	19	Udit Doshi and Vaibhav Barot <i>Emotion Detection and Sentiment Analysis of Static Images</i>
<p>Abstract—The usage of social media platform such as Facebook, Instagram, Flickr, etc. is rising day by day wherein images play a major role. It is said “An image is worth a thousand words”, people these days upload certain images on these sites to display their sentiments and emotions in the form of picture on almost every occasion. Images play the most important role in today’s generation where it has become a major part of everyone’s lives. Most of the prevailing research have focused on sentiment analyses of textual data, but only limited researches have focused on analyzing sentiment of visual data. In this project, we have explored the possibilities of Convolutional Neural Networks (CNN) to predict the various emotions (happiness, surprise, sadness, fear, anger and neutral) depicted by an image. These sort of predictions can be useful in applications for automatic tag predictions of the visual data available on social media platforms and understanding sentiments of the people and their emotions.</p>		
Sr. No.	Paper ID	Title & Author
45	20	Lavany Jadhav, Kapil Parekh, Vikas Gupta and Sumita Chandak <i>Using Virtual Reality for therapeutic treatment of phobia</i>
<p>Abstract— In this paper, we extend the use of Virtual Reality for treating various phobias. Virtual reality is used to therapeutically treat phobias efficiently. The study suggests in phobias the excessive amount of fear doesn’t correspond to the potential amount of danger of stimulus. In the trivial therapeutic method, the patient is unable to experience the stimulus as the treatment lacks projection of stimulus, here we use exposurebased treatment for patients by creating a virtual environment. The patients are examined and categorized based on the degree of fear, correspondingly a virtual environment is modeled based on each category. An examination is considered during mediated pathways, which suggest a reduction in the severity of the phobia symptoms during the treatment. The significant changes in the behavior are recorded for iterative refinements.</p>		
Sr. No.	Paper ID	Title & Author
46	27	Natasha Ambre, Arpita Bhagat, Ninad Chavan and Deepali Maste <i>Augmented Reality Application to ameliorate learning experience using psychological traits</i>
<p>Abstract— In this paper, we present the utilization of AR in instruction after a concentrated review on different subjects like human and youngster brain research, AR in training, visual memory and conventional educating systems. Training is a significant piece of a person's life and innovation has decreased the ability to focus definitely. This paper centers around bestowing learning in an intuitive fun strategy focusing on an understudy's brain research, likes, dislikes, and brain development. The examination demonstrates that utilizing AR in instructive applications is exceptionally productive to the advancement of both the training framework and the learning experience of an understudy. Augmented reality is a real-world environment where the entities of the real world are improved utilizing 2D or 3D animations. AR is being utilized in different areas in the business and is gradually discovering its way into the instructive business.</p>		
Sr. No.	Paper ID	Title & Author
47	62	Kapil Parekh <i>Technical Analysis Test for a Weak-form of Efficient Market Hypothesis</i>

Abstract— Most of the securities nowadays show a weak form or semi-strong form of Efficient Market Hypothesis. The weak form of efficient markets hypothesis states that the current security prices fully reflect all currently available security market data whereas the semi-strong form of Efficient Market Hypothesis holds that the security price rapidly adjusts without being bias to the arrival of all new public information. As the use of candlestick pattern analysis methods have become one of the most popular methods nowadays and also the Indian stock market is gradually becoming efficient, there is a need to validate the efficiency of technical indicators as well as pattern analysis in the current market. In this paper, the trend of stocks in IT, FMCG, Pharma, Automobile, Energy and PSU bank segments are taken into consideration for analysis. The expected trend is compared with the actual trend and a conclusion is made accordingly. The results have large implications on investment strategies and investor behavior concerning the Indian stock market.

Sr. No.	Paper ID	Title & Author
48	147	Shrajna Shetty, Shubham Shetty, Varsha Vishwakarma and Smita Patil <i>Review paper on various Door Lock Security Systems</i>

Abstract— Security is becoming an important issue everywhere nowadays. Every person wants his house, factory, bank etc. to be secured. House security is becoming necessary as the possibilities of intrusion are increasing day by day. Here in this paper, we are trying to present research made on various door locking systems that have been used at homes, offices, shops, industries, etc. The research will also put some light on the pros and cons of the various door lock systems and the technology used in the respective systems. The research will include traditional door lock system, RFID based system, gesture-based systems, Bluetooth and GSM technologybased and various other technologies used in the door lock security systems. The advance in technology in each passing day can help us come across various technologies that can be used in the door lock security system. Since security is the major concern of the majority of the people at present, we feel research made on the various system relevant to the topic can help people to choose the best technology for their upcoming projects or make changes in the past projects and use effective door lock systems for their needs.

Sr. No.	Paper ID	Title & Author
49	60	Darshan Makwana, Shubham Gamre, Divyesh Khandhedhia, Shankar Warang and Karuna Nikum <i>Gravitator - A gravity based power generator</i>

Abstract— The electricity requirement of the world including India is increasing at alarming rate and the power demand has been running ahead of supply. In current scenario electricity generation in the world, 60% by conventional sources and remaining by renewable sources. The main limitation of renewable energy sources on various geographical conditions to generate electricity is fluctuating power and conventional resources present in a limited quantity. It is important to solve the problem of conventional and renewable power sources in order to reduce the amount of electricity used from conventional power plants leads to reduce the burden on fossil fuels. This paper is about generation of electricity from gravitational energy called 'GRAVITATOR' which increases reliability and its power generation is inexhaustible. The proposed solution includes development of mechanical design model for gravitator. The arrangement converts the gravitational energy into mechanical energy and resulting in electrical energy.

Sr. No.	Paper ID	Title & Author
50	123	Sidharth Dhiman, Rohan Thakur, Asavari Kamble and Kalpita Saggam <i>The Wastewater treatment plant</i>
<p>Abstract— The waste water process plant is a gift to world in many ways. In this certain era water is at the verge of extinction due to irresponsible behaviour of our society and also due to temperature change which is causing global warming and is leading towards increase in summer period and direct rays of sun to earth because of breakdown of Ozone layer which protect earth from direct UV rays. Waste water process plant is a way to reuse the water for the same purpose and save the amount or percentage of water for society. Due to setup of these plant it has increased the water level as compared to old decade. One of such company that lead this setup is Rochem Separation Systems.</p>		
Sr. No.	Paper ID	Title & Author
51	128	Anjali Jawale, Mayuri Malvankar, Anagha Padte and Sarita Chauhan <i>Electric Vehicle: Indian Government Policies and Challenges</i>
<p>Abstract— Today 14 out of 35 most polluted cities in the world are in India. Major reasons for pollution are CO₂ and ultra-fine particulate matter, emitted by fuel-based vehicles, which are harmful and causing greenhouse effect. Hence Electric Vehicles are the alternative way. In 2017, Indian Government under Niti Aayog Plan, wants to set for 100% Electric Vehicles on roads in by 2030. This will reduce huge utilization of conventional fuels and will cut down fuel bill. But limited charging stations, weak vehicle to grid and grid to vehicle smart charging, short electric range and prolonged charging time are some barriers coming in path of implementation of government statements. This paper reviews Indian Government policies about Electric Vehicles and challenges for implementation of Electric Vehicles in the country.</p>		
Sr. No.	Paper ID	Title & Author
52	194	Aaditya Pandey, Rutuja Borkar, Suraj Kumbhar, Pranali Ghunke and Pragya Jain <i>Comparison of Power Electronic Converters with Sliding Mode Control and Open Loop Control</i>
<p>Abstract—The application of power electronic converters is rapidly increasing with the advancement of technology. Buck, Boost, Bidirectional dc-dc converters are widely used in renewable and energy storage systems, electric vehicle, microgrid etc. Optimal operation of these converters depend on its switching control. Controlling of a converter can be done by an open loop or a closed loop control. One such closed loop control is a Variable Structure Control (VSC). Sliding Mode control is a sub-category of a Variable Structure Control (VSC). This paper presents a comparison of the output voltage response of a buck and a boost converter having closed loop control in the form of sliding mode control and an open loop control in the form of constant frequency-variable duty, pulse firing in MATLAB Simulink.</p>		
Sr. No.	Paper ID	Title & Author
53	206	Vanya Goel, Romesh Chandra, Amitava Roy and Namita Maiti <i>Electrostatically and Electromagnetically Focused 60kW Electron Gun for High Voltage Applications</i>
<p>Abstract—The success of electron beam technology is mainly attributed to the immense research and synthesis of basic science and technology in many fields mainly attributed to high</p>		

voltage engineering, vacuum technology, advanced level computer technology and electron optics. In this paper, a rigorous effort has been made to electrostatically and electromagnetically focus electron beam, generated from a high power electron gun that can be used for various high voltage applications including melting and evaporation of refractory materials, coating applications, electron beam welding, plasma generation and material processing techniques. In this paper, electrostatic focusing is achieved in the pre-anode region by applying suitable potential to gun electrodes and by their appropriate geometric design. Electromagnetic focusing is achieved by applying suitable magnetic field incorporating focusing coils in the post-anode region. This paper illustrates the design of high power 60kW electron gun that successfully focuses the electron beam through simulation by using CST Particle Studio.

Sr. No.	Paper ID	Title & Author
54	208	Priti Singh, A. Majumder, Dr. A. K. Pulhani, Dr. G. Sridhar and Dr. Namita Maiti <i>Methods of High-Density Plasma Generation</i>

Abstract—Plasma is the fourth state of matter. Broadly, it can be classified into two categories first one is natural occurring plasma and another one is laboratory plasma. Laboratory plasma has variety of application in the field of material synthesis, controlled fusion, thruster, plasma-based lighting and display systems. In this paper an exhaustive literature survey on generation of laboratory plasma is provided. The objective of this paper is to provide an overview of various plasma generation methods that include plasma generation using electrical fields, electron beams and laser beams.

Sr. No.	Paper ID	Title & Author
55	227	Kshipra Pandey, Sangeeta Kotecha and Nirajkumar Pandey <i>Automatic Estimation of Equivalent Circuit Parameters of Induction Motors for Drives</i>

Abstract— Control strategies for the DC motor drives are quite simpler and have some good features. But AC motor drives are much more efficient and cost-effective for the servo application as compared to their DC counterparts. Many control strategies are available of AC drives too but they are complex as they require number of machine parameters. To obtain these machine parameters one can either refer to the datasheet provided by the manufacturer or some tests could be performed for the same. Test results may not be accurate due to the continuously varying operating conditions and other factors. This may lead to the malfunctioning of drive which is totally undesirable. For getting the performance of the higher grounds with sensorless vector control of an induction motor, the accuracy of the motor parameters has are predominant in governing the performance of the system in whole. A solution to problems faced in AC drives is the new feature called selfcommissioning. In this paper light is thrown on the selfcommissioning of the induction motor for drives which a novel feature for the AC drives. Self-commissioning totally eliminates the need of performing the traditional tedious tests for obtaining machine parameters. This drastically reduces the costs of test equipments, also selfcommissioning support the advantage of the auto-tuning of the electric drive with the motor parameter varying in continuously altering operating conditions.

Sr. No.	Paper ID	Title & Author
56	239	Harshali Sapkal, Sanjana Wagh, Prachi Talokar and Uday Vishvekar <i>Review of Isolated DC Microgrid coalescing Maximum Power Point Tracking and PV Array to produce electric energy</i>

Abstract— Isolated dc microgrid is independent of utility grid. It consists of distributed energy

resource (DERs) as Photovoltaic (PV) solar array along with battery and connected loads. The objective of this concept is to cater the growing energy demand. In country like India, till now conventional energy resources have been used which are limited deposits. To equitable the rising demand for energy the best way is to switch with renewable resources for energy generation. Also in the obscure areas where it is nearly impossible to transmit electricity, this concept of isolated dc microgrid to electrify the remote areas can be implemented. Another advantage is that; it earns carbon credits. The entire system incorporates PV array along with Maximum Power Point Tracking (MPPT) algorithm and battery to maintain the voltage level since the nature of solar is intermittent in nature as the sun's radiance fluctuates every time. This is achieved by using MPPT charge controller. The electronically operating dc to dc converter is MPPT, which stands for Maximun Power Point Tracking. The energy derived from solar and battery is enhanced by MPPT controller. It also protects the battery from overcharging thus ensuring battery protection. The voltage obtained from MPPT is dc voltage and to run the ac load inverter circuit is used. This paper provides MPPT design using the perturb and observe method.

Sr. No.	Paper ID	Title & Author
57	244	Shreyas Kulkarni, Namrata Walavalkar, Varoon Chhatre, Pratiksha Singh and Priyanka Sharma <i>Review of Optimization of Charge on VRLA Battery And Lithium Ion Operated Bike</i>

Abstract—Electric vehicles (EV) and Hybrid Electric Vehicles (HEV) contribute to substantially decrease the carbon footprint of the present means of transport. Battery is a critical component in every EV topology. The reliable and safe operation of a battery requires the presence of an independent controlling platform which is often referred to as Battery Management System (BMS). The state monitoring and charge optimization functionalities are to be incorporated in the BMS, to ensure the safety and reliability of the energy source which is battery. Due to the irregular operating parameters of the battery the overall system may be jeopardized. This paper offers a review to the current technologies of Battery Management System observing the State Evaluation of the battery including state of charge (SOC), State of Health (SOH), Depth of Discharge (DOD) and State of Life of the battery.

Sr. No.	Paper ID	Title & Author
58	267	Suresh Deshmukh and Prasannati Kulkarni <i>To Optimize the Conduct of a Photovoltaic Structure Using different DC-DC Conversion Topologies with Emerging Methods for Control Algorithms</i>

Abstract __Distributed generation is now a days one of the mostly used method for the production of electricity in different sectors like residential, commercial and industrial. The resources like solar, wind, hydro, biogas, tidal and biomass are in the race for the production of electrical energy. They are producing electricity independently as well helps in decreasing the pollution which was one of the main reasons to reduce the use of non-renewable sources. Out of several nonconventional energy sources, the source which is extensively used solar energy. Compared with other sources, it has many benefits like it is freely available, abundant in nature, nonpolluting, and for conversion it does not require any rotating device. Integration of any system with other increases the performance. Hence to improve its overall efficiency, a solar system can be integrated with thermal, hydro or wind power system. Also, a best suited converter topology will be opted along with an appropriate maximum power point tracking algorithm to make it more effective in operation. But solar energy depends on radiance and

temperature which shows it is variable and its power output reduces due to partial shedding in cells. This will alleviate the conversion efficiency of solar system (it is about 17-20%). Hence to increase the solar power output, soft and hard computing algorithms are used in a system which are called as control algorithms. This paper gives the idea regarding two major converter topologies -buck and boost, their comparison, and suitability of converter circuit for solar applications. Also, the paper focuses on different hard and soft computing methods which works to capture the optimum power point and related control algorithms.

Sr. No.	Paper ID	Title & Author
59	272	Apurva Khachane <i>Torque Ripple Minimization of Switched Reluctance Motor and Comparison of Controllers for Electric Vehicle Application</i>

Abstract—As SRM doesn't have permanent magnet, it is light weight motor and has constant power output capability which finds application primarily in space applications and Electric Vehicle because of high torque to weight ratio and low rotor inertia. It has small size, high efficiency, low cost. Hence, day by day Switched Reluctance Motor is becoming best alternative to DC and BLDC motors. In this paper MATLAB Simulink model is used to analyze controller performance. Selection of angle for region of operation to trigger the converter is explained here. With feasible approximations, nonlinear nature of SRM can be explained with its linear model having dynamic behavior, for the sake of simplicity and study purpose.

Sr. No.	Paper ID	Title & Author
60	152	Ajay Kumar, Abhishek Kumar, Abhijeet Thakare, Mansi Shah and Aruna Pavate <i>Landmines Detection Using Migration and Selection Algorithm on Ground Penetrating Radar Images</i>

Abstract— Landmine removal is a basic issue looked by numerous nations around the globe, and the circumstance can be intensified during cataclysmic events or land advancement. Along these lines, it is an earnest issue to identify landmines in the ground and evacuate them securely. The procedure of landmine expulsion begins with the discovery of landmines in the ground. This exploration surveys the advancement and utilizations of Ground Penetrating Radar (GPR) innovation to address the difficulties of dependably distinguishing landmines. The accentuation is on the significance of the GPR system in landmine recognition execution to non military personnel or helpful demining programs. Ground Penetrating Radar (GPR) is a ultra-wideband radar that gives centimeter goals to find even little targets. There are two particular kinds of GPR approaches viz. time space and frequency domain. For the experimentation, at first a ground penetration radar is utilized to create informational collection, which is then prepared utilizing A, B and C scans to lessen the commotion to get landmine signals. At that point the migration algorithm is applied to the images got from Ground Penetrating Radar. From the output of the migration algorithm, landmine signals are processed, which are utilized as features of each landmine for recognition and distinguishing proof. As different articles are distinguished after the movement calculation, a determination method is applied to identify only signals of landmines and dispose of different items. Along these lines, an end to end pipeline for landmine recognition is proposed and assessed with a baseline strategy to highlight its viability

Sr. No.	Paper ID	Title & Author
61	102	Sachin Gavhane, Amruta Pokhare and Sanjay Shitole <i>Non-Parametric Method for enhancement of darker portion in an image</i>

Abstract—Images caught in darker area builds complexities in handling and removing essential

data. Improvement of such pictures encourages us to recover significant information. ANN based error back propagation (BP) algorithm is used for enhancing shadow region of an image. Dataset used in this paper is a shadow image with its enhanced output (log transformed), so that model will be able to learn to enhance the shadow region of any given image. Darker locale in an image are successfully reduced in the results obtained. Still there is a scope of improvement through adjustments and variations into various parameters of proposed non-parametric approach.

Sr. No.	Paper ID	Title & Author
62	297	Venkata Sai Krishna Vanama, Sanjay Shitole and Y. S. Rao <i>Urban flood mapping with C-band RISAT-1 SAR images: 2016 flood event of Bangalore city, India</i>

Abstract—Flood mapping in urban areas is a rigorous and crucial task in disaster management. Bangalore, one of the Indian megacities, has experienced severe flooding in July 2016. To analyze this flood event, RISAT-1 satellite images were acquired before and after the flood. Various change detection methods were applied to the processed SAR images to identify the flood area. Horizontal like polarized data (HH) is highly sensitive to identify permanent water bodies and also flood affected areas.

Permanent water bodies and high elevated areas extracted from DEM were masked out from the results for accurate urban flood mapping. The results show that the spatial distribution of flood was better identified by Normalized Change Index (NCI) method. The results reveal that difference and ratio change detection methods ensued in over and underestimation of flood area, which may be due to the use of moderate resolution RISAT1 SAR images. In urban areas, the use of images acquired with RISAT FRS mode may give better results due to its high spatial resolution.

Sr. No.	Paper ID	Title & Author
63	90	Kungumakarthiskeyan Venkatachalam, Uddhabendra Maity, Atharv Shetty, Dr. Sameer Nanivadekar and Prof. Vishal Badgujar <i>Autonetics and Administration for IT Laboratories</i>

Abstract Majority of IT labs in today's academic institutions face operational issues in the management of multiple systems simultaneously. The best example would be when a particular software needs to be installed in the labs, it becomes a tedious and time consuming process for the lab assistant to manually install the software in each and every system in the lab. Also in some cases where the students forget to shutdown their respective computers, it becomes the responsibility of the lab assistant to shutdown the PCs manually. These challenges cause lack of access control and inadequate security. Moreover, there is lot of work pressure which leads to sub-optimal work schedules. To keep track of access records of the systems, we would also be designing a web-based GUI which records and displays the access information of PCs too.

Sr. No.	Paper ID	Title & Author
64	92	Sameer Dev, Yogendra Kokamkar and Sudama Jaiswal <i>Voice Based Smart Assistive Device for Visually Impaired People</i>

Abstract—Blind, the dictionary defines it in one simple word, sightless. The life for a visually challenged person is extremely hard for obvious reasons. In this era of cutting-edge technology, it is still extremely difficult for visually challenged people to carry out day to day chores or enjoy the simple pleasures of life such as going for a walk, socializing, and so on. Hence, developing new solutions that allow those individuals to interact with sighted people, and the

sighted world, in a way that lessens any of the problems that can arise from being visually impaired is becoming increasingly important. This paper presents a Smart Device built using a Raspberry Pi that can be controlled via Voice Commands and carry out various tasks such as Object Detection, Navigation, and notify the user through Audio feedback. The device will also take help of Image Recognition and Image Processing in order to convey information about specific places to the user as soon as the user is in that particular vicinity, hence allowing the person using the device know their surrounding environment in a better way

Sr. No.	Paper ID	Title & Author
65	94	Chaitanya Bysani, Ajinkya Huddar and Chintan Suchak <i>Dexter - The College FAQ Bot</i>

Abstract Chatbot is a new and upcoming technology that has great demand in various industries. The main goal of a chatbot is to create a human-like conversation between a human and a machine, to reduce the work stress. The chatbot can be implemented in any industry easily, unlike any other product where the products need to be developed and tested before switching platforms. In colleges, especially during the time of admission, reception gets crowded and people have to wait to get their queries solved. If any person wants to know about the college, then he/she has to travel to college. Although every college has its website, not everybody can find the answer to their query. Colleges are not working on weekends, so if someone wants to visit or call reception to get their query answered they will have to wait until any working weekday. To solve these problems, we will create an AI chatbot. This chatbot will be embedded on the college website and will be able to answer any college-related query easily. Chabot will be able to answer multiple persons at the same time, people don't have to visit the college to get their query solved and it will be available 24/7

Sr. No.	Paper ID	Title & Author
66	96	Srinivas Vishwanath and Saurabh Sharma <i>Vehicle Parking Management System</i>

Abstract Due to the increasing population in urban cities, there is an exponential rise in the number of vehicles which is leading to major problems leading to poor traffic management and congestion. Another major problem faced by the vehicle owners is the availability of parking space. The idea of Smart Cities is slowly gaining pace with the ever increasing technologies. Therefore, in the proposed parking system we are integrating the Wireless Sensor Technology with the Android Application so that the user can book or prebook a slot. The vehicle owner will be able to reserve a slot for his/her vehicle from anywhere and will be provided with a QR code which will be scanned on the entry of the parking area. Another feature our system provides is providing information about the near-by parking areas which comes handy when the current parking area is full.

Sr. No.	Paper ID	Title & Author
67	113	Sujatha Ramesh and K. Natarajan <i>A Study of Satellite Networks and Educational Technologies for Ubiquitous Education</i>

Abstract—Indian educational satellite, EDUSAT, launched from GSLV was the world's first dedicated satellite to provide education to rural and urban students through Virtual Classrooms. Around 15 million students across 26 States of India receive education each year. UNESCO's Institute for Statistics (UIS) suggests that, over 68 million trained school teachers will be needed across the world to achieve the objective of Universal Education Goal. To realize this, we require conventional education, as well as Satellite Networks that foster interactive and

inexpensive distance education through e-learning. This type of learning process will provide education for all. The Indian educational satellite networks are compared with those of other nations to understand the methodologies to improve literacy. The value addition provided by educational technologies like Artificial Intelligence, Cloud Computing, Big Data, Augmented Reality, Virtual Classroom, etc. in association with satellite networks, is also investigated. In the urban areas and Smart Cities, high tech education is best implemented by using high bandwidth satellite networks in conjunction with high speed terrestrial optical fiber links and modern EdTech. This paper examines the synergistic utilization of educational technologies with ubiquitous connectivity of satellites to provide education to tribal as well as remote hilly regions like the recently created Union Territory of Ladakh. This study gives input to the initiatives of the Ministry of Human Resources Development (MHRD) of the Government of India for the proposed New Education Policy (NEP), which envisages equitable and inclusive education for all.

Sr. No.	Paper ID	Title & Author
68	121	Harshit Singh, Dhyanikumar Palan, Ruhi Shinde and Mudra Doshi <i>Health Monitoring and Analysis System using IPFS and Blockchain</i>

Abstract— India currently has no central health monitoring system in place which can provide a single platform for storing Medical records of all the citizens of our country in a systematic and secured manner. In this research, we develop a system that will not only provide a record storing platform rather, a system that can be used to perform analysis on the records stored and produce output by the means of data mining which could be used for multiple agencies like Government, Pharmaceuticals Company, and Hospitals to benefit from services like Epidemic predictability based on Preset benchmarks, help in maintaining appropriate stock of medicine, serve as Electrical Medical Records (EMRs), etc. The highlight of this research is the use of two emerging paradigm changing technologies in the medical domain, which are Blockchain and IPFS. The use of these two technologies along with the architecture model suggested in this paper can efficiently reduce the problem of security breaches faced by most of the health record systems maintained by other countries.

Sr. No.	Paper ID	Title & Author
69	125	Sanyog Vyawahare and Kaustubh Chakradeo <i>Chatbot Assistant for English as a Second Language Learners</i>

Abstract—This work demonstrates an experimental implementation of a helper bot using IBM Watson. It is primarily aimed at people who know English as a second language. With the help of IBM Watson Assistant tool, the chatbot uses APIs like Google Translate API, Text to Speech API, SimpleWiki and Musixmatch API, to provide features like rich responses, translation to regional languages, text to speech conversion facilities, useful information in simpler English, and displaying music lyrics for music in regional languages. This is particularly helpful for those who are newly learning English and are more comfortable in their regional language.

Sr. No.	Paper ID	Title & Author
70	129	Advait Maduskar, Aniket Ladukar, Shubhankar Gore and Neha Patwari <i>Health Monitoring and Analysis System using IPFS and Blockchain</i>

Abstract - Efficient synthesis of musical sequences is a challenging task from a machine learning perspective, as human perception is aware of the global context to shorter sequences as well of audio waveforms on a smaller scale. Autoregressive models such as WaveNet use iterative subsampling to generate short sequences that are a result of a localized modeling

process but lacking in overall global structures. In juxtaposition, Generative Adversarial Networks (GANs) are effective for modeling globally coherent sequence structures, but struggle to generate localized sequences. Through this project, we aim to propose a system that combines the random subsampling approach of GANs with a recurrent autoregressive model. Such a model will help to model coherent musical structures effectively on both, global and local levels.

Sr. No.	Paper ID	Title & Author
71	139	Prajwal Ravishankar and Geethakumari, " <i>Classification of IoT Binaries in Resource Constrained Environments</i> "

Abstract—An overwhelming majority of the devices in the IoT ecosystem are severely constrained in terms of computing power and security, the former being one of the causes of numerous security concerns. This paper provides an efficient light-weight Convolutional Neural Network (CNN) based architecture for classification of IoT binary executables as malware or benign taking into account the severely constrained computing capabilities of the targeted devices. The proposed architecture facilitates faster classification of IoT binaries as benign or malignant using a reasonable number of parameters. The results of the experiment show that the proposed solution achieves an accuracy of around 95% using approximately 360,000 parameters. The number of parameters used in the proposed work is much less compared to what other neural network based models would use.

Sr. No.	Paper ID	Title & Author
72	294	Mayank Vyas, Priya Khanzode, Sunita Sanap, Jidnesh Mhatre and Vivek Ramakrishnan <i>IOT Based ICU Patient Monitoring System</i>

Abstract— The health of the patients in the hospital will be severely affected if they are not treated properly on time and there is a high risk of causing more diseases. Patients monitoring is a challenging factor in the past years. Even in hospitals it is very difficult for doctors to attend the patients, because doctors cannot not be available all the time in the hospital because of their busy schedule. Hence there is a need for a solution to monitor the patients any time for the doctors from any place. With the development of Internet of Things (IoT) devices in the recent years a solution is proposed for this. An IoT device which can be used for real time application in homes, hospitals and other places were developed as a gadget. With this gadget, the human man power can be reduced using Wi-Fi system. The patient monitoring and control system checks the pulse rate, temperature of the patients especially in hospital's using the sensors attached for collecting the data and send it to the Arduino microcontroller for processing the data. This gadget can also be used by the every one even at home, hospitals or any other places

Sr. No.	Paper ID	Title & Author
73	299	Joslyn Gracias <i>Prospective Synthesis for Evaluation System of EMG Information Signal-An Overview</i>

Abstract—Human nerve signal are being extensively studied in recent times due to their undeniable control on human physiological system. These Myoelectric signals have been and continue to be analyzed for medical data processing devices and human assistance robots. In this paper, a prospective procedure to analyze EMG signals has been proposed which synthesizes the techniques that have been evaluated individually to perform designed processing. Initially the paper briefly reviews the conventional EMG acquisition method followed by the overview of

the proposed data analysis techniques that involve the segmenting data, disregarding redundant data and classification of significant data. The paper briefly reviews KF-LDA design that assembles KF's ability to estimate non-linear progressions and stable steady state LDA classification. The proposed evaluation system synthesizes the use of ANN and KF-LDA for data classification. Furthermore, the broad areas of application for EMG evaluation are listed followed by a summarized conclusion.

Sr. No.	Paper ID	Title & Author
74	4	Shreya Tembe, Smita Pawar and Saher Khan <i>Design of an affordable pH module for IoT based pH level control in Hydroponics Applications</i>

Abstract—Hydroponics is a newly emerging agricultural technology that enables us to grow plants without the use of soil. When soil is replaced with coco-peat, rock wool or rocks, plants become highly sensitive to the nutrient solution. pH is the negative logarithm of hydrogen-ion activity, which tells us about how acidic or basic the soil, water or a solution is. It is calculated in logarithmic units and ranges from 0 to 14. Recirculating hydroponic systems absorb the nutrients from the nutrient solution. This results in a deviation of pH levels and requires timely regulation. Ideally, the pH of the nutrient solution must be between ranges of 5.5 to 6. pH probes have an output impedance of 1013Ω and produce an analog output. They require some level of signal conditioning, which is obtained through pH modules. Generally, the pH modules available commercially are very expensive. We focus on discussing the design of an affordable pH module, interfacing it with Arduino, NodeMCU and Raspberry Pi boards

Sr. No.	Paper ID	Title & Author
75	114	Harish Yadav, Sneha Choudhary, Aishwarya Verma, P.B. Karandikar, A.P. Karandikar and R.M. Holmukhe <i>Techno Commercial Solutions in Road side Distribution Transformers</i>

Abstract—Transformer is key component in electrical power system. It is used in generation, transmission, and distribution of power supply. There are lots of developments in transformer technology with respect to material used in it as well as in application. It is found that most of the researchers are working on material, construction, use and electrical parameters of both distribution as well as power transformers. This paper is about off track aspect of distribution substation. It deals with the social problems arising in roadside distribution transformers and solutions for it. Space related issue is major problem faced by electrical engineers. The issue raised in this paper is present in most of the underdeveloped, developing as well as highly dense countries in the world. Technical as well as non - technical solution approaches are presented in details. IoT gfbased technical solutions is successfully implemented.

Sr. No.	Paper ID	Title & Author
76	135	Ravindra Sonavane and Adhyayan Sonavane <i>Classification of Brain Tumor and Mammogram Images Using Adaboost and Learning Vector Quantisation Neural Network</i>

Abstract - Classification and accurate detection of brain tumor using MRI is essential for purpose of treatment and diagnosis of tumor. In this paper we propose and developed system using four stages namely image normalization, Skull Stripping, Anisotropic Diffusion filtering and feature extraction using GLCM. The system evaluated on two types of database, Clinical Brain MRI Images and Digital Database for Screening Mammogram (DDSM). Normalization is

process of contrast stretching which changes value of pixel intensity and Image Binarization is processing of Grey scale image into black and white image by fixing threshold level of pixel. If value of pixel above the threshold level is white either Black followed by steps of morphological operation i.e. Erosion and Dilation by processing MRI images. Apart from that anisotropic diffusion (ADF) is applied for detection and sharpen the edge detection. Features taken or extracted by using GLCM from filtered MR images. In the stage of classification, two Neural Networks have been implemented. The first Neural Network is Adaboost NN is based on boosting method which yields classification accurately and the second neural network, LVQ is feed forward network which uses Quantization machine learning algorithm and Lossy compression techniques. The extracted features hence given to train Neural Network for classification.

Sr. No.	Paper ID	Title & Author
77	215	Minal Fegade, Harshprabha Paliwal, Dr. Navneet Agrawal, Ajay Singh and Suriti Gupta <i>Design a microstrip patch 5G antenna with modified defective ground structure</i>

Abstract: The proposed design is of 5G Micro-Strip Patch Antennas with Defected Ground Structure on ground slots. Slots or defects merge on the ground plane of microwave planar circuits are defined as Defected Ground Structure. DGS is a very effective Partial Defected Ground Structure is used to improve all the antenna parameters and performance. DGS used to achieve high gain higher bandwidth. The proposed paper introduced the defective ground structure with a v slot in the partial ground. This will improve the parameter like return loss, bandwidth, VSWR, efficiency, and compactness of the antenna. The proposed antenna has great return loss up to -31.95dB. With frequency band 39.649Ghz to 43.97Ghz and it has bandwidth 4.30Ghz. Keywords: Defected Ground Structures (DGS), 5G, VSWR.

Sr. No.	Paper ID	Title & Author
78	223	Atharva Ajgaonkar, Shriniket Vichare, Rohan Badgular, Manisha Bansode, Deepak Karia and Abhay Bambole <i>Remote Structural Health Monitoring</i>

Abstract—In recent years, with the widespread construction, the number of incidences of structural damages and accidents has increased. This has led to fatal casualties and property loss. The most important reason for most of the structural damages and accidents occurring is lack of effective monitoring. The main aim of Structural Health monitoring is to monitor different civil structures like buildings, stadiums and try to improve the health of the structure which in turn will help to improve the lifespan of the civil structures and can also help to maintain the safety of Public [5]. The process of SHM includes detecting and analyzing the damages or weakness that the structure has, due to old age or any other reason and take preventive measure to avoid any fatal consequences[3]. Structural Monitoring is also important helpful for reducing over finance, as we don't always have to take big steps of demolition and rebuilding as sometimes simple repairs can do great effects. The necessity of bridge health monitoring has been drawn more and more attention. This paper introduces a remote bridge health monitoring system. Undergoing regular maintenance procedure on civil structures can help to increase the life span of the structure[7].

Sr. No.	Paper ID	Title & Author
79	225	Karuna Gamare and Ranjan Bala Jain <i>Cancer Cell Detection using 2D Photonic Crystal</i>
<p>Abstract—In this paper a fast, efficient and accurate method for the detection of a cancerous cell using Two-dimensional (2D) photonic crystal is proposed. Photonic crystal has many advantage of small size, portability, low cost, high sensitivity and accuracy. The detection of cancer cell is based on the fact that the refractive index of cancer cells differ from normal cells in human body. This difference in refractive index can be observed using optical techniques in 2D photonic crystal. The detection mechanism consists of shift in reflection or transmission coefficient on different wavelength, when a sample of cell is placed in to 2D photonic crystal structure with defect and this shift is different for different types of cancer cells. This helps in interpreting the type of cancer efficiently. For analysis of different cancer cells, refractive index of cancer cells have been taken instead of refractive index of air in the structure. This paper analyzes the shift in wavelength for various cancer cells such as PC12, Basal, Jurkat, Cervical, MCF-7, MDA-MB 231 with the help of grating structure, structure with defect and double ring structure. Finite Element Method based simulation tool, COMSOL Multiphysics has been used for analysis and results are presented in the form of reflection coefficient vs wavelength for various cancer cells.</p>		
Sr. No.	Paper ID	Title & Author
80	230	Bonthula Swetha, Jamparangi Veda Srith and Azees Maria <i>Efficient Anonymous Authentication and Key Management Schemes for Secure Service Provision In VANETs</i>
<p>Abstract— with the advancement of wireless communication technologies, the vehicular ad-hoc networks (VANETs) play an important role in providing better driving experience to vehicle drivers. Due to the open wireless nature of air communication medium in vehicular ad-hoc networks (VANETs), security and privacy should be given to protect the VANETs from various security breaches or security attacks. Even though, there were many existing schemes available related to security and privacy, these schemes have been suffered by high computational complexity. In this project, a computationally efficient anonymous authentication technique is proposed along with an efficient key sharing mechanism to securely share information among vehicles. The security analysis section shows that the proposed scheme can withstand against various security attacks. The performance analysis section demonstrates that the proposed scheme is efficient in terms of computational complexity.</p>		
Sr. No.	Paper ID	Title & Author
81	275	Ameya Kulkarni and Neha Rai <i>Cluster Based Object Tracking System Using Triangulation With Improved Energy Efficiency</i>
<p>Abstract—In current scenario in context of object tracking, same target might be identified by one or more sensors with equal amount of energy being consumed by each sensor. Also, there is a need to anticipate the future position of an object in view, of the object elements regardless of whether occasions are missed. The Kalman Filter is reasonable to evaluate the condition of targets moving with about consistent speed. The current framework also excludes the security parameters considering the fact that it just takes a shot at the grouping and not on triangulation to figure the forecast utilizing different hubs including the bunch head. In the current framework they are just chipping away at static bunching and channel strategy like Kalman. In this paper</p>		

we have tried to address these issues by using triangulation and more efficient use of energy so as to increase the overall output of the proposed system.

Sr. No.	Paper ID	Title & Author
82	160	Deepa Chakravarty and Debasish Pradhan <i>Segmentation of Images with Tubular Features based on Tight-Frame Technique</i>

Abstract—Image segmentation is an important topic in the field of computer vision and image processing. It is also of major significance in the area of medical imaging. Segmenting medical images with thin tube-like structures is a major challenge. The model proposed in this paper can be used to obtain a desired segmented result from an image having vessel or tubular features. This model uses the concept of solving Mumford-Shah model to obtain a smooth image. This smoothed image is segmented using the idea of Tight-Frame-based Algorithm with Eigenvector (TFAE). This hybrid method gives better segmented results than that of TFAE method alone. The given model also works well with noised images. The proposed method has been implemented on images with and without noise. The result obtained by this method has been further compared with existing models

Sr. No.	Paper ID	Title & Author
83	187	Yasmeen Shaikh, Vasudev Parvati and Sangappa Biradar <i>Role of IoT and Bigdata Analytics in Healthcare for Disease Prediction</i>

Abstract__ One of the major issues to worry nowadays is the busy life cycle people follow and the effect they have on the health. This busy life cycle has made people to neglect their health. In india many people are below poverty line and even majority of population stays in rural places and cost of medical treatment is too high. Under these situations, it is not feasible for people to afford costly medical treatment. We have seen people being admitted to hospitals at the last hour and being forced to follow traditional medical practices and lose their lives. To address this issue, we need a remote health monitoring system that could alert people about their health condition and people can get medical diagnosis done remotely. In this paper, we discuss, the role played by iot and bigdata analytics in the field of healthcare. We also discuss the benefits, challenges and applications of these technologies. We propose a system to monitor heart condition of a patient using iot which alerts the patient or doctor if any abnormality is observed. This system could further be scaled to provide real time health monitoring to predict various diseases using bigdata and ml analytics.

Sr. No.	Paper ID	Title & Author
84	189	Rishikesh Kadam, Vishakha Vidhani, Anushree Bane, Bhavika Valecha and Nupur Giri <i>Land Records System Using Hybrid Blockchain</i>

Abstract— Maintaining land records is a difficult task for countries with large area and population. Having a central database server is not a 100% safe alternative to paper-based traditional records as it is susceptible to cyber-attacks and frauds. This paper proposes an idea to solve this issue using blockchain. The proposed land records system is based on a hybrid blockchain network. The existing land records are put on the blockchain by the government. All land sales transactions are recorded on this hybrid blockchain. These transactions are mined (verified) by a miner which is run on government authorized peers or nodes. These records or transactions cannot be tampered with. The citizens can view their owned lands and corresponding transactions but cannot make changes to any data on the blockchain. Being based on hybrid blockchain, this system is benefitted by advantages of both the types of blockchain-

public and private and is more secure and reliable than databases and paper records.		
Sr. No.	Paper ID	Title & Author
85	190	Dr. Sharvari Sane and Gururaj Chaughule <i>Application Of Business Modelling Tools In The Analysis Of Business Case</i>
<p>Abstract—Every business has its own features. It is categories as per its product, service, investment and many other aspects. In this papers authors have use some special tools to study the business and analysis the same on profit level .Blue Town Company is taken as an example which is a telecommunication company from Denmark establishing in India. This company want to reach to the certain limits of the profit with the existing infrastructure. Authors have introduce new concept of analysis the business into seven dimensions and the same can be plotted graphically into eight different segments. In this paper authors discussed about the company issue in the similar way and predicted certain solutions with which company can established in rural area with moderate profit.</p>		
Sr. No.	Paper ID	Title & Author
86	198	Sahil Jobanputra, Varsha Kukreja, Mukesh Jha and Dr. Radha Shankarmani <i>Universal Research Portal</i>
<p>Abstract— In recent times there are plenty of research projects with grants from major Government Organizations, Industrial Organizations and other Institutions. But a lack of universal research portal where Professors can motivate students interested in the domain to work with them on high scale research work and projects sponsored by Industries and Government Organizations hampers the growth of research community and also hinders great research opportunities which could be offered to young intelligent minds. Also huge availability of research projects with no customization and recommendation which can enhance students’ knowledge in his/her field of interest makes very less students to take up research activities. Our solution aims at satisfying the above need by giving professors, a platform where they are continuously notified about the list of the projects with grants from major organizations for which they can offer research internships to students and float various research projects for students to apply. It also includes monitoring status of the research work and collaborative filtering and machine learning based recommendation with highly scale-able notification system making research recommendation completely customized according to data obtained from student’s contribution in different version control systems</p>		
Sr. No.	Paper ID	Title & Author
87	207	Akshata Churi and Dr. Vinayak Shinde <i>Alphanumeric database security through digital watermarking</i>
<p>Abstract—As the demand of online data availability increases for sharing data, extracting information and used it for decision making and business analytics, security of available data becomes important issue. Data needs to be protected from unauthorized access as well as it needs to provide authority that the data is received from a trusted owner. To provide owners identity digital watermarking technique is used widely since long time for multimedia data. Now a day’s data is available in database because it is easier to provide large information by storing it into a database, therefore there is a need to embed watermark information into relational database. This paper proposed a system involves watermarking of alphanumeric database. The</p>		

characters to be entered as watermark are converted into binary values; these binary values are hidden in the database using space character. Each bit is hidden in each tuple randomly. The tuples are selected using Ant Colony Optimization algorithm to hide bits. Since random numbers are generated to select tuples to embed watermark bits that are not random in true sense as they dependent on respective machine state, the hidden text security is compromised. To overcome this we propose use of ant colony optimization algorithm to select the tuples. This way the order of location of bits is randomised in such a manner that it is impossible to retrieve the hidden data. The proposed system is enhanced in terms of security due to use of Ant Colony Optimization and resilient because even if some bits are modified the hidden text remains almost same.

Sr. No.	Paper ID	Title & Author
88	211	Sandhya Vijayarathy and Abhishek Murkute <i>Federated Learning – A Review</i>

Abstract— In the current era of big data and analytics, modern machine learning techniques utilize juggernaut amount of data from different sources. The data privacy issue becomes a major concern, as it leads to misuse of personally identifiable information. Acts like GDPR creates hindrance in training the model. Also, training the models on huge data itself is a big challenge, as it requires huge investment of infrastructure. Here Federated Learning (FL) acts as a bliss to mitigate such issues. This paper throws light on various aspects of Federated Learning.

Sr. No.	Paper ID	Title & Author
89	219	Vinayak Bharadi and Geetanjali Sawant <i>Permission Blockchain based Smart Contract utilizing Biometric Authentication as a Service: A Future Trend</i>

Abstract— Smart contracts are the triggered self executing contracts which are termed and conditioned among the trusted parties. Being independent of trusted third party, smart contract rely on blockchain and the underlying consensus submitted by participants for the security. Hyper ledger fabric provides peer-to-peer-network based distributed operating environment. This scenario highlights the need of identification of peer , more precisely on the ‘who the person is’ rather than ‘what does the person possess’. This paper proposes an idea of the integration of multimodal biometric authentication system incorporation with the permissioned blockchain based smart contract. Every peer has to be authenticated before getting involved in smart contract. Paper also informs about the surveyed ways of multimodal recognition which ensures the major concern of various applications like insurance settlement, market predictions and internet on things, etc.[1] i.e. liveliness detection.

Sr. No.	Paper ID	Title & Author
90	221	Anisha Poojary, Avinash Chourasiya, Karan Jha and Prof Satish Ranbhise <i>Biometric Authentication System using Hand veins</i>

Abstract—Biometric authentication is a method of identifying individuals for security purpose based on the distinctive physiological characteristics of a person for verification and authentication. The use of biometrics provides a more definitive security layer in identification and user authentication in many fields. Biometric authentication can be implemented using finger print, iris, and voice and so on. Vein pattern is an extensive group of blood vessels underneath a an individual’s skin. These vein patterns are considered to be distinct and special to each individual and they are invariant in proportion. Taking in considerations the drawbacks of other biometric recognition methods, hand vein biometric is selected, as it is efficacious, guaranteed, secure and highly reliable for identification, authentication of individuals. So as to

enable biometric authentication, cost effective scanning devices are brought into use. The device includes the use of No IR camera which is used for acquisition of vein image and a matrix of NIR LEDs which is helps to capture only the veins in the camera. The system is designed using Raspberry Pi at its heart and also makes use of Open CV, a library in Python which is used for image processing.

Sr. No.	Paper ID	Title & Author
91	222	Zhouyu Yang, Ningyue Peng and Chengqi Xue <i>Exploratory Search Behaviors in Linear List Visualization</i>

Abstract—Presenting hyperlinks in the form of linear lists is the mainstream visualization method of semantic information space. Users need to click hyperlinks and jump to multiple pages to forage information and perceive the relation between pages and the connectivity within information space. The jumping process would interfere with the learning and understanding of the semantic information space, increase cognitive load of information retrieval and degrade user experience. In this paper, an experiment is conducted to investigate the exploratory search behaviors in linear list visualization. We create two exploratory search tasks, and use process analysis and questionnaire surveys to study users’ disorientation, their search behaviors, and search preferences. Results confirm the learning characteristic of exploratory search, which is specifically manifested in their continuous searching through multiple interactions with the searching system, and adjusting search strategies and methods until the search task is completed. Two search preferences based on retrieval keywords and literatures are observed in the search. Through observations and surveys, we find it is difficult for users to build the mental map between hyperlinks and the information space using a linear list visualization. They will get lost with deeper information searching. This paper can inspire the information retrieval and multimedia system designers to be more considerate of users’ learning abilities and their perceptual bottleneck.

Sr. No.	Paper ID	Title & Author
92	224	Purnima Ahirao, Srijan Das, Rishabh Rupani and Suyash Jadhav <i>Prevention Technique for Social Engineering based Internet Banking fraud</i>

Abstract—Financial institutions, including banks play an essential role in a country’s economic development. The Indian banking sector is observing the IT revolution, but at the same time cyber frauds are getting more sophisticated day by day, social engineering attacks being one of it. In Social Engineering the most vulnerable or the weakest link i.e. the humans are exploited for financial benefits. Though Banks have their own security solutions to fight security attacks, the major problem exists whenever human intervention is required such as account credentials as in case of Internet Banking. The social engineering technique is useful in getting the username and password to be revealed by the customer. Banks find themselves helpless in such cases. In this paper, the proposed system provides a solution that can be utilized by banks and customers to prevent social engineering based net banking frauds. The proposed system will check the eligibility of the customer who applies for internet banking facility. Eligibility test will be the benchmark for allowing or denying the internet banking facility to the customer. The system checks about the customer's awareness about Internet Banking Fraud. The system also provides tutorial videos related to social engineering based financial frauds along with preventive measures for such attacks to the customer who fails to clear the test. After viewing the tutorials, the customers can reappear for the test and avail the Net banking facility by clearing it. The system helps in avoiding financial frauds occurring due to a lack of awareness among Internet Banking customers.

Sr. No.	Paper ID	Title & Author
93	226	Vinayak Bharadi and Pravin Jangid Evolving Authentication Design Consideration and BAAS Architecture for Internet of Biometric things
<p>Abstract— Cloud computing has opened many possibilities for the design and implementing various models of software for addressing variety of problems. Biometric authentication is an important aspect of security and need for the same is increasing day by day. This has resulted in adaptation of biometric security based systems by masses. Further, with the portable sensors and computing devices the biometric authentication will become an integral part of Internet of Things. To handle such a large scale of authentication cloud based implementation is a viable option. In this paper, an evolution of a multimodal biometric authentication system is discussed. Initially the system is proposed as a native multimodal biometric system and further modified to be deployed as Software as a service based model and a cloudbased model with GPU and NoSQL database. This paper is presenting the improvement in computation time and scalability gained by cloud based deployment.</p>		
Sr. No.	Paper ID	Title & Author
94	1	Sanket Sawant, Aniruddha Patil, Pratik Mahale and Nikhil Nair Implementation of an Energy Efficient BLDC Motor in a Ceiling Fan
<p>Abstract— A brushless DC motor is in use nowadays for several applications. Room of Improvement for these motor still holds for it's efficiency and total power delivered. This project deals to provide a low power consuming BLDC motor that has a caliber to run a ceiling fan with maximum power consumed up to 20 Watts. Fan in domestic use holds for majority of power consumption in India, as almost everyone owns a fan for regular use. Power consumption of regular fans is 60 to 70 Watts. This power consumption can be reduced for the similar available output by making energy efficient BLDC motor. This paper deals with designing of motor which can be implemented in regular fan's design. Some companies in India are successful in design of low weighed aerofoil designed blades which can be an advantage for our project in terms of efficiency. Generally our paper is a new design of BLDC motor which can be implemented in various applications, but specifically this paper is concentrates on application of this motor in a ceiling fan.</p>		
Sr. No.	Paper ID	Title & Author
95	138	Deepali Maste, Nikita Patil and Mamta Meena Review of Health Care database
<p>Abstract—Digitalization has an impact on the healthcare system too and the result can be seen in improvements in medical field. All healthcare components like doctor, hospital, clinics, diagnostic center are working together to increase life expectancy using advanced digital tools. Healthcare department has imparted technology in it and so continues to be prominent. It deals with data overload across all departments and connecting doctors and patients through mobile apps and other technologies. Healthcare technology is making efforts to enhance the effectiveness of these endeavors. Method of diagnosis is also changing as decisions by doctor based on case study and analysis rather than individual perception. So to deal with more perfection towards treatment and to apply reliable methods for patient we need more consistent way of recording data ,status and stage of diagnosis. Database generated at each stage need to be stored, secured, compatible, standard and useful for diagnosis as well as preventive healthcare. Along with handling and preserving database, software developers are trying hard to increase</p>		

the consistency and performance delivery of remote-oriented platforms, so to create more profound and reliable experience for medical practitioners and researchers who are trying to provide patient care from long distance. The procedures for receiving medical care through digital medium is under drastic change in most of the nations, healthcare professionals need to adapt it for better outcome. The new regulations now encourage to save patient records or database for the services rendered in a given format. It is the need of an hour to deliver a comprehensive healthcare experience. Different stakeholders involved in healthcare system like doctors, healthcare scheme providers, insurance providers, doctors, and patients should be able to exchange the healthcare data among themselves securely.

Sr. No.	Paper ID	Title & Author
96	233	Akansha Bhargava, Gauri Salunkhe and Kishor Bhosale A Comprehensive Study and Detection of Anomalies for Autonomous Video Surveillance Using Neuromorphic Computing and Self Learning Algorithm

Abstract—Video Analytics is widely applied in the field of surveillance. Recently, with the advent in technology deep learning network has been incorporated in the video action detection. Traditional CNN is employed to extract 2D spatial features of image but for video it is required to exploit CNN for temporal information. In this work we propose to do instance segmentation in video bytes and predicting the actions with the help of deep learning. And, we aim to present an implementation of an algorithm that can depict anomalies in real time video feed.

Sr. No.	Paper ID	Title & Author
97	273	Jonas Robin, Mehul Soni, Rishabh Dubey, Nimish Datkhile and Jyoti Kolap Computer Vision for Hand Gestures

Abstract— The model developed here is used to detect specific items from the environment. The desired objects to be detected from the environment is hands(gestures). So, for computer to look at the environment computer vision is the most necessary aspect. Based, on the gesture present in the image captured along with the unnecessary objects, the image is processed and the important message is kept and rest is discarded. After processing the neural networks are introduced for to elevate the standards of computer vision there by allowing computer to know about the gesture provided by the humans. Here the recognition of the image is done by using Convolution neural network (CNN) algorithm, the gesture is predicted and this predicted result is shown on the screen connected or an audio device connected.

Sr. No.	Paper ID	Title & Author
98	277	Jyoti Dange, Shravani Mhashelkar, Geetanjali Gajare, Mahindra Patel and Mehul Chavan Heuristic- Based Phishing Site Detection

Abstract— net Spoofing attracts the consumer to accompany the phony sites as hostile the real ones. the first goal of this assault is to require the fragile information from the purchasers. The aggressor makes a 'shadow' website that seems to be just like the real site. This false demonstration permits the aggressor to look at and alter any information from the consumer. This paper proposes a discovery strategy of phishing websites hooked in to checking Uniform Resources Locators (URLs) of site pages. The planned arrangement will acknowledge the authentic {website} page and phony page by checking the Uniform Resources Locators (URLs) of suspected site pages. URLs area unit investigated hooked in to specific attributes to envision the phishing web site pages. The recognized assaults area unit accounted for antagonistic action. The presentation of the planned arrangement is assessed utilizing phis tank and Yahoo catalogue

datasets. The non inheritable outcomes show that the invention system is deplorable and competent to acknowledge completely different styles of phishing assaults maintaining a coffee pace of bastard alerts.

Sr. No.	Paper ID	Title & Author
99	310	Samuel Jacob, Mandar Warde and Pratibha Dumane Impact of Augmented Reality as an ICT tool to Deliver Engineering Education Content

Abstract — Augmented reality has found itself as an excellent candidate to deliver content for education. There is a definite need for improved visualization when it comes to Engineering education. AR could present itself as a good candidate to do so. This paper presents the use of Augmented Reality for engineering education. The need for visualization finds itself at the core of imparting Engineering education and there are various platforms to do so. We continue the work presented in an earlier publication where we have implemented our smartbooks concept for delivering an engaging AR experience. We have presented the use of AR for delivering content for three fundamental engineering subjects: Engineering mechanics, engineering drawing and electrical engineering. We have also explored a different user interface to improve our AR content delivery. Examples for each are demonstrated and so are their use cases. Measuring the impact of using AR was a particular challenge with variable usage across students. We have defined certain metrics (engagement factor) that help us correlate usage with impact. We have measured the impact of our AR implementation through well designed questionnaires, and used the academic scores of the candidates as an output metric to measure impact. The objective of this research is to present a case for the use of AR in being a front-runner ICT technology for delivering engineering education.

Sr. No.	Paper ID	Title & Author
100	311	Monika Shah and Dr. Preeti Mehta C field perfect fluid cosmological model in LRS Bianchi type-I universe

Abstract Here we approach to probe renowned C field perfect fluid cosmological model in LRS Bianchi type-I universe with varying cosmological constant $\Lambda(t)$ (headed to acquire the deterministic model, one supposes $\Lambda = \frac{1}{R^2}$; as opted by Chen and Wu[1]. The expression has the parameter R measured as Scale factor and for metric potentials A and B we $B = A^n$. = presume . We also analyze that $\Lambda = \frac{1}{t^2}$ which matches with the investigation of theory proposed by Hoyle & Narlikar. The deceleration parameter q is less than zero reflects a speed ing up of the universe. Apart from this, the paper put emphasis on physical and geometrical characteristics too.

Sr. No.	Paper ID	Title & Author
101	313	Gajendra Raut, Aditya Raut, Jeevan Bhagade, Jyoti Bhagade and Sachin Gavhane Deep Learning Approach For Brain Tumor Detection And Segmentation

Abstract—Brain tumor is a serious health condition which can be fatal if not treated on time. Hence it becomes necessary to detect the tumor in initial stages for planning treatment at the earliest. In this paper we have proposed a CNN model for detection of brain tumor. Firstly brain MRI images are augmented to generate sufficient data for deep learning. The images are then pre- processed to remove noise and make images suitable for further steps. The proposed system

is trained with pre-processed MRI brain images that classifies newly input image as tumorous or normal based on features extracted during training. Back propagation is used while training to minimize the error and generate more accurate results. Autoencoders are used to generate image mask which removes irrelevant features and further tumor region is segmented using K-Means algorithm which is a unsupervised learning method.

Sr. No.	Paper ID	Title & Author
102	122	Neha Singh, Neha Kunte and Sinu Mathew Impact of income level of an individual on his BMI and performance analysis using various Machine Learning Approaches on ATUS Survey 2014-16

Abstract— Body Mass Index(BMI) is widely accepted as a measure to assess various health risks of a person. Eating habits, stress and lifestyle followed by an individual are some of the factors that affect our health. All these contribute towards an increased BMI and in turn to more health issues related to overweight and obesity. In this paper, the American Time Use Survey (ATUS) Eating & Health Module Files from 2014 survey is used to predict the BMI of people based on their income and through it, we try to establish a relationship between overweight/obese likely based on the income of the family. To do this analysis different machine learning algorithms will be used and finally a comparison of all the algorithms are done with the help of ROC curve.

ABOUT ATHARVA COLLEGE OF ENGINEERING

Atharva College of Engineering has right blend of technology, innovation and research, with its keen foresight and exemplary vision. The endeavors and achievements stand witness to Atharva's penchant for innovation. To state a few, Atharva Robotics centre is India's Second & Maharashtra's First Private Engineering College equipped with standard training cell comprising of KUKA KR-16-2 Industrial Robot.

There is a full fledged state-of-the-art iMac lab that provides platform for developing iOS, macOS and tvOS Apps. The college has a Ground Station (Atharva Ground Station) which is the first functional station capable of receiving and processing data sent by PRATHAM apart from the IIT-B station. On electronics front, there is a Remote Embedded lab set-up in collaboration with ARM University Program which allows students to access Embedded labs remotely and an IoT lab to provide room for research oriented IoT projects. The college is also equipped with i-Lab (Innovation Lab) India's most advanced and high tech centre of Creative Leadership and innovation which has world class infrastructure, ambiance, advanced tool land technology for innovation. A venture by name "Make in Atharva" was launched to encourage entrepreneurship amongst students and alumni.

