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1.	**Authors:** Abhijit D. Jadhav, Ashvini A. Phalke, Pradnya A. Waman, Usha N. Katore, Santosh R. Salunkhe **Paper Title:** Enterprise Level E-mail Security System	1-2

Abstract: Data leakage is a process in which a data distributor has given important data to a supposedly trusted agents and some of the data is leaked and found in an unauthorized place or unauthorized user. An enterprise data leak is a scary statement. Security practitioners have always had to deal with data leakage issues that spring up from various ways like email, IM and other Internet channels. One or more agents can leak the data. Moreover, data can also be leaked from within an organization via e-mails. So, there is need to filter these e-mails. The mail can be filtered by blocking e-mails which contains images, videos or sensitive data of an enterprise. The e-mail is one of the sources of data leakage. Principle used in e-mail security is we classify e-mail, sensitive data into the white and black lists with document's digital signature value. The data can also be changed by the trusted agents. The system will detect such a changes of the sensitive data and if founds same as black list it will block the mail or stop for review. Then the distributor will decide to allow or disallow the incoming mails from the agent's. The system will prevent the enterprise data from data leakage. E-mail security system will make the data more secure.

Keywords: Black List, SHA, TF, White List.

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2.	**Authors:** Manish Bhaskar, Abhinav Saha **Paper Title:** Computational Analysis of Free Convection in Different Cavities with Different Aspect Ratios	3-8

Abstract: Cavity and Enclosures are finding increasing applications in the aerospace, marine, transportation, and electrical, chemical, construction and consumer goods industries. In some of these applications the composites are subjected to Thermal loads. This paper deals with the computational analysis of natural convection flow in a square, Cubical, Rectangular, Triangular and trapezoidal cavity, using FEV tool ANSYS FLUENT. Where the bottom wall and vertical walls are heated linearly, and the top wall is been insulated with the maximum temperature TH and the minimum temperature with Tc. The present numerical investigation deals with steady natural convection flow in a closed square cavity when the bottom wall is sinusoidal heated and vertical walls are linearly heated, whereas the top wall is well insulated. In the nonuniformly heated bottom wall maximum temperature TH attains at the center of the bottom wall. The sidewalls are linearly heated, maintained at minimum temperature Tc at top edges of the sidewalls and at temperature Th at the bottom edges of the sidewalls. During convection incompressible fluid is taken and passed over cavities driven by temperature difference across the wall was investigated with different aspect ratio. The temperature distribution and flow pattern across the cavities were visualized. The FEV results are validated with well published results in literature and furthermore with experimentation. Results are first presented in the form of streamlines, isotherm contours, local Nusselt number, and the average Nusselt number as a function of temperature difference aspect ratio.

Keywords: Natural Convection, Cavity, Nusselt Number.

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3.

Authors: **N. Mohan Teja, R. S. Ravi Sankar, P. Harsha, V. Uma Shankar**

Paper Title: **A Novel Method of Diode Clamped Multi-Level Inverter using PWM Technique**

Abstract: This Paper presents a novel method of Diode clamped Multi Level Inverter, which works without series association the clamping diodes. The conventional diode clamping inverter suffers from such problems as dc link unbalance, indirect clamping of the inner devices, turn-on snubbing of the inner dc rails as well as series association of the clamping diodes etc. It is due largely to these problems that the application of the conventional diode clamping inverter in practice has been deterred, in spite of the growing discussion in the literature. An auxiliary resistive clamping network solving the indirect clamping problem of the inner devices is also discussed for both the new and conventional diode clamping inverter. Operation principle, clamping mechanism, auxiliary clamping as well as experimentation are presented.

Keywords: Clamping Diodes, DC Link Unbalance, Multi Level Inverter, Pulse Width Modulation.

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4.

Authors: **Alphy John, I. Bildass Santhosam**

Paper Title: **Home Energy Management System Based On Zigbee**

Abstract: To inculcate the Home Energy Management System (HEMS) based on ZigBee communication using remote controller and sensor. This technique brings out the more efficient home energy management system to reduce power consumption in home area. We consider the room easily controllable with an IR remote control of a home appliance. The room has power outlets, a light, sensor and a ZigBee hub. The ZigBee hub has an IR code learning function and educates the IR remote control signal of a home appliance connected to the power outlet. Then it can control the power outlets and the light in the room. The PIR sensor which detects the presence of the human and then it allows the power on the light.. A LCD is used in the hardware module for the user interface. The LCD displays the power consumed and the value of PIR sensor. The ZigBee hubs in each room communicate with the home server and report the power consumption information to the home server. The proposed architecture gives more efficient energy-saving HEMS.

Keywords: ZigBee, Remote control, IR, Energy–saving, Power Outlet, Standby Power, sensor.

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Authors: **Tanushree Bhattacharya**

Paper Title: **Sustained Growth of Green Energy Economics**

Abstract: Energy is one of the critical inputs for economic development of any Country. In order to overcome the present energy scenario problems, energy should be conserved and since we are consuming disproportionate amount of energy that day is not far when all our Non-Renewable resources will expire forcing us to rely just on Renewable Sources. These non renewable sources of energy will not last forever and are proven contributors to environmental degradation. This has led to governments and industries around the globe thinking seriously about alternative energy sources. This along with declining availability of the fossil fuels have led to the development of renewable energy resources such as Biomass, Bio fuels, Wind, Solar, Geothermal, and Hydro energy etc. Current global trends in energy supply and consumption are not sustainable – environmentally, economically, socially but this situation can be changed if we can secure the supply of reliable and affordable energy and effect a rapid transformation to a low-carbon, efficient and environmentally benign system of energy supply. Since exhaustible energy sources are limited,

5. there is an urgent need to focus attention on development of renewable energy sources and use of energy efficient technologies. It is estimated that renewable energy could contribute to at least half of all electric power in each of the large economies by 2050. This Paper emphasis on the various types of modern energy generation techniques and cost analysis as well as economics from Biomass. Biomass is biological material derived from living, or recently living organisms, such as wood, waste, hydrogen gas, and alcohol fuels. Correctly managed, biomass is a sustainable fuel that can deliver a significant reduction in net carbon emissions when compared with fossil fuels.

Keywords: Biomass, Energy Conservation, Renewable Energy, Energy Economics.

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6. **Authors:** **Cezarina Adina Tofan**

Paper Title: **Implementation of Quality Management in the Assessment of Higher Education - Case Study in a Private University in Romania**

Abstract: At the beginning of the millennium, the higher education passes through a process of adaptation to the current needs of society, a process marked by globalization and unprecedented development of the information technologies. Given by increasing the number of the students and the offer of specializations, the competitive inter-university system development and intensification of the international academic cooperation, it appears logical to implement a type of educational management to increase the services offer, their effectiveness in promoting the performance in the competitive conditions. In this context, the quality is undoubtedly one of the most important requirements of any result of actions taken, and any activity for detecting the problems, to assess the influence and find solutions to solve them is, for any organization, the key of the progress. The QUALITY term and the international symbol Q can be used in many different circumstances. Thus, it can be spoken by the quality of products, services, life, education, learning, vocational training, etc.

Keywords: Decision, information, information system, quality management.

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7. **Authors:** **Chaithanya T, Bachu Anusha, Manikandan S**

Paper Title: **Theoretical and Computational Analysis on Blunt Shaped Reentry Capsule**

Abstract: For high aerodynamic drag and safe returning of capsule on the earth, to protect astronaut from radiation, the blunt shape reentry capsule is required. The flow fields over the blunt shaped reentry capsule are numerically obtained by the steady state, axisymmetric, compressible Navier–Stokes k-Ɛ turbulence model for free stream mach numbers are in the range of 2 and 4. Employing a finite volume approach which reduces the governing equations to semi-discretized ordinary differential equations. The numerical simulation is carried out on a structural grid. The flow field features around reentry capsule, such as bow shock, sonic line, expansion are obtained. A good agreement is found between the computationally calculated value of aerodynamic drag co-efficient blunt shape reentry capsule with the theoretical value. The effects of geometrical parameters, blunt shapes have been numerically investigated for various reentry configurations which will be useful for forming the strong shock wave in supersonic flow, as a result there is a increases in aerodynamic drag during landing of the vehicle.

Keywords: Blunt, reentry capsule, supersonic flows, drag.

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Authors: **Hemanta Kumar Nayak, Debaraj Rana**

Paper Title: **Eye Localization using PCA Based Genetic Search**

Abstract: In this paper, we propose a novel approach for eye localization from human face image using GA based on PCA. As the genetic algorithm is computationally intensive, the searching space is reduced and limited to the eye regions so that the required timing is greatly reduced. Here GA is used to search for the possible eye region in an image efficiently. Specifically, we use GAs to find image sub-windows that contain the eye region. Each sub-window is evaluated using a fitness function and sub-windows containing eyes eye region is extracted. This is one of the major applications in case of retina recognition used in security purpose. The idea from the method of eigen-eye, and used to determine the fitness values.

Keywords: YCbCr, Skin Region extraction, PCA, Eigen Eyes, Genetic Algorithm.

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Authors: **Dayalan J, Beulah M**

Paper Title: **Effect of Waste Materials in Partial Replacement of Cement Fine Aggregate and Course Aggregate in Concrete**

Abstract: A brief study on the suitability of silica fumes, powdered ceramic tiles and crushed animal bones as partial replacement for cement, fine aggregate and coarse aggregate respectively in concrete work has been carried out. Experimental study has been conducted for approximately 10 % of the silica fumes in replacement for cement, 20 % of the powdered ceramic waste powder in replacement for fine aggregate and 50 % of the crushed animal bones in replacement for coarse aggregate separately and in a single sample. Compressive strength, flexural strength and split tensile strength has been conducted for each sample. Results were quite satisfactory with no compromise in strength requirements for M20 grade concrete. Hence comparative study has been done between normal concrete and new concrete mix.

Keywords: Silica Fumes - Powdered Ceramic Tiles - Crushed Bones – Compressive Strength – Flexural Strength - Split Tensile.

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10.

Authors: **Sandeep Rankawat, J. S. Purohit, D. R. Godara, S. K. Modi**

Paper Title: **Scattering Measurement Due to Trunk and Foliage Canopy of Desert Region at 35 GHz**

Abstract: At the time of propagation of millimeter wave, Scattering phenomenon due to foliage plays an important role as the wavelength approaches to the order of the size of the leaves and edges of leaves. It is important to estimate the propagation attenuation due to scattering when the arid zone foliage leaves and twigs size affect adversely in experimental propagation range. In this paper a 35 GHz transmitter receiver link system is used to measure the attenuation scattering pattern of tree foliage of Ber tree (Zizyphus mauritiana) of western Rajasthan region. Measurements were made to study the angular variations of the positioning of receiver unit around the target tree with trunk and canopy positions. The measurements, which were made for HH polarization configurations over a wide range of the azimuth angle, provide a quantitative reference for the design of millimeter-wave bistatic radar, high speed data communication links, point to point communication systems.

Keywords: 35 GHz, Scattering, Foliage, Trunk, Tropical tree, Western Rajasthan, Millimeter wave, Thar Desert.

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11.

Authors: **Vamsi Krishna Pelluru**

Paper Title: **Scattering Measurement Due to Trunk and Foliage Canopy of Desert Region at 35 GHz**

Abstract: In Traditional Enterprise-class storage technology, many organizations now have a variety of storage needs with varying performance and price requirements. Open stack has support for both Object and Block storages with many deploying options based on the organizations needs.

Keywords: Open Stack, SAN, Storage, Havana.

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Authors: **Lakshmikishore Nittala, Preet Kanwar Singh Rekhi, Sukhvinder Singh Malik, Rahul Sharma**

Paper Title: **LTE Schedulers – A Definitive Approach**

12.	**Abstract:** Scheduler is the backbone of intelligence in a LTE network. Scheduler will often have clashing needs that can make its design very complex and non-trivial. The overall system throughput needs to be maintained at the best possible value without sacrificing the cell edge user experience. In this paper, authors compared different scheduler designs for voice and packet services. They explained the role of configuration parameters through simulations. These parameters control the tradeoff between the sector throughput and the fairness in system through. They explained a possible scheduler implementation. **Keywords:** LTE, Scheduler, Quality of service, GBR, Non GBR, Proportional fair. **References:** 1. LTE - The UMTS Long Term Evolution from Theory To Practice 2nd Edition by Stefania Sesia , Issam Toufik, Matthew Baker 2. Essentials of LTE and LTE-A (The Cambridge Wireless Essentials Series) by Amitabha Ghosh and Rapeepat Ratasuk 3. 3G Evolution: HSPA and LTE for Mobile Broadband by Erik Dahlman, Stefan Parkvall, Johan Sköld and Per Beming 4. 3GPP TS 36.211 "Evolved Universal Terrestrial Radio Access (E-UTRA); Physical channels and modulation". 5. 3GPP TS 36.213 "Evolved Universal Terrestrial Radio Access (E-UTRA) Physical layer procedures". 6. 3GPP TS 36.321 "Evolved Universal Terrestrial Radio Access (E-UTRA); Medium Access Control (MAC) protocol specification" 7. 3GPP TS 36.331: "Evolved Universal Terrestrial Radio Access (E-UTRAN); Radio Resource Control (RRC) Protocol Specification".	**43-47**