International Journal of Emerging Science and Engineering

ISSN : 2319-6378

Website: www.ijese.org

Volume-6 Issue-3, MAY 2019

Published by:

Blue Eyes Intelligence Engineering and Sciences Publication

Dr. Labib Francis Gergis Rofaiel
Associate Professor, Department of Digital Communications and Electronics, Misr Academy for Engineering and Technology, Mansoura, Egypt.

Dr. Hugo A.F.A. Santos
ICES, Institute for Computational Engineering and Sciences, The University of Texas, Austin, USA.

Dr. Sunandan Bhunia
Associate Professor & Head, Department of Electronics & Communication Engineering, Haldia Institute of Technology, Haldia (Bengal), India.

Dr. Awatif Mohammed Ali Elsiddieg
Assistant Professor, Department of Mathematics, Faculty of Science and Humatarian Studies, Elnielain University, Khartoum Sudan, Saudi Arabia.

Technical Program Committee Chair

Dr. Mohd. Nazri Ismail
Associate Professor, Department of System and Networking, University of Kuala (UniKL), Kuala Lumpur, Malaysia.

Technical Program Committee Members

Dr. Haw Su Cheng
Faculty of Information Technology, Multimedia University (MMU), Jalan Multimedia (Cyberjaya), Malaysia.

Dr. Hasan. A. M Al Dabbas
Chairperson, Vice Dean Faculty of Engineering, Department of Mechanical Engineering, Philadelphia University, Amman, Jordan.

Dr. Gabil Adilov
Professor, Department of Mathematics, Akdeniz University, Konyaaltı/Antalya, Turkey.

Dr. Ch.V. Raghavendran
Professor, Department of Computer Science & Engineering, Ideal College of Arts and Sciences Kakinada (Andhra Pradesh), India.

Dr. Thanhtrung Dang
Associate Professor & Vice-Dean, Department of Vehicle and Energy Engineeering, HCMC University of Technology and Education, Hochiminh, Vietnam.

Dr. Wilson Udo Udofia
Associate Professor, Department of Technical Education, State College of Education, Afaha Nsit, Akwa Ibom, Nigeria.

Convener Chair

Mr. Jitendra Kumar Sen
Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd., Bhopal(M.P.), India

Editorial Chair

Dr. Sameh Ghanem Salem Zaghloul
Department of Radar, Military Technical College, Cairo Governorate, Egypt.

Editorial Members

Dr. Uma Shanker
Professor, Department of Mathematics, Muzafferpur Institute of Technology, Muzafferpur(Bihar), India

Dr. Rama Shanker
Professor & Head, Department of Statistics, Eritrea Institute of Technology, Asmara, Eritrea

Dr. Vinita Kumar
Department of Physics, Dr. D. Ram D A V Public School, Danapur, Patna(Bihar), India

Dr. Brijesh Singh
Senior Yoga Expert and Head, Department of Yoga, Samutakarsha Academy of Yoga, Music & Holistic Living, Prahladnagar, Ahmedabad (Gujarat), India.

Dr. J. Gladson Maria Britto
Professor, Department of Computer Science & Engineering, Malla Reddy College of Engineering, Secunderabad (Telangana), India.

Dr. Sunil Tekale
Professor, Dean Academics, Department of Computer Science & Engineering, Malla Reddy College of Engineering, Secunderabad (Telangana), India.

1.

Authors: P. Sasirekha, M. Sasi Kumar, R. Siva Shankar, S. Vignesh Alias Shangesh

Paper Title: Treatment of Dye Waste Water by using Natural Coagulants

Abstract: Waste water from dye industries containing various dyes is dangerous to the human health and environment. This research work focused on a low-cost coagulants for the removal of dyes from the effluent of dye industries. The effect of experimental conditions like dye concentration, pH, dosage and contact time on the removal efficiency of dyes were studied using design of experiments. Natural Coagulants can be used as a cost effective and efficient technique for the removal of contaminants from wastewater. Waste material from industries such as food processing and agriculture may act as natural coagulants. The discharge of the effluents into the receiving environment should follow acceptable level. Therefore, various techniques have been employed for the treatment of bearing industrial wastewaters including biological treatment through natural coagulants offers the advantages of low cost and good efficiency. The successful application of local fruit waste in treating wastewater containing contaminants requires a deeper understanding of how coagulants material proceeds. This research focusing on reducing of contaminants in wastewater using natural coagulants will be presented.

Keywords: Wastewater Treatment, Natural Coagulants, Low Cost.

References:

1. Sasirekha.P “Removal of Oil and Grease from wastewater by using Natural Adsorbent” International Journal of Applied Engineering Research, Volume. 13,Issue 10, 2018
2. Sasirekha.P “Reduction of Chemical Oxygen Demand By using Coconut Shell Activated carbon and Sugarcane Bagasse Ash” International journal of Innovative and Technology, Volume. 8, Issue. 4, 2018
3. Sasirekha.P “Rhizo-Filtration of Cemetery Area Groundwater Pollution by Using Aquatic Plants” International Journal of Latest Engineering Research And Application, Volume. 2, Issue. 3, 2017
4. Sasirekha.P “Plant species Identification for phytoremediation of leacheate contaminated soil” International Journal on Recent and Innovative Trend in Technology, Volume. 3, Issue. 2, 2017
5. Ramamurthy. C, maliga uma maheswari, Natarajan Selvaganabathy, “Evaluation of eco-friendly coagulant from Trigonella foenum-gracecum seed” , journal of advances in biological chemistry, volume 2 pp.58-63,2012.
6. Md. Asrafuzzaman A.N.M Fakhruddin and Md. Alamgir hossain , “Reduction of Turbitity of water using locally available natural coagulants” ISRN Microbiology volume, Article ID632189, 2011.
7. Swati M, Govindan VS. “Coagulations studies on natural seed extracts” J indian water works assoc 2005,37:145-9
8. Chung-Yang, “Emerging usage of plant-based coagulants for water and wastewater treatment, Process biochemistry” 45(2010) 1437-1444

2.

Authors: I B V S Shiva Sai, K Sathish, G Aurava, S Mahboob, K N V C Koushik

Paper Title: Lane Detection Algorithm Based on Reliable Lane Markings for Self Driving Vehicles

Abstract: Keeping the vehicle within the lane is an important aspect in the self driving vehicles. These lane lines are detected by using lane detection algorithms. Initially the self driving vehicle captures the footage of the road ahead of it using high resolution cameras mounted on the top of the car. Then the footage is divided into individual frames and the frames are processed further to identify the lane markings. Digital image processing technique is utilized in order to find ROI (Region of Interest) and to eliminate unnecessary noises and glares caused by the reflection of light. Then, the light intensity and width of lane markings are taken as input. An edge detection algorithm is applied to find the boundaries of objects within images. It works by detecting discontinuities in brightness followed by a line detection algorithm is applied on the edge detected image to construct the lines on which the edge point lies. Hough transform with some subsidiary conditions is suitable algorithm preferred. With this proposed model, the lane can be accurately detected in conditions of fluctuating, poor illumination and from interference from reflected light can be avoided effectively. The results obtained demonstrate the accuracy of the proposed method.

Keywords: Self Driving Vehicle, High Resolution Camera, Edge detection, Morphological filters, Hough Transform.

References:

1. Morris B, Doshi A, Trivedi M. Lane change intent prediction for driver assistance: On-road design and evaluation[C]// Intelligent Vehicles Symposium. IEEE, 2011:895-901.
2. Tsai S C, Huang B Y, Wang Y H, et al. Novel boundary determination algorithm for lane detection[C]// International Conference on Connected Vehicles and Expo. IEEE, 2014:598-603.
3. Dorum O H, Lynch J D, Gnedin M. Creating geometry for advanced driver assistance systems: US, US8762046[P]. 2014.
4. Kaur G, Kumar D, Kaur G, et al. Lane Detection Techniques: AReview[J]. International Journal of Computer Applications, 2015, 112(10):4-8.
5. D. Anggraini, W. Siswantoko., D. Henriyan, D.P. Subiyanti, M.V.G.Aziz, A.S.Prihatmanto, “Design and implementation of system prediction and traffic conditions visualization in two dimensional map (case study: Bandung city)”. 2016 6th International Conference on System Engineering and Technology (ICSET).
6. Schmidhuber, J. (2015). "Deep Learning in Neural Networks: An Overview". Neural Networks. 61: 85–117. PMID 25462637.
7. Bengio, Y.,Courville, A.; Vincent P. (2013). "Representation Learning:A Review and New Perspectives". IEEE Transactions on Pattern Analysis and Machine Intelligence. 35 (8): 1798–1828.
8. J. H. Yoo, S.-W. Lee, S.-K. Park, and D. H. Kim, “A robust lane detection method based on vanishing point estimation using the relevance of line segments,” IEEE Transactions on Intelligent Transportation *Systems*, vol. 18, no. 12, pp. 3254–3266, 2017.
9. S.-N. Kang, S. Lee, J. Hur, and S.-W. Seo, “Multi-lane detection based on accurate geometric lane estimation in highway scenarios,” in *2014* IEEE Intelligent Vehicles Symposium Proceedings, 2014.

10. J. Long, E. Shelhamer, and T. Darrell, "Fully convolutional networks for semantic segmentation," in *Proceedings of the IEEE conference on computer vision and pattern recognition*, pp. 3431–3440, 2015.
11. S. Lee, J. Kim, J. S. Yoon, S. Shin, O. Bailo, N. Kim, T.-H. Lee, H. S. Hong, S.-H. Han, and I. S. Kweon, "Vpgnet: Vanishing point guided network for lane and road marking detection and recognition," in *Computer Vision (ICCV), 2017 IEEE International Conference on*, pp. 1965–1973, IEEE, 2017.
12. M. Teichmann, M. Weber, M. Zoellner, R. Cipolla, and R. Urtasun, "Multinet: Real-time joint semantic reasoning for autonomous driving," *arXiv preprint arXiv:1612.07695*, 2016.
13. D. Neven, B. De Brabandere, S. Georgoulis, M. Proesmans, and L. Van Gool, "Towards end-to-end lane detection: an instance segmentation approach," *arXiv preprint arXiv:1802.05591*, 2018
14. LiDAR Technology Co., Ltd (2013), LiDAR Data Processing. [Online].Available: http://www.lidar.com.tw/?m=111&d=5
15. P. Li, S. Jiang, X. Wang, and J. Zhang, "Building Extraction Using LiDAR Data and Very High Resolution Image over Complex Urban Area," in IEEE International on Geoscience and Remote Sensing *Symposium* (IGARSS), Beijing, China, Jul. 21-26, 2013, pp. 4253-4256.
16. K. Y. Shrestha, W. E. Carter, K. C. Slatton, and T. K. Cossio, "Shallow Bathymetric Mapping via Multistop Single Photoelectron Sensitivity Laser Ranging," IEEE Transactions on Geoscience and Remote Sensing, vol. 50, no. 11, pp. 4771-4790, Nov. 2012
17. Z. Pan, C. L. Glennie, J. C. Fernandez-Diaz, C. J. Legleiter, and B.Overstreet, "Fusion of LiDAR Orthowaveforms and Hyperspectral Imagery for Shallow River Bathymetry and Turbidity Estimation," *IEEE Transactions on Geoscience and Remote Sensing*, vol. 54, no. 7, pp. 4165-4177, Jul. 2016.
18. L. Ma, G. Zheng, J. U. H. Eitel, L. M. Moskal, W. He, and H. Huang,"Improved Salient Feature-Based Approach for Automatically Separating Photosynthetic and Nonphotosynthetic Components Within Terrestrial Lidar Point Cloud Data of Forest Canopies," *IEEE Transactions on Geoscience and Remote Sensing*, vol. 54, no. 2, pp.
679-696, Feb. 2016.
19. M. Hämmerle, B. Höfle, J. Fuchs, A. Schröder-Ritzrau, N.Vollweiler, and N. Frank, "Comparison of Kinect and Terrestrial LiDAR Capturing Natural Karst Cave 3-D Objects," IEEE Geoscience and Remote Sensing *Letters*, vol. 11, no. 11, pp. 1896-1900, Nov. 2014.
20. P. Babahajiani, L. Fan, J. Kamarainen, and M. Gabbouj, "Automated Super-Voxel Based Features Classification of Urban Environments by Integrating 3D Point Cloud and Image Content," in *IEEE International Conference on Signal and Image Processing Applications*, Nokia Research Centre, Tampere, Finland, Oct. 19-21, 2015, pp. 372-377.
21. "What we're driving at." http://googleblog.blogspot.sg/2010/10/ what-were-driving-at.html, 2010-Oct-09. [Online; accessed 23-June-2015].

3.

Authors: **Rohit Sahu, Gangte Tagar, Taba Issac, Taring Sanjay, Hillang Reema**

Paper Title: **A Research Study on Soil Stabilization by Powdered Glass and Rice Husk Ash**

Abstract: The safe disposal of both hazardous and non-hazardous waste and degradable and non-degradable wastes has become a problematic for the civil engineers as well as to many citizens. This is because only few states are able to dump these wastes emanating from industries safely. This paper presents a research on soil stabilization by means of industrial waste and agricultural waste such as Glass Powder and Rice Husk Ash (RHA). So, efforts have been made using glass powder and rice husk ash (RHA) in this research to revamp, intervene the quality of the soil. The main objective of the soil stabilization is to increase the shear strength and decreasing the compressibility of the soil. Soil Stabilization is the process which improves the physical properties of soil, such as increasing shear strength, bearing capacity, etc. which can be done by use of controlled compaction or addition of suitable admixtures like cement, lime and waste materials like flyash, glass bottle, etc. During the course of the project it is planned to conduct various experiment like Specific gravity, Atterberg limits tests, Sieve analysis, Proctor compaction test, and CBR test to increase the strength and behavior of the soil properties. Then the results and graphs of various mixes are compared to see their effects in the soil stabilization. The stabilization technique has an additional benefit of providing an environment friendly way to deal with industrial waste and household wastes. The paper shows that there is a great possibility of the replacement of Industrial and Agriculture waste.

Keywords: Atterberg Limits, Sieve Analysis, Soil Stabilization, Compaction, California Bearing Ratio.

10-21

References:

1. Olufowobi J, Ogundoji A, Michael B, Aderinlewo O, (2014). Clay Soil Stabilization using Powdered Glass. Journal of Engineering Science and Technology Vol. 9, No. 5 541-558.
2. Adams Joe M, Maria Rajesh A,(2015) Soil Stabilization Using Industrial Waste and Lime. International Journal of Scientific Research Engineering & Technology (IJSRET), ISSN 2278-0882 Volume 4.
3. Ashraf Anas,Sunil Arya, Dhanya J,Varghese Meera,Veena M,JosephMariamma, College of Engineering, Trivandrum,Soil Stabilization Using Raw Plastic Bottles, Proceedings of Indian Geotechnical Conference, December 15-17,2011, Kochi (Paper No. H-304).
4. Rahmat Nidzam Mohamad, Raffe RedzwanMuhammad, Ismail Norsalisma, Utilization of Agricultural Wastes in Stabilization of Landfill Soil, MATEC Web of Conferences 15, 01001 (2014) DOI: 10.1051/matecconf/20141501001, EDP Sciences (2014).
5. Pandian, N.S.Krishna, K.C.& Leelavathamma B., (2002), Effect of Fly Ash on the CBR behavior ofSoils, Indian Geotechnical Conference, Allahabad, Vol.1, pp.183-186.
6. Prashanth J.P., (1998)"Evaluation of the Properties of Fly Ash for its Use in GeotechnicalApplications ". Ph.D. Thesis, IISC. Bangalore.
7. Phanikumar B.R., & Radhey S. Sharma(2004) "Effect of fly ash on Eng. properties ofExpansiveSoil" Journal of Geotechnical and Geo-environmental Engineering Vol. 130, no 7, July, pp. 764-767.
8. Singh Maninder, Sharma Rubel, Abhishek, Soil Stabilization using Industrial Waste (Wheat Husk and Sugarcane Straw Ash) International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056 Volume: 04 Issue: 09 | Sep -2017, p-ISSN: 2395-0072.
9. BrahmacharyTonmoyKumar, Soil Stabilization using Fly Ash and Cotton Fiber, International Research Journal of Engineering and Technology (IRJET)International Open Access Journal,ISSN No: 2456 – 6470, Volume-I, Issue-6 (Sep - Oct 2017).
10. Gunasekaran V, Sandhiya M, Role of Thermoplastic Granulus for the Improvement of Strength of Clay Soil,International Research Journal of Engineering and Technology (IRJET)International Open Access Journal,ISSN No: 2456 – 6470, Volume-I, Issue-6 (July-August 2018).

4.

Authors: **Syed Saifali, P Jaganatthan, K S Satyanarayanan**

Paper Title: **Study of Flexural and Torsional Behaviour of Beams Made with Bacterial Concrete**

Abstract: The main concept of replacing cement with fly ash can accomplish as sustainable development, in construction industry, concrete is a most broadly utilized development material and cement is the only manufactured material and other materials like fine aggregate and coarse aggregate and water are natural resources. As per reports its states that by manufacturing a ton of cement 800 to 900 kg of co2 is emitted in to the atmosphere which results in to the global warming. In this project we are utilizing the fly ash as a byproduct, presently large amounts of fly ash

22-26

	are generated in thermal industries which international journal of science and research h are dumped as waste and it will be adverse impact on environment and humans. And in this project, it is decided to use bacteria and to enhance its properties of hardened concrete. For this bacillus subtilis has been chosen based on previous work done. The design mix is to made of M40 grade concrete. The ingredients for concrete are tested. It is proposed that incomplete substitution of cement by fly ash enriched by bacteria and to test the flexural and torsional strength of concrete at different ages. **Keywords:** Flexural, Torsional, S1CC, S1CCB, S1CF, S1CFB, Bacillus subtilis. **References:** 1. A. Manoj Prabahar*, R. Dhanya, N. Ganapathy Ramasamy, S. Dhanasekar, "An experimental study of self healing of cracks In concrete using sodium silicate capsule," Vol. 10 | No. 2 |577 - 583 | April - June | 2017 ISSN: 0974-1496 | e-ISSN: 0976-0083 | CODEN: RJCABP 2. P Jagannathan, K S Satyanarayanan, , Kantha Devi Arunachalam, Sathesh Kumar Annamallai (2018), "Studies on the mechanical properties of bacterial concrete with two bacterial species," ELSEVIER Materials Today:Proceedings 5 (2018) 8875-8879. [Scopus/ Impact Factor - 0.94/ SNIP - 0.837]. 3. P Jagannathan, K S Satyanarayanan, , Kantha Devi Arunachalam, Sathesh Kumar Annamallai, Akansha (2018), "Influence of Bacteria Bacillus sphaericus on water Absorption and Rapid Chloride Permeability Properties in Concrete ," Issue 08 (Special issue), pp. 1113-1117. [Scopus/ Impact Factor - 0.19/ SNIP - 0.135]. 4. V Sai Kumar, A Venkateswa Rao (2018), "experimental investigation on Flexural behaviour of fly ash Concrete by replacing sand with m-sand," Volume 9, Issue 6, June 2018, pp. 348–354. Article ID: IJCIET_09_06_040. 5. R. Sri Bhavana, P. Polu Raju, S S Asadi (2017), "Experimental Study on Bacterial Concrete with Partial Replacement of Cement by Fly Ash," Volume 8, Issue 4, April 2017, pp. 201–209. Article ID: IJCIET_08_04_026. 6. N. Ganesh Babu, Dr. S. Siddiraju (2016), "An Experimental Study on Strength And Fracture Properties of Self-Healing Concrete," Volume 7, Issue 3, May–June 2016, pp. 398–406 Article ID: IJCIET_07_03_041. 7. R. Gowrishankar, C. Mohanaselvan and R. Kartheeswaran (2017), "Experimental Study on Flexural Behaviour of Bacterial Concrete with Internal Curing," Volume IV, Issue VS, May 2017 | ISSN 2321–2705. 8. Ch. Koteswara Rao, P. Polu Raju, T. Naga Seshu Babu (2017), "Comparative Study on Analysis of Plain and RC Beam Using Abaqus," Volume 8, Issue 4, April 2017, pp. 1531–1538 Article ID: IJCIET_08_04_172. 9. Ali A. Hameed, Mohannad H. Al-Sherrawi (2018), "Torsional Strength of Steel Fiber Reinforced Concrete Beams," Volume 9, Issue 6, 10. June 2018, pp. 1388–1396, Article ID: IJCIET_09_06_155. 11. IS 10262:2009, "concrete mix proportioning - guidelines" 12. IS 456: 2000, "plain and reinforced concrete - code of practice" 13. IS 4031 (Part 4) – 1988, "determination of consistency of standard cement paste – code for practice" 14. IS 12269 : 2013, " ordinary portland cement, 53 grade — specification" 15. IS 383 – 1970, " Specifications for coarse and fine aggregates from natural sources for concrete- guidelines" 16. IS SP16-1980 " design aids for reinforced concrete – code for practice"	
5.	**Authors:** **Anju C P, Austin Larson, Jenish Joy P, Maritta Stephen** **Paper Title:** **The Smart Restaurant** **Abstract:** In this fast growing world where technology has made its way into every walk of life our effort is to make the time consuming traditional process in restaurants easier and efficient. The traditional process was that when a customer enters into the restaurant he has to wait for the waiter to come to him and to get the menu list. After that he has to wait for another couple of minutes again for the waiter to come and take the order. Finally he has to wait for the food too. This is a highly time consuming process. So in order to tackle this problem we have introduced the idea of smart restaurant. Our project is a much simpler replacement of traditional process in restaurants. In this system a customer can scan a QR code given by the restaurants which will direct the customer to the website of the restaurant. The menu will be provided by the restaurants such that customer can order the food as soon as he reached the restaurant without any delay. Customer can also request our interest too which may or may not be granted. The payment option is also provided in the website through which the customer can pay the cash. **Keywords:** Growing world where Technology, Traditional Process, The Menu Will Be Provided, Website Through Cash Payment **References:** 1. S.K. Jamal, A. Omer, A.A.S. Qureshi, "Cloud computing solution and services for RFID based supply chain management", *Adv. in Internet of Things*, vol. 3, no. 04, pp. 79, 2013. 2. S. Amendola, R. Lodato, S. Manzari, C. Occhiuzzi, G. Marrocco, "RFID technology for IoT-based personal healthcare in smart spaces", *IEEE Internet of Things Journal*, vol. 1, no. 2, pp. 144-152, 2014. 3. S. Sivagami, D. Revathy, L. Nithyabharathi, *SMART HEALTH CARE SYSTEM IMPLEMENTED USING IoT*.	**27-30**
6.	**Authors:** **Aparna U, Amal Babu, Anjali Radhakrishnan, Joseph Ronald** **Paper Title:** **Motion Based Message Conveyer System for Differently Abled** **Abstract:** The main aim of motion based message conveyer system for differently abled is to implement a low cost reliable system which will help to establish communication between paralytic or disabled patients and a nurse. A patient can easily send messages to the nurse by just tilting an accelerometer connected to any of the body part capable of movement. This angle of tilt is measured and sent to a central controller which then initiates communication between the patient (transmitter) and nurse (receiver) and also decides which message is to be transmitted based on the tilt angle. Each patient will have such a device installed on his body part and all such patients will be centrally linked to the receiver at the nurse side. The project provides a reliable, effective and simple yet important solution to various issues faced by nurses in traditionally communicating with disabled patients. **Keywords:** IDE, VDT, ADC, Gesture. **References:**	**31-34**

1. Vishnu Vardhan1, P. Penchala Prasad, "Hand Gesture Recognition Application for Physically Disabled People", International Journal of Science and Research (IJSR), Volume 3 Issue 8, August 2014.
2. Aishwarya Desai, et al, "Motion Based Message Conveyor for Paralytic/Disabled' 'International journal of innovative research in computer and communication engineering. (3rd March 2016). (An ISO 3297: 2007 Certified Organization) Vol. 4, Issue 3, March 2016 IJIRCCE.
3. Rajalakhshmi. S, S. Nikilla; "Real Time Health Monitoring System using Arduino'', South Asian journal of engineering and technology vol.2, no.18 (11th March 2016).
4. Shreedeep Gangopadhyay; Somsubhra Mukherjee; Soumya Chatterjee, Intelligent gesture controlled wireless wheelchair for the physically handicapped, Proceedings of Fifth IRAJ International Conference, 15th September 2013, Pune, India.
5. Rohini Bhilare, Shraddha Swami, Priyanka Deshmukh, Mr. Prasad R. Patil "motion based message conveyor for patient using arduino system and zigbee". International Journal of Advanced Research In Engineering Technology & Sciences March-2015 Volume 2, Issue-3.

7.

Authors: **Rahul Sethumadhavan, Smera Kurian, Suramya Ramachandran, Yadhu Krishnan K.S**

Paper Title: **Smart Parking System**

Abstract: Over the years there has been a tremendous increase in the number of automobiles and parking is the major issue that affects our daily life. Difficulty in parking vehicles leads to stress, wastage of time and fuel. Research shows that people have tob travel more that 500 meters in search of a parking lot. We are introducing a simple and efficient smart parking system to tackle this problem. Our system divides the parking area into different slots. As the name suggests, when any vehicle enters the allotted slot the lights that display the slot is vacant(green) is turned to engaged position(red). The color of the light changes when a vehicle comes in front of the sensor, it sends a signal and immediately changes the color from green to red. Also we have set up an LCD display outside the parking lot to find out the free parking space easily. The biggest advantage is that we save the fuel, time and money and can avoid accidents and unnecessary disputes among the people.

Keywords: Arduino, Fuel, Lights, Parking

References:

1. Scolarity articles for smart parking system ieee paper http://scholar.google.co.in/scholar?q=smart+parking+system+ieee+paper&hl=en&as_sdt=0&as_vis=1&oi=scholart
2. smart parking ieee paper
3. https://www.engpaper.com/smart-parking.htm
4. Automatic smart parking system using internet of things(IOT)
5. http://www.ijsrp.org/research-paper-1215/ijsrp-p4898.pdf

8.

Authors: **R.Kishore Kanna, R.Vasuki**

Paper Title: **Advanced Design of Lie Detector System using EEG Signals Acquisition**

Abstract: Polygraph is tool which is used detect lie spoken by a person in various situation. It is also used as best tool for investigation purpose to check whether a person speaks truth or lying when answering to certain questions shoot to them. by calculating the EEG signals one can find the relationship between the lying and frontal lobe during performing certain task. For bio-signal classification multiplayer neural network are used. Short-time Fourier transform (STFT) are calculated for each channel for each group subject. To differentiate between deception and truth types of EEG multi-layer perception (MLP) is used. The activation of the frontal cortex is associated with mental processes. A set of questions are framed as stimulus for the subject. The main aim is to find difference in state of truth and deception by calculating the alpha waves from two midline electrodes and four frontal electrodes.

Keywords: EEG, NEURO, STFT, MLP.

References:

1. A.H. Jahidin, , M.N. Taib, N.M. Tahir, M.S.A. Megat Ali, S. Lias , Asymmetry pattern of resting EEG for different IQ levels , 2013.
2. Dan Wu,ChaoyiLi,Yu Yi n, Changzheng Zhou, and Dezhong Yao Music, Music Composition from the Brain Signal: Representing the Mental State by Music,2009.
3. C.Davatzikos, K. Ruparel, Y. Fan, D.G. Shen, M. Acharyya, J.W. Loughead, R.C. Gur, and D.O. Langleben, Classifying spatial patterns of brain activity with machine learning methods: Application to lie detection,200S
4. Eddie Harmon-Jones and David M. Amodio, Electroencephalographic Methods In Psychology, 2012
5. A. N. Norali, Surface Electromyography Signal Processing and Application: A Review, Proceedings of the International Conference on Man-Machine Systems (lCoMMS) , 2009.
6. Rumelhart, D., Hinton, G., Williams, R., Rumelhart, D., & McClelland, J. , Learning internal representations by error propagation, Parallel distributed processing, Cambridge, MA, 3 18- 362, 1 986.
7. Sanei, S., & Chambers, 1. Chichester: John Wiley & Sons. EEG signal processing, 2007.
8. Saba Ahmed Yahya, Irma Pammusu, Composition from the Brain Signal: Representing the Mental State by Music Study on the effects of EEG and ECG signals while listening to Qur'an recitation, 2013.

9.

Authors: **M. Prakash, B. Hemalatha**

Paper Title: **Replacement of Waste Material in Concrete using Recycled Plastic**

Abstract: Disposal of waste plastic has become a major environmental issue in all parts of the world. Every year millions plastic are discarded, thrown away or buried all over the world, representing a very serious threat to the ecology. It is estimated that every month almost 100000 million plastic waste end their service life and more than 50% are discarded without any treatment. This experimental study was based on the utilization of waste plastic as a partial substitute for natural fine aggregates in cement concrete. The properties of concrete like compressive strength, flexural tensile strength, abrasion resistance, pull-off strength, water permeability, water absorption, resistance to acid attack and sulphate attack, carbonation, depth of chloride penetration, corrosion of steel reinforcements were tested and SEM test was performed to study the micro structure.

Keywords: Plastic Aggregate: Fine Aggregate, Partial Replacement.

References:

1. Arabani m., a. r. azarhoosh. "the effect of recycled concrete aggregate and steel slag on the dynamic properties of asphalt mixtures". construction and building materials 2012;
2. Arin Yilmaz, Nurhayat Degirnci. “Possibility of using waste plasticand fly ash with Portland cement as construction materials”. Waste Management 2009; 29: Aruntas, H. Y., Guru, M., Dayı, M., Tekin, İ. “Utilization of waste marble dust as an additive in cement production”. Materials & Design 2010;
3. Asokan Pappu, Mohini Saxena, Shyam R. Asolekar. "Solid wastes generation in India and their recycling potential in building materials". Building and Environment 2007;
4. Boboon rai, S. Tabin Rushad, Bhavesh Kr. And S.K.”research article study of waste plastic mix concrete with plasticize
5. Elchalakani Mohamed. "High strength plastizised concrete containing silica fume for the construction of sustainable road side barriers". *Structures* 2014;
6. Eldin N., Senouci A. “Observations on plastic concretebehavior”. *Cement Concrete and Aggregates* 1993;
7. Elke Gruyaert, Philip Van den Heede, Mathias Maes, Nele De Belie. “Investigation of the influence of blast-furnace slag on the resistance of concrete against organic acid or sulphate attack by means of accelerated degradation tests”. *Cement and Concrete Research* 2012
8. Eshmaiel Ganjian, Morteza Khorami, Ali Akbar Maghsoudi. “Scrap-plastic-plastic replacement for aggregate and filler in concrete”. *Construction and Building Materials* 2009; 23:
9. Feng Liu, Wanhu Zheng, Lijuan Li, Wenxian Feng, Guofang Ning. "Mechanical and fatigue performance of plastic concrete". *Construction and Building Materials* 2013;
10. Fernando Pelisser, Nilomar Zavarise, Tiago Arent Longo, Adriano Michael Bernardin. “Concrete made with recycled plastic plastic: effect of alkaline activation and silica fume addition”. *Journal of Cleaner Production* 2011;.
11. Fernando Pelisser, Barcelos A., Santos D., Peterson M., Bernardin A. M.
12. Gameiro. F., J. de Brito, D. Correia da Silva. "Durability performance of structural concrete containing fine aggregates from waste generated by marble quarrying industry". *Engineering Structures* 2014;
13. Gregory Marvin Garrick. (2001). “Analysis and testing of waste plastic fiber modified concrete”. M.S Thesis submitted to the Department of Mechanical Engineering, B.S., Louisiana State University.
14. Guneyisi Erhan "Fresh properties of self-compacting plastic concreteincorporated with fly ash". *Materials and structures* 2010;
15. Guneyisi Erhan, Mehmet Gesoğlu, Turan Özturan. "Properties of plasticzed concrete s containing silica fume". *Cement and Concrete Research* 2004;
16. Osman Gencel, Cengiz Ozel, Fuat Koksal, Ertugrul Erdogmus, Gonzalo Martínez-Barrera, Witold Brostow. “Properties of concrete paving blocks made with waste marble”. *Journal of Cleaner Production* 2012;
17. Parrot L. J. “Some effects of cement and curing upon carbonation and reinforcement corrosion in concrete”. *Materials and Structures* 1996;.
18. Plastic Concrete”. *Journal of Materials in Civil Engineering* 2008;.
19. Renata Oliveira, Jorge de Brito, Rosário Veiga. "Reduction of the cement content in rendering mortars with fine glass aggregates". *Journal of Cleaner Production* (2015). doi:10.1016/j.jclepro.2015
20. Sethia, M.R, Gupta, R.C. "Analysis and Design of Single Panel Slab". *Bridge & Structural Engineers* 1987
21. Skaropoulou A., Sotiriadis K., Kakali G., Tsivilis S. “Use of mineral admixtures to improve the resistance of limestone cement concrete against thaumasite form of sulfate attack”. *Cement & Concrete Composites* 2013
22. Serdar Aydın, Halit Yazıcı, Huseyin Yigiter, Bulent Baradan. “Sulfuric acid resistance of high-volume fly ash concrete”. *Building and Environment* 2007
23. Wei Ken Part, Mahyuddin Ramli, Chee Ban Cheah. "An overview on the influence of various factors on the properties of geopolymer concrete derived from industrial by-products". *Construction and Building Materials* 2015
24. Wai Hoe Kwan, Mahyuddin Ramli, and Chee Ban Cheah. "Flexural strength and impact resistance study of fibre reinforced concrete in simulated aggressive environment". *Construction and Building Materials* 2014
25. Wei-yi Ouyang, Jian-kang Chen, Min-qiang Jiang. “Evolution of surface hardness of concrete under sulfate attack”. *Construction and Building Materials* 2014; 53:
26. Weiguo Shen, Lai Shan, Tao Zhang, Hongkun Ma, Zhi Cai, Hua Shi. “Investigation on polymer–plastic aggregate modified porous concrete”.
27. *Construction and Building Materials* 2013
28. Guneyisi Erhan, Mehmet Gesoglu, Zeynep Algin, Halit Yazici. “Effect of surface treatment methods on the properties of self-compacting concrete with recycled aggregates”. *Construction and Building Materials* 2014.
29. Guneyisi Erhan, Mehmet Gosoglu, Kasum Mermerdas. “Improving strength, drying shrinkage and pore structure of concrete using metakaolin”. *Materials and Structures* 2008;
30. Guneyisi Erhan, Mehmet Gosoglu, Turan Ozturan, Erdogan Ozbay. “Estimation of chloride permeability of concretes by empirical modelling; considering effects of cement type, curing condition and age”. *Construction and Building Materials* 2009
31. Guneyisi Erhan, Turan Ozturan, Mehmet Gesoglu. “Effect of initial curing on chloride ingress and corrosion resistance characteristics of concretes made with plain and blended cements”. *Building and Environment* 2007;
32. Hadjsadok Ahmed, Said Kenai, Luc Courard, Frederic Michel, Jamal Khatib. "Durability of mortar and concretes containing slag with low hydraulic activity". *Cement and Concrete Composites* 2012
33. Hisham Qasrawi. “The use of steel slag aggregate to enhance the mechanical properties of recycled aggregate concrete and retain the environment”.
34. *Construction and Building Materials* 2014;
35. Hui LI, Delong XU. “The Future Resources for Eco-building Materials: Fly Ash and Coal Waste”. *Journal of Wuhan University of Technolotgy-Mater. Sci. Ed.* 2009
36. Ilker Bekir Topcu, Turhan Bilir, Tayfun Uygunoglu “Effect of waste marble dust content as filler on properties of self-compacting concrete”. *Construction and Building Materials* 2009;
37. Camille, George Salem. “Utilization of recycled crumb plastic as fine aggregates in concrete mix design”. *Construction and Building Materials, Elsevier* 2013;.
38. Jack M. Chi, Ran Huang, Yang C.C. “Effects of carbonation on mechanical properties and durability of concrete using accelerated testing method”.
39. James Xue, Masanobu Shinozuka. “Plasticzed concrete : A green structural material with enhanced energy-dissipation capability”. *Construction and Building Materials* 2013;
40. Keleştemur Oguzhan, Erdinç Arıci, Servet Yıldız, Bihter Gokçer. "Performance evaluation of cement mortars containing marble dust and glass fiber exposed to high temperature by using Taguchi method". *Construction and Building Materials* 2014;