

Proceedings
of
**1st International Conference
On Business, Management,
Environmental, and Social
Science 2021 (BMESS[®] -
2021)**

30-31 March 2021

VIRTUAL

Proceeding Editors:

Bishwajeet Pandey, Jason Levy

About BMESS'2021

1st International Conference On Business, Management, Environmental and Social Science 2021(BMESS®-2021) will be held on 30 March -31 March 2021. The main objective of BMESS'2021 is to present the research from different areas of Business, Management, Environmental, and Social Science. This conference provides a platform for researchers and scientists across the world to exchange and share their experiences and research results about all aspects of Business, Management, Environmental, and Social Science. This conference also provides an opportunity to interact and establish professional relations for future collaboration. The conference aims to promote innovations and work of researchers, engineers, students and scientists from across the world on Advancement in eBusiness, Management, Environmental, and Social Science. The basic idea of the conference is what more can be done using the existing technology, and resources. These systems involve a very wide area for research. Gyancity Research Lab organize 3 conferences across the globe. This BMESS conference is a sister conference of RTCSE®, IMCES® and ICGCET®. ICGCET® was organized in Dubai, Denmark, Ireland, Denmark, Morocco, and Russia in 2015, 2016, 2017, 2018, 2019 and 2020 respectively. ICGCET®2021 will in Peru. RTCSE®'16 and RTCSE®'17 conference were in Malaysia. RTCSE®'18 was in Thailand. RTCSE'19, RTCSE'20, RTCSE'21 were in the USA. RTCSE'22 will in USA. IMCES® was organized in Malaysia, Mauritius, and Indonesia in 2017, 2019 and 2020 respectively. IMCES'21 will Indonesia.

Chair Message

As a chair, we have the honor to welcome you with great respect and enthusiasm to the 1st International Conference On Business, Management, Environmental and Social Science 2021(BMESS@-2021) to be held ONLINE on 30 March-31 March 2021 (ONLINE due to COVID-19). BMESS'2021 intended to attract innovative technical and scientific work in the field of computer science and electronics engineering. The response to the conference was overwhelming and we are proud to state that we have received really good quality contributions and we are sure as an online participant you will share the same sentiment. All accepted papers will be submitted to WOS-ESCI (see list on conference website) and hopefully these papers will be available online by middle of 2021.

As a chair and on behalf of the organizing committee, we are extremely sorry that BMESS'2021 will unable to host you at Hawaii. And as a participant, you are unable to visit Hawaii from different parts of the world to share and contribute in the areas of their expertise. We hope to provide a good virtual platform to the participants of BMESS'2021 where not only they meet and share their vision, ideas but also fertilize their thoughts in the ever-growing area of computer science and electronics engineering technologies. We are also confident that our keynote speakers will be able to enrich your knowledge during the conference and we wish you a very safe stay at your home country.

It is the 15th conference hosted by Gyancity Research Lab, there are two more in 2021:

4th International Multi-Topic Conference on Engineering and Science (IMCES)

29-30 June 2021

Faculty of Information Technology, Universitas YARSI, Jakarta, Indonesia

<https://imces.tech/>

7th International Conference on Green Computing and Engineering Technologies (ICGCET®)

22 Sep - 23 Sep 2021

Universidad Nacional Federico Villarreal, Lima, Peru

<https://icgcet.org/>

Best wishes.

Prof Mohammad Kamrul Hasan, Universiti Kebangsaan Malaysia (UKM)

Dr Bishwajeet Pandey, Gyancity Research Consultancy, India

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BMESS'2021 Schedule

30 March 2021

Video Presentation:

Available 24x7 on YouTube Channel of Gyancity Research Lab:
<https://www.youtube.com/channel/UCHtdIuXB1evhmQb3zQ82uCA>
Paper Id: 1, 2, 4, 5

10:00-13:00 (Indian Time)

CISCO WebEX Sessions @ Birla Institute of Applied Science, India
Paper Id: 7, 8, 9, 10, 11, 16
Chaired by Prof Bishwajeet Pandey, Birla Institute of Applied Science, India

31 March 2021

10:00-11:00 AM (Indian Time)

Inaugural Speech: General Chair Mohammad Kamrul Hasan, Universiti Kebangsaan Malaysia (UKM), Malaysia

12:00-14:00 (Indian Time)

Session 1: 17, 18, 19, 21
Session Chair: Prof Jason Levy, University of Hawaii, USA
Paper Id:

15:00-17:00 PM (Indian Time)

Session 2:
Session Chair: Prof Akbar Hussain, Aalborg University, Denmark
Paper Id: 24, 26, 27, 34, 35

18:00-20:00 PM (Indian Time)

Session 3:
Session Chair: Prof Ciro Rodriguez, Universidad Nacional Federico Villarreal, Peru
Paper Id: 36, 37, 38, 40, 48

RTCSE'16 Group Photo



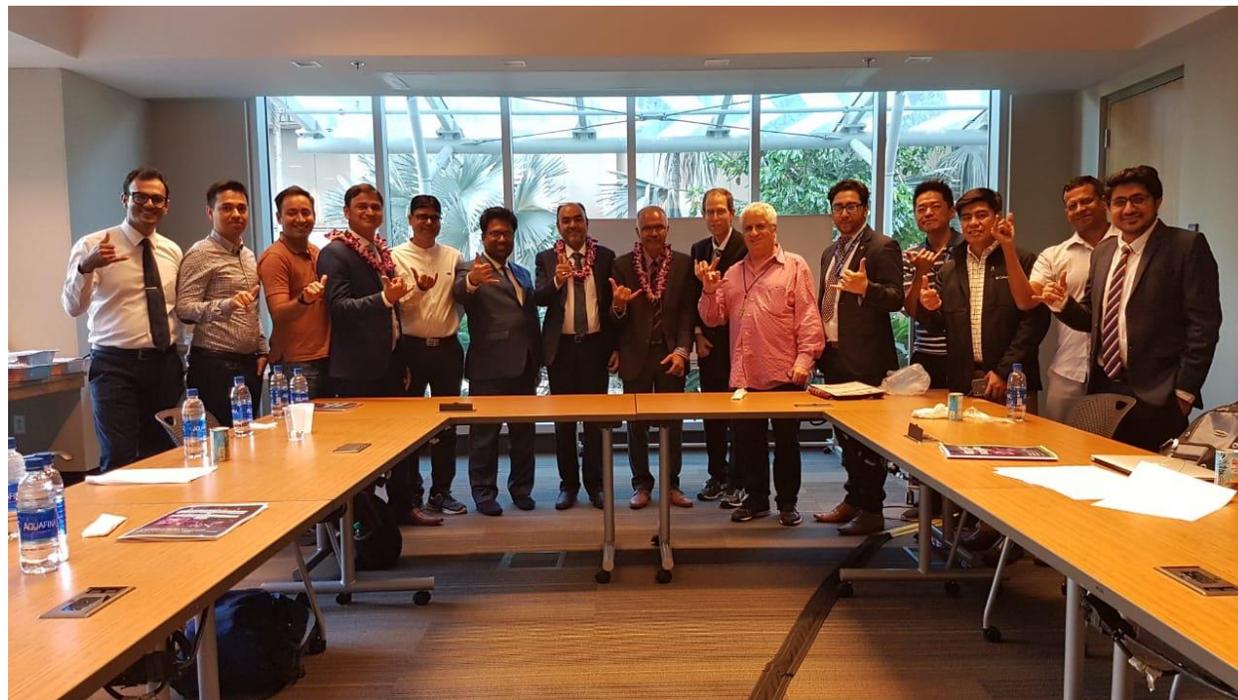
RTCSE'17 Group Photo



RTCSE'18 Group Photo



RTCSE'19 Group Photo



RTCSE'20 Group Photo



Abstract of Paper Accepted in BMESS'2021

1

Responding to Orientalists' Misconceptions in the Domains of Discretion and Imitation

Fatma Ibrahim Ali Radwan, Farida Mohammed Alli Aqili

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ABSTRACT

This study is aimed to clarify the claims of orientalism in the domain of discretion and imitation. It analyzes these allegations objectively without fanaticism. It demonstrates the falsehood of the orientalist's sayings in one place and the validity of their sayings in other places. The importance of discretion in Islamic legislation has been presented through the study. Islamic nations can't make advancement without it. It is opposite to the orientalism views, which believes that discretion cannot be achieved due to the depletion of the Islamic legislation sources and their distance from reality. Besides, the consensus has impeded the discretion process, which has been proven in this research. The research also highlights the importance of reconsidering many issues that need discretion. It recommends the necessity of encouraging Muslim scholars to pursue discretion. They need to provide its means and to oppose the orientalist thought through objective research and criticism based on facts that are far away from fanaticism.

Keywords: orientalism, orientalist, fanaticism

Abstract of Paper Accepted in BMESS'2021

2

Building the Prophet's Biography for Peace through Establishing Social Relationships

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ABSTRACT

The research highlights the need to clarify the concept of Peace by referring to the Prophet's biography, knowing his social life and how he was able to consolidate Peace in the city's warring society of many tribes, leaderships. It aims at defining the concept of social Peace, stating the importance of the Prophet's biography in strengthening it. He mentioned the works that PBUH cared about building and establishing peace in the city through social networking. The research was organized in an introduction, a preapprehension, four topics and a conclusion that included the most important findings and recommendations, including: The interest of the Prophet may Allah's prayers and peace be upon him, in building community Peace in Medina through establishing social relations. That the culture of Peace is authentic, and by applying it, all communities in society feel safe and secure. His greatness, may Allah's prayers and peace be upon him, and his sophistication, as he was able - after the help of Allah Almighty - to transform the community of Medina from a warring society to a friendly society. The necessity of returning to the Prophet's biography to solve the problems that arise in societies. Representing the Prophet's biography in a valuable manner, linking it with reality, and simplifying it for people.

Keywords: Prophet, Peace, Social

Abstract of Paper Accepted in BMESS'2021

4

Violations In The Inheritance Of The Aleasbuh And Their Impact On Social Security

Zainab Ahmed Al-Saeed Muhammad

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ABSTRACT

I have devoted this research; of the widespread irregularities in the inheritance of the Aleasbuh and its bad impact on Islamic societies. In this research, I dealt with defining who the Aleasbuh is, and then explaining their inheritance in Islam. Then it dealt with the widespread violations, how to deal with them, confront them and reduce them, and limit the crimes resulting from these violations. Then I dealt with the social impact of implementing Allah's law on inheritance because of its role in social security.

Keywords: Inheritance, Social Security, Islamic Societies

Abstract of Paper Accepted in BMESS'2021

5

Systematic Literature Review of Sentiment Analysis Techniques

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Abstract

Sentiment analysis has become an important research area that aims to understand people's opinions by analyzing a large size of information. There are two types of sentiment analysis methods: those based on the lexicon and those based on Machine Learning algorithms. Although there are many proposals related to sentiment analysis, there is still a great margin for improving results. The objective of this work is to identify the current state of the latest research related to the analysis of feelings, making use of a framework for the systematic review of the literature, in order to answer the following research questions: RQ1 What are the types of methods used for sentiment analysis? RQ2 What kind of data sources are used to perform sentiment analysis? A crossover analysis of the results was performed. One of the results showed that the most used classifier was Naïve Bayes. Besides, most of the works reviewed used texts extracted from microblogs, web pages, E-Commerce, and other data sources, to perform sentiment analysis.

Keywords: Natural Language Processing, Opinion Mining, Sentence Classification, Sentiment Analysis.

Abstract of Paper Accepted in BMESS'2021

7

OdorSense: Measuring, Assessment and Alerting the Health Effects of Odor Pollution

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Abstract

Nowadays there is an increased conflict between residents and government bodies /or industries due to unpleasant or offensive Odor smells emanating from different sources, interfacing with person's enjoyment of life as they are frequent and persistent. The main concern among all the residents is the health effects of toxic Odor gases (like, ammonia, Sulphur dioxide, nitrogen, hydrogen sulphide) released from the waste dumping sites, drainages, food & meat processing industries, etc., causing dreadful diseases to the living beings. There is urgent need of an intelligent mechanism, which allows every common people access the Odor pollution information through user friendly applications. Hence the main objective of the proposed research work was to develop an intelligent mechanism for detecting, measuring and alerting the health effects of Odor pollution. The research work follows design of an artificial olfaction system based electronic nose using low cost, low power and improved accuracy sensors for detection and real-time measurement of Odor concentrations at various sources of Odor emissions, uploading the Odor concentrations to IoT cloud for remote monitoring and alerting. User friendly interface application developed for providing real time information about the Odor levels at the desired source and alerting the health effects if the Odor concentration levels increases above the threshold levels.

Keywords: Odor pollution, Odor Measurement, Odor concentration, Artificial olfaction system (E-Nose), User Interface (Mobile Application), Health survey, IoT Cloud, Risk Assessment

Abstract of Paper Accepted in BMESS'2021

8

Integration Of The Enterprise Information To Facilitate Decision Making

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Abstract

The research objective is to apply business intelligence techniques to take advantage of an existing system's conditions and increase the low-cost capabilities in its Extract, Transform and Load ETL processes with snapshots integrating the company's information web services. The methodology used for the development was HEFESTO, the development time was one week applying agile methodologies, achieving a short development with welldefined and easy-to-understand phases; the tool was the Pentaho BI Suite. Using open source tools, the cost was reduced through the proposed architecture with the repository type and the DataMart with a departmental approach to the problem, increasing its decision-making capacity.

Keywords: ETL, HEFESTO, BI, Pentaho, decision making, enterprise, services

Abstract of Paper Accepted in BMESS'2021

9

EARNED VALUE METHOD MANAGEMENT APPLIED TO THE CONSTRUCTION OF THE MULTIFAMILY BUILDING– LIMA, PERU 2020

Franz Hernandez¹, Doris Esenarro², Ciro Rodriguez³, Lorena Vela⁴, Robert Calvo⁵
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Abstract

This research aims to assess costs and time in the study of the earned value method management applied to the construction of the multifamily building in Lima; it is worth mentioning that the main problem of low productivity rates is the low-cost control, which affects the performance of projects directly. The methodology used in this context is the earned value, which allows managing the costs and time of projects gaining. As a result of the S curve and the control table, it could be said that the companies should maintain correct control of time and cost of projects, because as it can be seen, at the end of the project, the company will have a loss of money for S/ 134,176.33 soles from month 06, which represents the 1.94% at the end of the project.

Keywords: Management, earned value, schedule, control.

Abstract of Paper Accepted in BMESS'2021

10

Plan Grid in the process of purchasing services in the construction site Nuevo Santa Clara Stage 4,5,6, Lima

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Abstract

The present research aims to propose using the Grid Plan to optimize the flow of services in the New Santa Clara Construction stage 4 - 5 - 6, Lima 2020. It is worth mentioning that the main problem is implementing new and unknown technology, as in this case, the Grid Plan. Similarly, the optimization of the flow of contracting of the service within the area of costs and the most important, reducing time generates a purchase of services. The methodology used in this context is the application of the Grid Plan App to track all purchases of the services required in this project, which allows us to manage the purchases of the services in the shortest time that has been used today, obtaining that the reduction in the time taken to purchase services within the project, with the result that the process of purchasing services was successfully reduced to 47 % of the usual, restoring the process completely to avoid delays that would harm the work in the purchase of traditional services.

Keywords: Plan Grid, Optimization, Purchase, Services

Abstract of Paper Accepted in BMESS'2021

11

Modular construction camp as an architectural model and its different construction systems - Moquegua, Peru 2020

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Abstract

This study compiles information on the different construction systems used in mining camps in Peru in order to determine guidelines and criteria for architectural design and their different construction systems, considering improving the quality of life, comfort and optimal development of social activities that are made there. The particular case study is located in Quellaveco, Moquegua Region in southern Peru, and the “Las Bambas” mining camp located in the Apurímac Region will also be used as an example for comparison. The research has made it possible to identify the main variables that make up the design of its architecture, modular concepts and the use of different construction systems and to propose design recommendations that can be implemented to improve comfort,

Keywords: Architecture; building systems, modular, mining camps; weather; comfort.

Abstract of Paper Accepted in BMESS'2021

16	<p style="text-align: center;">Gas leakage and environmental contamination on the natural gas transmission line in the district of Chilca</p> <p>¹Jhonny OlazaChacon, ²Doris Esenarro, ³Jaquelin OlazaChacon, ⁴MarianoAndres Sal y RosasJulca, ⁵Samuel Reyna Mandujano</p> <p style="text-align: center;">^{1,2,3,4,5}<i>Universidad Nacional Federico Villarreal UNFV, Lima, Perú</i></p> <p>^{2,5}<i>Specialized Institute for Ecosystems and Natural Resources Research INERN</i> jolaza@produce.gob.pe, desenarro@unfv.edu.pe,jacquelin.olaza@gmail.com,msalrosas@unfv.edu.pe, smandujano@unfv.edu.pe,</p> <p style="text-align: center;">Abstract</p> <p>The objective of this research is to analyze gas leakage and environmental contamination in the natural gas transmission line in the Chilca district to determine to what extent gas leakage affects ecological contamination in the natural gas transmission line in the Chilca district. The ASME B31 8-2003 Standard methodology was used, in addition to Procedures I-MAN-322, P-COO-025, P-COO-026 and, P-COO-015. The API 6D Standard and Procedure S-DIO-30 were also used. The investigation concludes that environmental contamination is produced by the leak of natural gas in the transmission line of the Chilca district, caused by anthropogenic activities carried out by the monitoring, supervision, and maintenance of the gas pipeline. This tampering occurs at valve No. 8, causing the emission of 5,502.34 ft³ of natural gas per month.</p> <p>Keywords: Natural gas, gas pipeline, welded joints, valves installed, anthropogenic activities.</p>
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Abstract of Paper Accepted in BMESS'2021

17

Social Networks Monitoring to Identify the Trust of the Population towards Covid 19 Vaccine

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Abstract

The research work consists of the implementation of a social network monitoring system that allows obtaining information in real-time from the population regarding vaccines and knowing their positive or negative opinion, this with the aim that public health professionals can take advantage of this information to develop communication strategies that resolve the doubts of the population, to increase the confidence of the people towards vaccines and achieve better vaccination rates in the vaccination programs carried out by the government. Currently, public health professionals are not very useful when communicating the benefits of vaccination to citizens, so many believe vaccines are unnecessary. The 34% of persons found to be unsafe and therefore would not be vaccinated. The use of a social media monitoring system allows knowing in real-time and geographical spaces the concerns of specific population sectors regarding vaccines. It helps the authorities establish more effective communication strategies that ensure a high level of confidence.

Keywords: Social networks, monitoring system, machine learning, natural language processing, trust, population, vaccine

Abstract of Paper Accepted in BMESS'2021

18

Sustainable Construction of Ancasmarka and Its Functionality in the Pre-Inca and Inca Period, Calca - Cusco - Perú

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Abstract

This research aims to analyze the functionality in the sustainable constructions of Ancasmarka and its influence in the Pre-Inca and Inca period. The archaeological area of Ancasmarka is located in the community of Aqcha Alta, Calca district, Calca province, Cusco department. This type of settlement is widespread in the Andes from the north to the south of Peru. The alveolar patterns of housing function structures are dominant and recurrent and the forms of spatial organization. It is intended to explain its sustainable construction systems through observation, visitation, and topographical surveying of its spatial distribution and constructive analysis.

Keywords: Sustainable constructions, Inca pre-Inca, Xerophytes, Storage centers, Ancasmarka archaeological

Abstract of Paper Accepted in BMESS'2021

19

Methodological Design of Green Urban Infrastructure Corridors for the Multifunctional Provision of Ecosystem Services in Metropolitan Lima, Perú

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Abstract

The purpose of the research is to supply the scarcity of maps to evaluate the ecosystem services of the green infrastructure of Metropolitan Lima, the capital of Peru. The study considers, maps of ecosystem services are produced using Graphab software. By superimposing them with Landsat 8 images 04/14/2019, we were able to obtain maps of vegetation or green infrastructure, showing their fragmentation, non-existence in sites with ecological potential, and the inequity of ecosystem services in relation to the district of Human Development Index (HDI). The development of green infrastructure maps is a recommendable instrument for urban planning.

Keywords: Methodological design, Green Urban Infrastructure, Maps, Corridors, Multifunctional Provisions, Ecosystem, HDI.

Abstract of Paper Accepted in BMESS'2021

21

Urban green areas to improve the quality of life in the San Juan de Miraflores district

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Abstract

This research seeks to propose a design of ecological green areas in the district of San Juan de Miraflores, Panamericana Sur sector; The lack of green spaces increases environmental pollution and affects the health of the residents of the neighborhood, the proposal to incorporate green areas in public spaces aims to improve the quality of life, in the methodology used to determine the location, a topographic survey of the district identifying the existing green areas, as well as evaluating the climatology, soil science, flora and fauna of the place and the urban environment for the design in such a way that it generates microclimates. It also had the support of a virtual survey directed to the residents of the area. As a final result, the design of a proposal for ecological spaces that integrate with the urban environment without losing their identity and minimizing their relationship with nature is proposed for users' interaction and comfort using clean technologies.

Keywords: green areas, quality of life, urban environment, sustainability

Abstract of Paper Accepted in BMESS'2021

24

Digital Enrollment System for Educational InstitutionsMarjorie Chamilco¹, Alex Pacheco², Cesar Peñaranda³, Edwin Felix⁴, Mario Ruiz⁵^{1,2}Universidad Nacional de Cañete, ³Universidad Privada San Juan Bautista ,
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efelixp@unam.edu.pe, mruizc@unam.edu.pe**Abstract**

Purpose- The enrollment process of an educational institution becomes very complex when the waiting time is prolonged and crowds of people are created. Technological tools are the most effective way to deal with this problem. Therefore, this research seeks to optimize the processes that make up the enrollment management of an educational institution through the implementation of a digital enrollment system.

Design/methodology/approach- The development of the digital license plate system was divided into four phases. **Planning:** Where the system requirements were described. **Design:** A simple model was chosen according to the established requirements. **Coding:** Programming languages were used that helped in the structure, customization and operation of the system. **Test:** The system was verified for errors. **Findings-** In this sense, the digital enrollment process was optimized, such as student enrollment, registration and reports, allowing the reduction of crowds, time and human effort. **Originality / value-** It allowed collaborative work at a distance between the institution and the students, being a technological and innovative aid that reduces the time of the enrollment processes, in an equitable and transparent way, guaranteeing freedom of choice and equal access opportunities to remote education in times of pandemic.

Abstract of Paper Accepted in BMESS'2021

26

Discontinuous Conduction Mode Buck Converter with High Efficiency

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ABSTRACT

Electronic devices require AC to DC converter (rectifier) to convert AC voltage from the grid to DC voltage for the electronics and its result is low power factor (PF) and harmonic current injection into the system. Nowadays, power factor correction (PFC) converters are being widely used which can achieve high power factor (PF) and reduce the harmonics caused during AC to DC conversion and buck PFC converter is one of mostly used converter. On the other hand, if this converter works with constant duty-cycle (CDC) control scheme, the overall losses are more and efficiency is less. In order to increase the efficiency of buck converter operating in discontinuous conduction mode (DCM), a variable duty-cycle (VDC) control scheme is proposed. The method of fitting VDC control scheme is given for making implementation of circuit simpler. The performance of buck converter is compared with CDC and VDC control scheme in terms of efficiency. For verifying the validity of proposed technique, the simulation results are carried out. The object of the research paper is to propose the control scheme to achieve high PF for DCM buck converter by only modulating the duty-cycle of buck switch.

KEYWORDS: Variable duty-cycle (VDC), constant duty-cycle (CDC), discontinuous conduction mode (DCM), electromagnetic interference (EMI), duty-cycle, buck converter

Abstract of Paper Accepted in BMESS'2021

27

Virtual Enrollment Platform to Fulfill Social Distancing: COVID-19

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Abstract

Purpose - Worldwide, there are long queues outside educational institutions, causing them to become infected with COVID-19 due to the agglomeration of people, which generates great consternation and misunderstanding among parents during the enrollment process. Therefore, the objective of this research is to implement a web platform to optimize the enrollment process in educational institutions, taking into consideration the availability, integrity and confidentiality of the information.

Design/methodology/approach - The system development methodology was divided into 3 phases. Start; The problem, the functional and non-functional requirements were defined, the technologies to be used for development were evaluated and the system prototypes were designed. Development; The Frontend was designed by programming the functional requirements and the architecture of the database was developed in the Backend. Transition; A feedback was made correcting errors by users through a usability test. **Findings** - In this sense, it was possible to carry out the registration process in a virtual way, complying with social distancing, preventing citizen insecurity, optimizing processes in a fast and efficient way, preserving information security. **Originality/value** - The web platform made it possible to reduce the digital gap for the use of information technologies (IT) between the institution and parents, reducing educational inequality with an inclusive education, taking a step towards digital transformation in an equitable and transparent way.

Keywords: implementation, web enrollment system, enrollment process, virtual enrollment platform.

Abstract of Paper Accepted in BMESS'2021

35

EFFECTIVENESS OF THE EXTRACT OF THE LEAF OF *Mentha arvensis* (MINT) AND OF THE BULB OF *Allium sativum* (GARLIC) AS NATURAL INSECTICIDE IN THE CONTROL OF *Planococcus citri* (WHITE COCHINILLA)

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Abstract

The research arose from pest control of insects from the family Sphidoidea of the suborder Sternorrhyncha. At the same time, we wondered about the damage caused by the ingestion of these foods and the loss of soil quality due to the use of poor control practices, that is why we focus directly on the generation of natural options for pest control and thus obtain a solution to the power of *Planococcus citri* (White Cochineal). Likewise, the introduction presents the complex reality and its description, indicating the importance of pest and disease control in crop production. The methodology shows the complete process of the research, identifying and describing the pest in order to proceed to a separate coding in segmented doses. Then, the concentrations for the elaboration of biopesticides with *Mentha arvensis* and *Allium sativum* are separated. The results show the reaction of the attention according to the days involved, ranging from 1 to 7 days. They also indicate that 4 out of 6 insecticides are adequate for the samples within the days sampled. Finally, it is concluded that the concentrations of *Mentha arvensis* (mint) have effective results in the elimination of *Planococcus citri* (white scale insect) in all cases. In contrast, the natural insecticide *Allium sativum* (garlic) did not have the best results.

Keywords: Leaf extract, concentrations, Garlic bulb, Natural insecticide, control of white scale, *Mentha arvensis* (mint), *Planococcus citri* (white plate), *Allium sativum* (garlic).

Abstract of Paper Accepted in BMESS'2021

36

Machine Learning Techniques in the Detection of Cocoa (*Theobroma cacao* L.) Diseases

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Abstract

The purpose of the research is to apply machine learning techniques to identify the cocoa tree's diseases (*Theobroma cacao* L.) and avoid the loss of crop harvests because farmers lack immediate tools to detect diseases on time. The methodology considers the use of machine learning with techniques for image processing and analysis such as HoG (Histograms of Oriented Gradient), LBP (Local Binary Pattern), and the SVM (Support Vector Machine) algorithm, for the classification to determine if the plant cocoa is being affected or not by disease. The results obtained show that SVM, Random Forest, and ANN's application with the characteristic vectors extracted with the HOG and LBP extraction algorithms predict the cocoa plant state; therefore, it is advisable to increase the dataset so that the results are more accurate.

Keywords: Machine Learning, Cocoa, HOG ((Histograms of Oriented Gradient), LBP (Local Binary Pattern), SVM (Support Vector Machine), ANN (Artificial Neural Networks),

Abstract of Paper Accepted in BMESS'2021

37

Increase of Graduates by the Thesis Development at Public Universities in Peru through Collaborative Motivation

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Abstract

In Peru, there is a deficit of university students who manage to graduate by the thesis development modality; in the different faculties of public universities, the number of graduates for this modality is low. This research analyses the particular situation of graduates in the faculty of Systems Engineering and Computer Science of the Universidad Nacional Mayor de San Marcos from 2014, where less than 10% of the total graduates were identified, graduate by the modality of thesis support and that more than 90% graduate through various modalities that do not include making a thesis; the consequence of this is the small amount of thesis generated and therefore the low research index as well as the null publication of scientific articles by our graduates. Therefore, this research aims to increase the percentage of graduates by the thesis development modality through collaborative motivation using virtual platforms and support graduates in the publication of scientific articles. At the end of the research, more than 50% of graduates by the thesis development modality were increased; the publication of scientific articles generated by graduates through the thesis development modality based on the results of their research was also increased

Keywords: Graduates, thesis, collaborative motivation, collaborative competence, virtual platforms, scientific publication. University.

Abstract of Paper Accepted in BMESS'2021

38

EMOTIONAL INTELLIGENCE MODEL TO IMPROVE RESILIENCE IN UNIVERSITY STUDENTS

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Abstract

Emotional intelligence is essential when socializing and adapting to the environment, it allows us to understand how we can influence in an adaptive and intelligent way the emotions of people and of ourselves. In the Peruvian university environment, it is important that students have skills to manage their emotions and face adverse situations. Therefore, an emotional intelligence model is proposed to improve resilience in university students. The research is of an experimental, quantitative and quasi-experimental design, the technique used was the survey and as an instrument the questionnaire that was applied to 58 students about the variables emotional intelligence and resilience. The results show that 27.59% indicate that their level of interpersonal intelligence is regular, 39.66% indicate that their level of intrapersonal intelligence is regular and 32.76% indicate that their level of adaptability is bad. Therefore, adequate emotional intelligence and resilience in students will allow them to handle skills such as interpersonal and intrapersonal intelligence, adaptability, perseverance and self-confidence when facing situations of change in their environment.

Keywords: Cañete, emotional intelligence, resilience, university

Abstract of Paper Accepted in BMESS'2021

40

COMPARATIVE ANALYSIS OF THE REDUCTION OF SUSPENDED SOLIDS USING *Opuntia ficus indica* AND FERRIC CHLORIDE IN THE WATERS OF THE LURIN RIVER

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Abstract

One of the world's significant concerns lately is the quality of water and its availability over time. Being one of the most critical basic needs for humanity, its care is elementary for the world. In this research, we develop mechanisms for its treatment, the process of coagulation, and flocculation, where synthetic coagulants are added to accelerate the settling of suspended solids. This process was divided into four parts for a better understanding. They are starting with the introduction that provides a broad overview of the research and describes the Lurín area's problem. The methodology indicates the experimental research design where the collected concentrations are measured, going through the two treatments' procedure (*Opuntia ficus indica* and Ferric Chloride) at different doses. The results present initial and final parameters with both *coagulants'* dose tests for determining periods and zones, showing parameters of treatment and removal of the coagulants concerning the Lurín river's water. Finally, the conclusions indicate that the natural coagulant *Opuntia ficus Indica* obtained the highest percentage of turbidity removal, removal of chemical oxygen demand, reduced biochemical oxygen demand, and generated lower costs than ferric chloride.

Keywords: Water, Lurin River, Oxygen, Natural Coagulation, *Opuntia ficus indica*.

Abstract of Paper Accepted in BMESS'2021

48

Intellectual information technologies for tourism using mobile application

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Abstract

This paper presents the intellectual information system for personalized tourism consisting of the server app that serves data for the client mobile app. Decision-making math models for personalized travel routes' generation and optimization are presented. Both the theoretical explanations of decision-making models the development process are described. The proposed solution is implemented with full cycle stages in mind including data collection, data mining, information system's design, conceptual, logic and physical design as well as formatting, configuring data models for client apps and designing an acceptable user experience level of the mobile application and results of testing. Further deployment is connected with using new math models and patterns of system's realization. Presented intellectual system's use allows to significantly reduce costs at the stages of a complex of routes' constructing according to individual preferences, collecting all the necessary information of the route's subject and the ability to automatically take into account and correct the limits of time and financial resources.

Keywords: tourism, mobile applications in tourism, intellectual systems.

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