CONFERENCE PROCEEDINGS

2nd ICSTR Barcelona – International Conference on Science & Technology Research, 01-02 August 2019

01-02 August 2019

CONFERENCE VENUE

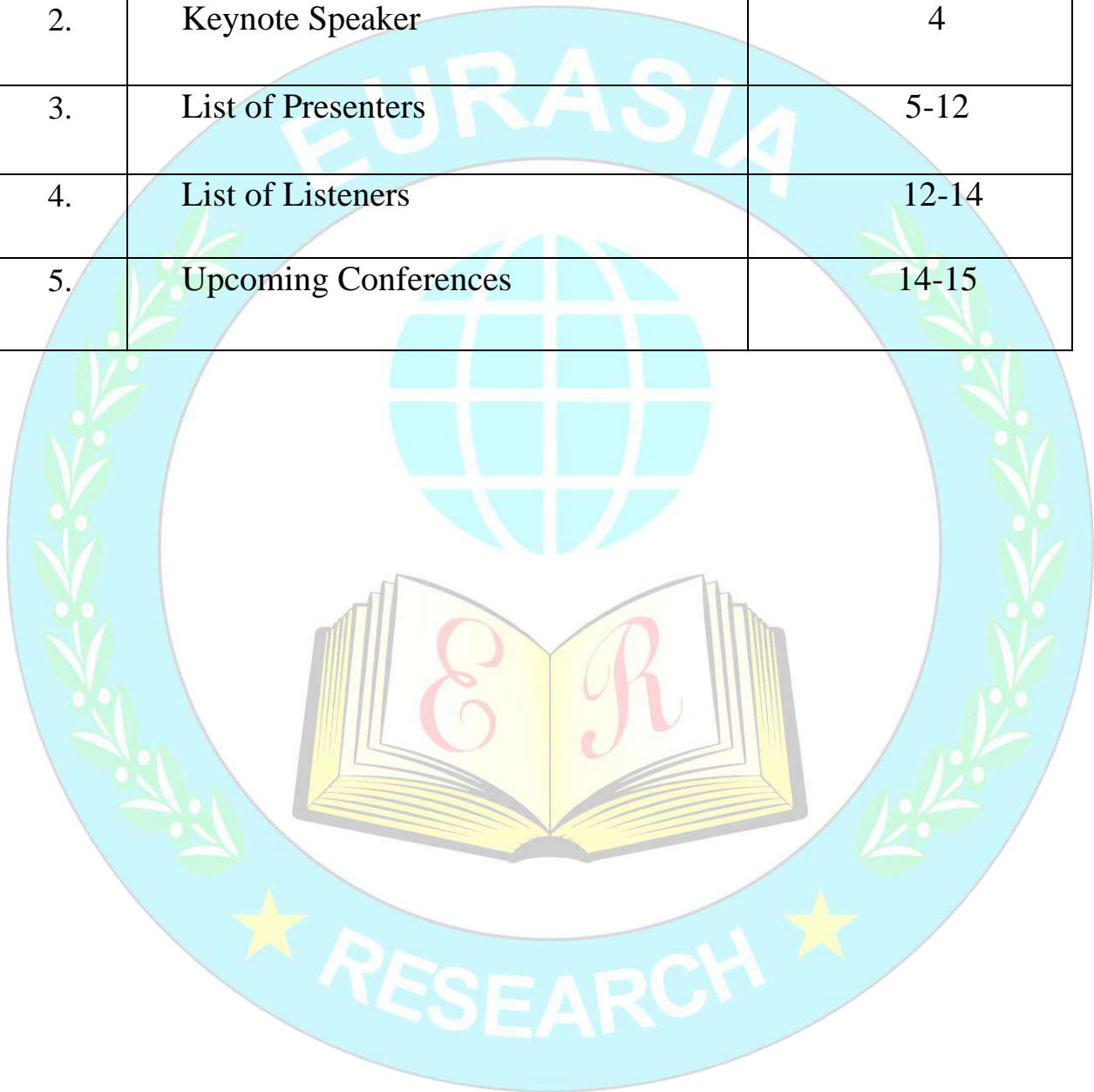Universitat Pompeu Fabra, Campus de la Ciutadella, Barcelona, Spain

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Preface:

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KEYNOTE SPEAKER

Paulo Alexandre Gonçalves Piloto
(Coordinator Professor, Department of Applied Mechanics – Polytechnic Institute of Bragança (IPB), Portugal)

Topic: Fire Performance of Fire Fighter Clothing

Paulo Alexandre Gonçalves Piloto has a degree in Mechanical Engineering from the Faculty of Engineering – University of Porto (FEUP, 1991), Master Science degree in Mechanical Engineering from the Technical University of Lisbon (IST, 1994) and PhD degree in Mechanical Engineering (FEUP, 2001).

He is currently coordinator professor at the Department of Applied Mechanics – Polytechnic Institute of Bragança (IPB) – Portugal, having performed other professional activities in business and university environment.

Develops the research activity in the field of fire and structural engineering, participating as a permanent researcher at LAETA INEGI (Portugal). He is also an associate researcher at the research unit from the University of Salamanca (Spain) "Art, architecture, Urbanism and Engineering (Centuries XIX-XXI)".

He is the author/co-author of several papers published in journals and congress proceedings. He made part of the organizing committee and scientific committee of several conferences. He participated in several international and national research projects.

Profile Weblinks:

http://portal3.ipb.pt/index.php/en/ipben/home

PRESENTERS

Development of Green Roads and Highways using Carbon Neutral Materials: A Review

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Abstract
An estimated 2.2 billion people in 108 countries are expected to survive on multidimensional poverty and almost 1.5 billion out of 2.2 billion people survived on or less than US\$1.25 a day. This review highlights the concept of a green economy that promotes an attractive green revolution to the present economic crises affecting developing countries for sustainable economic and environmental improvement. Green roads and highways can reduce the emissions released from fossil fuels and greenhouse gases if constructed with carbon neutral materials. Thus, carbon neutral materials used for the construction of green roads and highways can absorb temperature and excess emissions released by the vehicles because of their neutralities. This is because of the massive quantity of natural aggregates used during construction. Problems associated with green roads and highways made from carbon neutral materials are incompatibles with land use, geology, topography, substructure, landscape, rainfall, and other physical features. Therefore, physical features, geology, landscape, transportation, and development substructures were measured as crucial problems for national development. Most of the approaches used in this study are based on the context of a green economy and the development of green roads and highways. The USA possesses the highest GDP per capita of US\$52,194.90 and Bangladesh possesses the lowest GDP per capita of US\$1,029.60. This implies that the GDP for USA is 50.70 times higher than that of Bangladesh. The study highlights positive solutions to the above global challenges. It can be concluded that global challenges will be addressed through the concept of green revolutions.
Keywords: Carbon Neutral Materials, Green Economy, Green Roads, Green Highways, Environmental Sustainability, Fossil Free Fuels

Study of Internal Waves Near a Sill in Makassar Strait through Kelvin-Helmholtz Instability

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Abstract
Makassar strait is located between the islands of Kalimantan and Sulawesi, the fascinating phenomena of internal waves can be observed. Typical characteristics of internal waves are their large wavelength and amplitude. Internal wave stability is determined by density and current velocity profiles by detecting large internal wave amplitude in areas near a sill (topographic critical). These profiles will indicate areas of high shear occurrence and stable stratification or weak shears with unstable stratification. This research aims to derive a dispersion relation based on the basic equations of two layers fluid, to determine the internal waves in the Makassar Strait, and to create a simulation of generation of the internal waves using the software Mathematics. The results show that the generation mechanism of these internal waves can be formulated based on the Kelvin-Helmholtz dispersion relation for a two-layer fluid. This dispersion relation can also be used as classification criteria of instability of internal waves. Emphasis is given to the types of instability, i.e. temporal and spatial instability. Temporal stability occurs if current velocity in the upper part of fluid is less than its critical velocity. For the spatial instability, internal waves in Makassar strait can be approximated for both layers as deep water waves. The spatially stable region is reached when the frequency of the lower part of fluid is smaller than the critical frequency, or when the frequency of the upper part of fluid is larger than the critical frequency. In addition to their intrinsic physical relevance, the results of this study have important implications for the physics and the numerical modeling of breaking internal gravity waves.

Keywords: Makassar Strait, Generation of Internal Waves, Instability

Usaini Aliyu **ERCICSTR1915055**	**Use of Digital Technology to Develop Nigerian Traditional Textiles to make them Modern for the Contemporary World** **Usaini Aliyu** **Department of Fashion Design and Clothing Technology, Hussaini Adamu Federal Polytechnic Kazaure, Hussaini Adamu Federal Polytechnic Kazaure, Jigawa State, Nigeria** **Abstract** **My Research paper is to investigation on use of Digital Technology to Develop Nigerian Traditional Textiles to make them Modern for the Contemporary World. My research work was able to create new ideas or designs of Nigerian textile influenced by the Nigerian traditional motifs and symbols on fabrics, the traditional method of making Nigeria textiles involves the use of several materials, some of which are bought from the market or made. The processes involved in the making of traditional textiles can also be labour intensive and takes much of time. There is also an issue of re-design or modification of design that is not easy using the traditional methods. Therefore, there is a need to develop the processes of traditional textiles designs by employing digital technologies so as to bring out the textiles designs. New technologies such as design software can be used to produce these textiles designs or patterns from images of landscapes and traditional motif printed on a fabric.** **Keyword: Technology, Textile, Traditional Motif, Design**
 Muhammad, N. B. **ERCICSTR1915058**	**Nutritional Value and Antioxidant Vitamins of Abelmoschus Esculentus (Okra) and Hibiscus Cannabinus (Kenaf) Leaves** **Muhammad, N. B.** **Department of Biochemistry, Sokoto State University, Sokoto, Nigeria** **Wasagu, R.S.U.** **Department of Biochemistry, Usmanu Danfodiyo University, Sokoto, Nigeria** **Salihu, S.,** **Department of Biochemistry, Sokoto State University, Sokoto, Nigeria** **Abstract** **In this present study, the leaves of Okra (A.esculentus) and Kenaf (H. cannabinus) (Kenaf) were screened for their proximate composition and antioxidant vitamins (A, C and E) content. The proximate composition were determined using method of Association of Official Analytical Chemistry (AOAC) 1990, and antioxidant vitamins were determined using Rutkowski Method Kenaf had 45.36 ± 6.71 moisture, 4.52 ± 2.82 lipid, ash 8.1 ± 2.82, 28.41 ± 5.29 protein, 0.1 ± 0 crude fibre and 13.61 ± 3.61 carbohydrate. Okra 43.92 ± 6.55 moisture, 5.08 ± 2.23 lipid content, 9.11 ± 3 ash, 17.87 ± 4.12 protein, 0.2 ± 0 fibre and 24.025 ± 4.89 carbohydrate. Okra leaves shows predominance of lipid, ash, fibre and carbohydrate content. Significant difference was observed at $P>0.05$ between the two leaves. The vitamin A, C and E for kenaf are 3812.27 ± 63.94, 151.27 ± 12.60, and 51.29 ± 51.14mg/100g while okra vitamin A, C, and E are 2119.29 ± 74.75, 98.17 ± 10, 36.24 ± 6mg/100g. Kenaf shows predominance in vitamin C and E. Therefore the plant may have the potential to be used in treatment of diseases associated with oxidative stress.** **Keywords: Antioxidant, Vitamins, Okra and Kenaf**
 Umar A.I. **ERCICSTR1915059**	**Determination of Antioxidant Vitamins and Chemical Properties of Monodora Myristica Seeds and Fruits (Orchid Tree)** **Umar A.I.** **Department of Biochemistry Sokoto State University, Sokoto** **Labbo A.M** **Department of Biochemistry Sokoto State University, Sokoto** **Muhammad N.B,** **Department of Biochemistry Sokoto State University, Sokoto**

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Abstract
Palm oil (PO) and palm kernel oil (PKO) have a lot of nutritional benefit, industrial purpose and are good source of vitamins which may help in protection against oxidative damage. In the present study, antioxidant vitamins and chemical properties of two varieties of oils were determined. Vitamins were analyzed using spectrophotometry and chemical properties were analyzed using Standard analytical procedure. Results for Vitamins A, E & K analyzed in PKO were (478.33mg/dl, 48.73mg/dl, & 11.18mg/dl), whilst for vitamins A, E & K measured in PO were (496.02mg/dl, 48.64mg/dl & 1.63mg/dl). Vitamins content between the two oils have no significant difference at $p < 0.05$. However, values recorded for free fatty acids corresponded to the acid values; palm kernel oil was higher compared to palm oil, both oils had low peroxide values; PKO had the highest iodine value as compared to PO while Saponification values for the two oils were greater than 100, thus indicating that the oils can be used for making soap. The vitamins and chemical properties of PO determined are comparable to those of PKO and that the seed oils are not inferior to other edible oils used for cooking.
Keywords: Antioxidant Vitamins Peroxide Values Iodine Value Saponification Values Palm Oil and Palm Kernel Oil

Sequential Production of Methylester, Bio ethanol and Briquette from Spent Coffee Ground

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Abstract
In this study, methyl-ester, bioethanol and briquette samples were sequentially produced from spent coffee ground. The oil extracted from spent coffee ground with solvent extraction route at hexane to spent coffee ground ratio of 22.5g/g with an extraction time of 30.4min resulting in 11.892% of oil yield. This was comparable with literature values and subsequently used for methyl-ester production experiments using a 1% by wt of NaOH at reaction temperatures and residence times ranging from 50 to 65 °C and 20 to 60min, respectively. The optimization carried out using central composite design methodology gave 81.507% of methyl-ester yield at a reaction temperature of 57.133°C and reaction time (residence time) of 45.117 min with model determination coefficient (R2) of 0.9465 while the optimum reducing sugar yield for dilute acid hydrolysis experiments for ranges of operating parameters of temperature (70-100°C) and (1-3M)of H2SO4 concentrations was found to be 39.161% at a temperature of 98.313°C and H2SO4 acid concentration of 2.962M.The central composite design optimization results for trans-esterification and dilute acid hydrolysis experiments were verified by running experiments at optimum conditions and in turn resulted 79.65% of Methyl Esteryield(out of 11.892g of oil) and reducing sugars yield of 37.28%(out of the hydrolysate). This implied that the verification experimental results weren't far from the predicted values so that the experimental results were sufficiently represented by the central composite design models. The bio ethanol produced by simple distillation having alcohol by volume yield of 55% can be considered as a good result and it can be easily concentrated to a fuel grade ethanol by using fractionating column. Moreover, the characteristics of the Methyl Ester produced were in good agreement with ASTM and EN standards. The end product of the process which is briquette has been produced from 75% wt of dilute acid hydrolysis residue and 25% wt of glycerol, resulted a calorific value of 13.35MJ/kg, volatile matter value of 88.15%, ash content of 3.95%, and fixed carbon contents of 1.74% with its easily moldable physical status showed that it can as well be used for fueling purpose like firewood and charcoal. This study signifies the value addition that can be affected from spent coffee ground and the potential and results obtained in this regard are discussed.
Keywords: Spent Coffee Ground, Central Composite Design, Alcohol by Volume

| Malika Mokhtari | **Removal of Methyl Violet 2B from Water by Fepo4 as Heterogenous Photocatalyst** |

ERCICSTR1915068	

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Abstract
FePO4 was successfully synthesized via a simple method as a heterogeneous catalyst for photo degradation of methyl violet 2B in aqueous solution. X-ray diffraction, Fourier-transform infrared spectroscopy analyses and the scanning electron microscopy image confirmed the presence of phosphate, oxygen and iron on the FePO4structure. The analysis was completed by the pHPZC and the band gap energy. The photo catalytic performance of FePO4 was investigated using reduction of methyl violet 2B as a model reaction. The results showed that FePO4 has converted nearly 99 % of methyl violet 2B under UV light with optimum operating conditions of 1 g/L of FePO4, natural pH (pH =6. 75), and 10 mg/L of methyl violet 2B, a kinetic study was also realized. The recyclable character of the catalyst under the optimum conditions for three cycles was successfully investigated without any structural modification of the FePO4.
Keywords: Methyl Violet 2B, FePO4, Photo Catalysis, Degradation

Design of New Inhibitors of Dipeptidyl Peptidase-4 in Type 2 Diabetes by Computer Simulations

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Abstract
The techniques of molecular modelling are widely used in chemistry, biology and the pharmaceutical industry. Most current drug starg et enzymes. This theoretical approach allows us to predict the mode of interaction of a ligand withitsreceptor. Inhibition of Dipeptidyl Peptidase-4 "DPP-4" is an important approach in the treatment of disease in Type 2 diabetes. Several inhibitors have already been identified, but their affinity is insufficient to consider any of thembeing a pharmacological development. High-affinity inhibitors are used to inhibit DPP-4 as Linagliptin, Sitagliptin, Vildagliptin, Saxagliptin and Alogliptin but also as an adjuvant therapy for the treatment of Type 2 diabetes. It is for thi spurpose that molecular modeling techniques like docking and molecular dynamics have been developed. The results obtained in this work show the inhibition of DPP-4 by molecular modeling methods.The introduction of bulky groups causes a conformational rearrangement in the pocket of the active site that will probably best lengthe ned by the complementarity and therefore the activity increases. The results obtained in this study, by methods of molecular modeling which have been elucidated, allowed us to conclude that Linagliptin is a better inhibitor of DPP-4 than Sitagliptin,Vildagliptin, Saxagliptin andAlogliptin. Linagliptin has the potential to be the best inhibitor of DPP-4 in the treatment of Type 2diabetes based on molecular modeling interaction.
Keywords: DPP-4, Type 2 Diabetes, Inhibitor, Molecular Docking, Molecular Dynamics Simulations

Hanane El-Halouani ERCICSTR1915070	**Chemical Fertilizers and its Effect on the Quality of Groundwater in the Tadla Irrigated Plain; Morocco**

Hanane El-Halouani
Department of the Environment, Sciences and Technologies Faculty, Morocco

Abstract
In Morocco, irrigated perimeters are threatened by diffuse nitric pollution of groundwater, which reduces the potential of water resources which are of good quality, thus creating a health risk for the population and socioeconomic developments in the country. Control of this pollution requires sufficient knowledge of the causes and mechanisms responsible for this problem.
The Beni Mellal-Khénifra region suffers from the misuse of agrochemical inputs coupled with agricultural intensification and heavy pumping of groundwater, which is make water in the region of poor quality. Despite decades of efforts to reduce the release of pollutants into the environment, nutrient enrichment of aquatic environments remains an important issue, especially phosphates released into the environment, which come from agricultural sources (Fertilizers) and industrial wastes, human excreta and detergents or phosphate washed, and nitrates that turn into nitrites causing diseases that are in some cases fatal in newborns.
In this context, this study has achieve to determined the effects of the use of fertilizers on the water quality of the Tadla aquifer, by carrying out various analyzes such as nitrates, nitrites and phosphates, whose results have allowed extracting polluted areas and unpolluted areas.
Keywords: Tadla plain, groundwater, agriculture, nitrates, irrigation.

Mohammedi Ferhat ERCICSTR1915077	**Using the Diffraction Efficiency of Blazed Gratings for Application Metroly Optical And Measurement Profils Objets** **Mohammedi Ferhat** **Professor, L.A.R.H.Y.S.S - Laboratory, Coordinator Laser Research Group, Algeria** **Usually a holographic exposure would yield a sinusoidal profile, but it can also yield more complex profiles. In the case of a sinusoidal grating, the overall efficiency remains low and the zero order strong, even in the case of an optimum phase shift. The efficiency in the two conjugate first orders is 33%. We propose a design methodology for systematic design of surface relief transmission gratings with optimized diffraction efficiency. Reflection gratings are very sensitive to the incident angle and there for i.e. difficult to align in a spectrometer. In contrast, transmission gratings are very robust to variation in incident angle. Furthermore, reflection gratings have in general lower diffraction efficiency than transmission gratings due to the inherent loss in the metal surface. The diffraction efficiency, spectral bandwidth, and angular bandwidth are influenced by the Bragg condition and are functions of the intensity of the grating modulations and the thickness (d) of the grating volume. In general, a VP grating with a wide spectral bandpass has lower peak diffraction efficiency than a grating with a narrower bandpass. he theoretically achievable diffraction efficiencies derived through rigorous coupled-wave analysis of three different transmissive VP gratings designed for operation at 790 nm. Notice that the peak diffraction efficiency and bandwidth are traded off against each other. The blazing for surface-relief, transmission gratings, particularly in the red portion of the optical spectrum, can be difficult and sometimes impossible due to the large facet angles and grating depths required. This is particularly true for high dispersion gratings rulings greater than 600 l/mm for unimmersed gratings. Eventual utilization of this technology in with applications ranging from optical data storage, optical telecom, military and homeland security applications, LED and laser displays, industrial and medical sensors, biotechnology systems, optical security devices, high power laser material processing, to consumer electronics.**
F. Mhd Hamzah ERCICSTR1915082	**Testing of Tensile Strength on Composite Sandwich Products Combined with 3D Printing** **F. Mhd Hamzah** **Faculty of Industrial Technology, Department of Mechanical Engineering, Islamic University of Indonesia, Yogyakarta, Indonesia** **Abstract** **Information about the results of the 3D printing process in Indonesia is still minimal, such as the strength of the objects produced from the process, accuracy, etc. Such information is very important to know, so that the object / prototype that will be made is in accordance with what is expected. The purpose of this study was to find out what is the tensile strength of the material used in 3D printers with a combined sandwich. To find out its strength, a test needs to be done, one of which is by testing**

the tensile strength of material. Specimens tested had 4 variations, namely, specimens were made by testing 3DP, 3DP + Resin, 3DP + Fiberglass, and 3DP + Sandwich. From the results of tensile testing, the highest average value of tensile strength in 3DP + Sandwich specimens was 29.72 MPa. While the tensile strain that occurs for tensile testing is very small below 1 mm because of the character of brittle polymer composites.

Keywords: 3DP Printing, Sandwich, Brittle

Dilan Canan Çelikel **ERCICSTR1915094**	**An Investigation on Strength Properties of Multilayer Nonwoven Structures for Automotive Industry** **Dilan Canan Çelikel** **Gaziantep University, Technical Sciences Vocational School, Gaziantep/ Turkey** **Osman Babaarslan** **Çukurova University, Textile Engineering Department, Adana/Turkey** **Abstract** **Multilayer or multicomponent nonwovens are the structures of various combinations of materials and processes providing great advantages. Various combinations of spunbonded (S) and meltblown (M) processes as SM, SMS, SMMS, SSMMMMSS etc. where weaker meltblown fabrics are sandwiched between the stronger spunbonded fabrics. Nonwovens with their bulky, fibrous and porous structures have an important role within the automotive, construction, industrial applications etc. In multilayer nonwovens, in accordance with the layers' structural parameters, different fiber intersections and fiber orientations occur. Tortuosity and pore geometry will vary and pore connection and distribution become an important factor in determining mechanical properties of the material.** **In this study mechanical properties (bursting and tensile strength) of SMS (Spunbonded/ Meltblown/ Spunbonded) type multilayer nonwovens with bicomponent fibers have been derived. Multilayer nonwovens obtained by polyester fibers consisted of three layers. The top and bottom layers were spunbonded nonwoven and middle layer was meltblown nonwoven sandwiched between them. Spunbonded layers having a basis weight of 40 gsm made from polyester homocomponent round and bicomponent round cross-sectional fibers. Meltblown layers having seven different basis weights ranging from 50 gsm to 200 gsm were made from polyester round cross-sectional fibers.** **Also the effect of pore diameters on strength properties has been evaluated. All results have been analyzed statistically. Results have shown that three-layered nonwoven structures including bicomponent fibers at outer layers had better mechanical performance. This effect becomes more significant as the basis weight increased.** **Keywords: Nonwovens, Bursting Strength, Tensile Strength, Porosity**
Mahmut ÜNALDI, Dr. **ERCICSTR1915061**	**The Hardness, Density, Porosity and Wear Rate Features of Brake Pads Produced by Miscanthus as Reinforcement and Cashew as Lubricant** **Mahmut ÜNALDI, Dr.** **Department of Motor Vehicles and Transportation Technologies, Cihanbeyli Vocational School, Selcuk University, Konya/Turkey** **Recai KUŞ, Prof.Dr.** **Faculty of Technology, Department of Mechanical Engineering, Selcuk University, Konya/Turkey** **Abstract** **The five main components constituting the brake pads are: reinforcement, lubricant, abrasive, filler and binder. Miscanthus as reinforcement, cashew as lubricant, alumina as abrasive, calcite as filler, and phenolic resin as binder were used to produce composite ecological brake pad samples. Components and mixing ratios of them affect the all properties of the composite materials. To determine the effect of ecological brake pad ingredients on the porosity, hardness, density, and wear rate properties the Taguchi method was utilized. The miscanthus, cashew, alumina and phenolic resin ingredients were selected as the factors according to the Taguchi method. Factors were selected as four levels and samples brake pad samples were produced in accordance with L16(44) Taguchi orthogonal array design.** **As a result of this study, the brake pad samples' features such as density, hardness, porosity and wear rate were determined that were affected more by miscanthus and phenolic resin proportions in the mixture. According to the test results, the hardness and density values of the samples decreased, and**

the porosity and wear rate values increased as the reinforcement ratio increased. The hardness and density features of the samples were significantly affected by the reinforcement and binder ingredients ratios in brake pad samples. The lubricant and abrasive component ratios of the samples significantly affected the porosity feature.

Keywords: Brake Pad Material, Cashew, Density, Hardness, Miscanthus, Taguchi Method

New and Rapid Curing Process with Epoxy Based Reinforced Matrix with Temperature Control

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Mustafa Taşyürek
ERCICSTR1915062

Abstract
Fabrication of epoxy systems reinforced nano and/or micro scale materials are used widely sectors such as aerospace, automotive, coating, marine and also defense industries. The material manufacturing and development process are very important for these sectors. Curing is the most important stage during sample formation. Faster results can be achieved by radiant and microwave curing about mechanical properties, thermal properties or material processing. In this article, internal structure, energy saving and hardness values of fast curing composites were investigated. For this purpose, original graphics were obtained by making inferences about curing time, curing temperature, sample content and curing type. The results were compared with the results obtained by the conventional method.

Keywords: Composite, Curing, Epoxy Systems, Microwave, Temperature Control

Effect of Surface Temperature Controlled Microwave Epoxy Curing on Energy Consumption and Process Time

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Abstract
In contrast to conventional heat transfer mechanisms, microwave energy so internal heat generation is the most efficient heat generation technique because it does not heat the cavity and therefore the environment. In the microwave system, almost all of the supplied energy passes through the product to be heated, resulting in heat generation and temperature rise. The transfer of the energy to the product intensively leads to a very rapid temperature increase. Therefore, if a process is carried out with microwave energy, temperature control is a very important parameter.

In the study, epoxy, which is frequently used as a main structure in the production of aerospace and automotive composite materials, was chosen. A constant surface temperature controlled microwave system has been developed for curing epoxy. The epoxy curing process normally takes about 120 minutes at 80-120 ºC in the curing oven. According to the results of the study, microwave power density of 7.5 W / grmatter curing process was realized in 1-10 minutes for 80-120 ºC temperature range and similar quality characteristics were obtained according to traditional methods. In addition to the reduction in process time, a significant decrease in energy consumption has been achieved.

Keywords: Microwave Heat Generation, Constant Surface Temperature, Composite Materials, Curing Process, Energy Saving

Open Cv Based Autonomous Robot

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Abstract
Vision-based robot navigation has long been a fundamental goal in both robotics and computer vision research. While the problem is largely solved for robots equipped with active range-finding devices, for a variety of reasons, the task still remains challenging for robots equipped only with vision sensors. Vision is an attractive sensor as it helps in the design of economically viable systems with simpler sensor limitations. It facilitates passive sensing of the environment and provides valuable semantic information about the scene that is unavailable to other sensors. Two popular paradigms have emerged to analyze this problem, namely Model-based and Model-free algorithms. Model-based approaches demand a priori model information to be made available in advance. In case of the latter,

required 3D information is computed online. Model-free navigation paradigms have gained popularity over model-based approaches due to their simpler assumptions and wider applicability. This thesis discusses a new paradigm to vision-based navigation, namely Image-based navigation. The basic concept is that model-free paradigms involve an unnecessary intermediate depth computation, which is redundant for the purpose of navigation. Rather the motion instruction required to control the robot can be inferred directly from the acquired images. This approach is more attractive as the modeling of objects is now simply substituted by the memorization of views, which is far easier than 3D modeling.

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Upcoming Conferences

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- ICSTR Istanbul – International Conference on Science & Technology Research, 08-09 August 2019

- 2nd ICSTR Rome – International Conference on Science & Technology Research, 30-31 August 2019

- 2nd ICSTR London – International Conference on Science & Technology Research, 12-13 September 2019

- 2nd ICSTR Jakarta – International Conference on Science & Technology Research, 19-20 September 2019

- ICSTR Hong Kong – International Conference on Science & Technology Research, 26-27 September 2019

- 4th ICSTR Dubai – International Conference on Science & Technology Research, 09-10 October 2019

- 2nd ICSTR Prague – International Conference on Science & Technology Research, 17-18 October 2019

- 4th ICSTR Bangkok – International Conference on Science & Technology Research, 17-18 October 2019

- 4th ICSTR Singapore – International Conference on Science & Technology Research, 15-16 November 2019

- 5th ICSTR Dubai – International Conference on Science & Technology Research, 11-12 December 2019

- ICSTR Sydney – International Conference on Science & Technology Research, 12-13 December 2019

- 3rd ICSTR Bali – International Conference on Science & Technology Research, 21-22 December 2019

- 5th ICSTR Bangkok – International Conference on Science & Technology Research, 23-24 December 2019

- 3rd ICSTR Malaysia – International Conference on Science & Technology Research, 29-30 December 2019

- 6th ICSTR Dubai – International Conference on Science & Technology Research, 19-20 February 2020

- ICSTR Melbourne – International Conference on Science & Technology Research, 05-06 March 2020

- 5th ICSTR Singapore – International Conference on Science & Technology Research, 27-28 March 2020

- ICSTR Tokyo – International Conference on Science & Technology Research, 03-04 April 2020

- 3rd ICSTR London – International Conference on Science & Technology Research, 16-17 April 2020

- ICSTR Berlin – International Conference on Science & Technology Research, 14-15 May 2020