

ABSTRACT PROCEEDING

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Venue: Best Western Globus Hotel Rome, Italy

Date: December 26-27, 2019



**Association of
Engineering Technology
& Applied Sciences**

AETA International Conference on Recent Advances in Biotechnology, System Modeling, Applied Sciences, Technology & Engineering (RBTE)

Conference organized by:



Association of Engineering Technology & Applied Sciences (AETA) aims to provide a forum for researchers, practitioners, and professionals from the industry, academia and government to discourse on research and development, professional practice in engineering technology and applied sciences..

Mission, Innovative Features & Ethics and Values

AETA is an organization aims to provide a platform to innovative academicians and researchers around the globe. The organization also encourages research activities by organizing research training workshops, conferences and publishing high quality research manuscripts in reputable international journals.

AETA is a dedicated platform to promote and encourage the latest advancements in Science, Engineering Technology & Applied Sciences for the betterment of human development.

We are passionate about discovering new ways to create value for our members and society. Driven by intellectual curiosity, we promote a culture of invention among all our delegates.

Membership, Conference, Publishing, and Research Information

Abstracts of the registered participants will be published in the conference abstract book with an ISBN.

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AETA International Conference on Recent Advances in Biotechnology, System Modeling, Applied Sciences, Technology & Engineering (RBTE)

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Welcome Message

AETA International Conference on Recent Advances in Biotechnology, System Modeling, Applied Sciences, Technology & Engineering (RBTE)

We are happy you decided to join your colleagues from around the world to explore innovative technologies, pioneering pedagogical strategies, and a sampling of international collaborations that are being used to engage and retain students, researchers and Scholars in the new millennium.

Scientific Committee

Prof. Kaninda Musumbu, LaBRI , Universite Bordeaux 1, France

Prof. Figueira, F. M. Monteiro, ULHT - Universidade Lusofona, Portugal

Dr. Ahmad Fairuz Bin Omar, School of Physics, University Science Malaysia, Malaysia

Dr. Le Hoang Son, Hanoi University of Science, Viet Nam National University, Vietnam

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Prof. Dong-Chul Park, Myong Ji University, Korea Prof. Mohamed Ben Haj Frej, POST University, USA

Abdulrhman.A.A.Emhemed, Assistant Professor, College of Technical Sciences-Bani walid, Libya

Acknowledgements

The organizing committee would like to thank all those people who were involved in making the conference a success. A great amount of planning and organizing is required to hold a successful conference, so we are indebted to those who volunteered their time and energy.

We want to thank all the members of the Association of Engineering Technology & Applied Sciences who volunteered their time to help organize the conference.

Engineering & Technology Studies

Acoustical engineering Agricultural engineering Aquacultural engineering Aquatic and environmental engineering Architectural engineering Army engineering maintenance Atomic engineering Aviation engineering B Biological interface engineering Biomechanical engineering Bioresource engineering Broadcast engineering Building services engineering C Ceramic engineering Chemical engineering Civil engineering Civionics Climate engineering Cloud engineering Collaborative engineering Computer engineering Computer-aided engineering Computer-aided production engineering Construction engineering Control engineering Cost engineering D Detailed engineering E Earthquake engineering Ecological engineering Electrical engineering Electronic engineering.

Accounting

Accounting Practices, Financial Modeling, Financial Analysis, Financial Statistics, Future Markets, Risk, New Trends for Accounting and Finance, Research for Accounting, Tax Theories and Practices, Tax Avoidance, Invasion and Extraction from Tax Invasion, Corporate Finance, Finance Theories, Money, Credit and Banking, Stock, Currency and Bonds, Commodity

Computational Engineering

Computational science and engineering (CSE) is a relatively new discipline that deals with the development and application of computational models and simulations, often coupled with high-performance computing, to solve complex physical problems arising in engineering analysis and design (computational engineering) as well as natural phenomena (computational science). CSE has been described as the "third mode of discovery" (next to theory and experimentation).[1] In many fields, computer simulation is integral and therefore essential to business and research. Computer simulation provides the capability to enter fields that are either inaccessible to traditional experimentation or where carrying out traditional empirical inquiries is prohibitively expensive. CSE should neither be confused with pure computer science, nor with computer engineering, although a wide domain in the former is used in CSE (e.g., certain algorithms, data structures, parallel programming, high performance computing) and some problems in the latter can be modeled and solved with CSE methods (as an application area).A Agent-based computational economics Algorithmic art Artificial intelligence Astrominformatics Author profiling B Biodiversity informatics Biological computation C Cellular automaton Chaos theory Cheminformatics Code stylometry Community informatics Computable topology Computational aeroacoustics Computational archaeology Computational astrophysics Computational auditory scene analysis Computational biology Computational chemistry Computational cognition Computational complexity theory Computational creativity Computational criminology Computational economics Computational electromagnetics Computational epigenetics Computational epistemology

Interdisciplinary

Children and Youth, Communications and Media, Complex Systems, Conflict resolution, Creativity, Culture, Disaster Management, Discourse, Film studies, Gender studies, Globalization, HIV/AIDS, Human Rights, Identity, LGBT Studies, Leadership, Memory, Multidisciplinary Studies, Poverty, Public Policy, Security, Sexuality and eroticism, Spirituality, Sport science, Sustainable development, Urban studies, Violence Women's studies

General Economics, Economic Development, Technological Change and Growth

Microeconomics, Household Behavior and Family Economics, Economic Development, Sustainable Development, Eco-Development, Production and Organizations, Welfare Economics, Macroeconomics and Monetary Economics, International Economics, Public Economics, Analyses of Economic Development, Agriculture; Natural Resources; Energy; Environment; Other Primary Products, Human Resources; Human Development; Income Distribution; Migration, Economic Development: Financial Markets; Savings and Capital Investment; Corporate Finance and Governance, Regional, Urban, and Rural Analyses, International Linkages to Development; Role of International Organizations, Fiscal and Monetary Policy in Development, Trade Policy; Factor Movement Policy; Foreign Exchange, Innovation and Invention: Processes and Incentives, Management of Technological Innovation and Research and Development

IT Business

Business for AI and Deep Learning, Technological Forecasting and Social Change, Business for Big Data, Internet of Things and Cloud Computing, Business for IT-driven Services, Information Systems and Informatics, ICT for Business, ICT for Education, Healthcare, Finance and Other Sectors, Large Scale Surveys and Analysis, HCI and Computers Human Behavior, Computers In Industry

Conference Schedule

AETA International Conference on Recent Advances in Biotechnology, System Modeling, Applied Sciences, Technology & Engineering (RBTE)

Rome, Italy

December 26-27, 2019

09: 00 am - 09: 30 am	Registration and Reception
09: 30 am - 09:40 am	Introduction of Participants
09: 40 am - 09:50 am	Inauguration and Opening address
10: 50 am - 10:00 am	Grand Networking Session
10: 00 am - 10:30 am	Tea Break

AETA International Conference on Recent Advances in Biotechnology, System Modeling, Applied Sciences, Technology & Engineering (RBTE)

**Day 01: Thursday
December 26, 2019**

Session 01: 10:30 am 01:00 pm

Track A: Engineering, Technology & Applied Sciences

Presenter Name: Danna Tang

Reference ID: RBTE-129-P6

Paper Title: Direct Ink Writing Of Kaolinite Ceramic Functionally Graded Materials

Presenter Name: Meng He

Reference ID: RBTE-129-P7

Paper Title: Research on the Application of Bionic Additive Manufacturing

Presenter Name: XIU FANG

Reference ID:RBTE-129-P8

Paper Title: The Influence of Modern Science and Technology on the Development of Traditional Chasing and Repousse Xinhua Village

Presenter Name: Shivanika Soni

Reference ID: RBTE-129-P2

Paper Title: Characterization of the Light-Activated Cyclase and its Optogenetic Applications in Bacterial System

Track B: Business, Economics, Social Science & Humanities

Presenter Name: Dr. Semih Delil

Reference ID: MBSHS-DEC-010

Paper Title: The Use of Multimedia Components in Digital Story Books for Children: Advantages of Interactive Story Books

Presenter Name: Selcuk Koyluoglu

Reference ID: MBSHS-DEC-011

Paper Title: Comparative Analysis of Neuromarketing Perception in Social and Health Sciences

Presenter Name: Alfred Balla

Reference ID: MBSHS-DEC-018

Paper Title: Reflection on the Criminal Responsibility of Minors in Conflict with the Law

Presenter Name: Dr. James Ondracek

Reference ID: RBME-12-104

Paper Title: Valero Energy Corporation Case Study

Presenter Name: Dr. James Ondracek

Reference ID: Dr. James Ondracek

Paper Title: Oracle Corporation Case Study

Presenter Name: Dr. James Ondracek

Reference ID: RMS-4129-101

Paper Title: Sorry, Roland Barthes! The Author Will Never Die!

Presenter Name: Vivek Kumar Singh

Reference ID: MBSHS-DEC-016

Paper Title: Development of a novel business concept for standard and economic accommodation and travel arrangements of studying and working professionals across the globe

Track C: Medical Medicine and Health Study

Presenter Name: Yanming Wang, PhD

Reference ID: RMM-4129-101

Paper Title: Molecular Imaging of Myelin the Missing Link in Cure for Multiple Sclerosis

Closing Ceremony & Lunch (01:00 pm 02:00 pm)

AETA International Conference on Recent Advances in Biotechnology, System Modeling, Applied Sciences, Technology & Engineering (RBTE)

**Day 02: Friday
December 27, 2019**

Conference second day is reserved for participants own tourism activities.

Conference Abstracts

Track A: Engineering, Technology & Applied Sciences

Characterization of the Light-Activated Cyclase and its Optogenetic Applications in Bacterial System

Shivanika Soni *

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Optogenetics is a biological technique comprising of genetic and optical methods to regulate specific intracellular function on living tissue and animals. The technique so far has been employed widely to study neural circuits and now shifting towards other living systems. Optogenetics is based on activation and deactivation of various light regulated protein called photosensory receptors at different wavelength of light for respective photoreceptor. Our work aims at expression, purification and characterization of a photoactivated adenylyl cyclase from *Beggiatoa* sp.(bPAC), a BLUF domain containing cyclase protein that converts intracellular ATP to cyclic AMP (cAMP) when activated via specific blue light and analyze effect of increased intracellular cAMP level for bacterial physiology and delineate the role of cAMP mediated biological processes during host-pathogen interactions. In future, developed optogenetic tool could be applied to regulate cAMP mediated cellular events like osmoregulation, plaque and biofilm formation in bacteria and cell growth, cell division, cell differentiation, inflammation and apoptosis in mammalian cells. Thus, aiming to develop a potent tool to control or treat various diseases and disorders on exposure of blue light via bPAC.

Index Terms: Optogenetics, bPAC, cAMP

Direct Ink Writing of Kaolinite Ceramic Functionally Graded Materials

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This study was carried out in order to explore the process of clay functionally graded materials (FGM). In the experiment, several additives (e.g., polysorbate, liquid paraffin and water) were mixed with kaolinite and barite powders to print the gradient materials with variation in compositions and structures. A stable ceramic slurry with a viscosity of 2.66-3.66 GPs has been formulated under the optimized flow rate of 150 ml/s and thickness of 0.5 mm. Besides, the model with the vertical gradient pore and material variations brought about spatial and nonlinear mechanical properties, which made it possible to control the permeability of properties precisely in the bonic models. The dual-extrusion DIW method presented here is versatile to be adapted to a wide range of biomimetic ceramic materials for the fabrication of FGMs objects with unprecedented properties.

Index Terms: Ceramic Composite, Direct ink Writing, Functionally Graded Materials, 3D printing

Research on the Application of Bionic Additive Manufacturing

Meng Hea Selanik-Ay^{1*}, Liang Hao²

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Digital technology and Additive Manufacturing (AM) provide support for the formation of complicated structure and excellent material properties in further nature imitation. This paper was carried out to study bionic additive manufacturing technology from the aspects of technology, material and structure. Besides, the texture and structure of natural objects were observed and extracted by microphotograph technology. Then digital technology software (rhino, grasshopper) for the virtual model optimize and design was used, combining with the Selective Laser Melting (SLM) 3D printing technology. A design method of the kind of bionic movable structure and a process method of the all-in-one titanium alloy was eventually formed for jewellery. It is promising to realize the unity of function, technology and art, which can promote the sustainable development of natural ecology and modern manufacturing.

Index Terms: Bionic additive Manufacturing, Selective Laser Melting, Titanium Alloy, Jewellery.

The Influence of Modern Science and Technology on the Development of Traditional Chasing and Repousse

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Chasing and repousse is an intangible cultural heritage and a traditional Chinese metal craft with a history of nearly 300 years. The rapid development of manufacturing technology and efficient production tools has vital impact on many traditional handicrafts including chasing and repousse. This paper briefly describes the process flow of the traditional chasing and repousse technology with the addition of modern equipment. Every step from preparation to finished products is time-consuming and laborious by hand, while mechanized equipment, such as silver plate machines, twisted silver machines, polishing machines, etc, can highly increased production efficiency. However, precision machinery also dilutes the characteristics of traditional handicrafts and reduces the complexity level of chasing and repousse technology. With the advancement of society, modern technology has become the only way to protect and inherit the development of traditional handicrafts, and strive to combine the two. It is inevitable to apply machine in the rough in the production process, but it needs to adapt to the traditional handicraft technology with reasonable use. A series of art works related to silver chasing and repousse (Name: Short Bloom) exhibited the combination of traditional craft and modern technology.

Index Terms: Chasing and Repousse, Modern Science and Technology, Traditional Handicraft.

Conference Abstracts

Track B: Business, Economics, Social Sciences & Humanities

Consumption and Social Media

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Today, social networks are of great importance in most peoples lives. Many people who are members of social networks spend long periods of time in these networks in line with their interests. Today, shopping is also done through social networks. Many people who are members of social networks follow many shopping related topics through digital networks such as facebook, twitter, instagram. Today social networks also turned to huge consumption areas. Sociological examination of this type of consumption is important. In this study, perspectives of users on consumption issues will be understood through their posts on shopping on Twitter and Instagram. The study is designed as a qualitative study. For this purpose, shopping and consumption words will be searched and related posts will be selected with random sampling. With this aim, after the literature review on consumption and sociology, selected posts from Twitter and Instagram through random sampling will be analyzed.

Index Terms: Social Media, Consumption, Online Networks

Comparative Analysis of Neuromarketing Perception in Social and Health Sciences

Asst. Prof. A. Selcuk Koyluoglu *

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The aim of this study is to investigate the perceptions of students in the social sciences and health sciences about neuromarketing. Survey method was used to collect data. In determining the questions in the questionnaire form, related literature and previous studies in this field were taken into consideration. The questionnaire consists of two parts. In the first part, there are 6 questions to determine the demographic characteristics of the participants. In the second part, 14 questions about determining the perception of neuromarketing are given. The questions in this section are published by Eser et al. (2011). The questions posed to the participants were measured with a 5-point Likert scale. Following the initial design of the questionnaire, the form was reviewed by academicians who are experts in neuromarketing in terms of comprehensibility and suitability and the questionnaire was finalized. The questionnaires were filled in by face-to-face interviews with Selcuk University students. Following the collection of questionnaire forms, it was concluded that there were 499 valid questionnaires. The data obtained were coded in accordance with SPSS 21 program and the test phase was started. At this stage, the demographic priorities of the participants were examined separately for the social sciences and health sciences. Then, the answers given by the participants in both fields to the questionnaire were averaged and then the factorization structure of the scale was examined with explanatory factor analysis. And difference analysis was performed with t test. As a result, it was seen that the participants in the social sciences and health sciences differed significantly about the perception of neuromarketing ($p = .000$). It was found that the perception level of social sciences was higher than those of health sciences.

Index Terms: Neuromarketing, Neuromarketing Perception, Social Sciences, Health Sciences

Development of a Novel Business Concept for Standard and Economic Accommodation and Travel Arrangements of Studying and Working Professionals Across the Globe.

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As intra and inter national travelling of professionals for work or study purpose is now often, there is immediate need of one stop platform that would deal with pre and post travel planning and services. Along travel the issues of stay, food and transportation is major point of concern for students and first time visitors from economic as well as safety point of view. The pre travel planning part of service includes hassle free bookings of air or rail tickets, choosing accommodation and applying passport and visas under appropriate category on time however the post travel plans includes escorting of customer from air ports or railway stations to destined accommodation. The accommodation would be available in format of PG, rentals and/or BNB chosen by customer in pre planning sessions. The complete travel would be managed constantly by single company to make the concept completely hassle free, safe and commission free. The customer can also opt food facility of own choice, prepared freshly instead of carrying canned food items along. The aim of the concept is to provide the most economic and secure travel arrangements for the professionals and encourage the young travelers to accomplish their studies or jobs and fulfill their dreams independently. The concept would work completely online making the travel cashless, document less, commission free and hassle free. The concept would also open a source of employment international level and thus focuses on building of international relations and economy of all the nations.

Index Terms: Novel Business, Employment, International Relations

Reflection on the Criminal Responsibility of Minors in Conflict with the Law

Alfred Balla ^{1*}, Mirela Kapo, ²
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This study aims to express a balanced and integrated approach for the protection of children's rights, which is one of the most important social policy guidance in the Republic of Albania. The bases of these policies are the fundamental principles of the Albanian Constitution, the UN conventions and other international instruments ratified by the Albanian state, which stipulate that juvenile offenders of law, due to age characteristics and lack of physical and intellectual maturity need special protection and attention from family and state institutions. The organic interconnection between the element of age and the offense is very important in criminal law; therefore, there is rightfully room for an in-depth study of the concept of "age in criminal law". Exactly due to the young age and other specifics, which are related to juvenile offenders in criminal laws of developed countries, this vulnerable category enjoys a different treatment, a milder and norm favorable treatment compared to the adult perpetrators. The answer to the question whether this privileged treatment of under-aged offenders has increased the level of juvenile delinquency will be made obvious by the end of this chapter.

Index Terms: Age Element, Protection of the Higher Interest of the Child, Vulnerable Category, Acquis Communitarie, Criminal Responsibility.

Sorry, Roland Barthes! The Author Will Never Die!

Hanan Bishara *

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The prevailing classical point of view about a literary work is that it is a legitimate son of its author and a reflection to his life, education and psychological condition. Illuminating the text with data about the author's life helps the reader to identify with the author's thoughts and makes him come closer to his emotional experience. After the classical period, a new approach of criticism appeared simultaneously with the appearance of structuralism that calls for concentration on the language of the text and isolating it from its author, who no more has authority on the meanings and indications of the text. The idea of the Death of the Author goes back to philosophical and intellectual thoughts that were connected to the objective circumstances that prevailed in Europe after its revolution against the Church. The German existentialist philosopher Fredrick Nietzsche introduced the idea of 'Death of God' and rejected the supernatural perspective that is employed to explain the ambiguous or mysterious issues. This rejection was received by a wide reaction among the European critics, who were eager to destroy the supernatural approach of explaining the texts and enthusiastic about giving way to the appearance of the man with all his human abilities, which are perceived by the intellect and anything else is considered dead. The axiom or postulate of the 'Death of God' was borrowed into the literary criticism. The Western critics, headed by Roland Barthes, declared the idea of the Death of the Author. Barthes called for the Death of the Author through giving more weight to the text than the author. Here, the language affects more than the author because it is the language that speaks with the reader and not the author. Thus, we find that Barthes makes fun of the critics who put the writer within the text and try to reach his deep psychological dimensions. For Barthes, the text is a linguistic means of communication that the research should start from it, namely, from its structure, its indications and its metaphors. Barthes maintains that we should not analyze from the outside, namely, through the author and his psychological structure. The theory of the Death of the Author left a great effect on the studies of linguistics and critical theories through its direct and daring call to break and denounce the legend of the 'author' and destroy the artificial holy barriers between the text and its readers. All this was considered a 'revolution in the world of literature. The reader has always had absolute freedom in opening and closing the indicative imagination and many times far from the indication of the author.

Index Terms: Death of the Author, criticism Autobiography, Post-Structuralism, Russian Formalism, Semiotics, Postulates

Conference Abstracts

Track C: Medical Medicine and Health Study

Molecular Imaging of Myelin the Missing Link in Cure for Multiple Sclerosis

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Destruction or changes associated with myelin in the CNS play a key role in the pathogenesis of multiple sclerosis (MS) and related neurodegenerative disorders. Novel therapies are currently under development to prevent demyelination and promote remyelination. For efficacious evaluation of these myelin-targeted therapies, a major challenge is assessing and quantifying changes in myelin content in vivo. To meet this unmet need, we have developed a PET probe ($[^{11}\text{C}]\text{MeDAS}$) that readily enters the CNS and selectively binds to myelin membranes. Here we reported its application in image-guided myelin repair therapies in an animal model of MS. Methods: 1) Lysolecithin (LPC) was administered to the brain and spinal cord via stereotactic injection; 2) The LPC rats were treated with a mesenchymal stem cell-based hepatocyte growth factor (HGF) to promote remyelination. 3) The time course of myelin changes were quantitatively monitored by longitudinal microPET imaging in the brain and spinal cord and correlated with histological analysis. Results: 1) Focal demyelination in the brain and spinal cord was induced by LPC; 2) HGF treatment showed significant remyelination; 3) Quantitative imaging analysis showed that the uptake and retention of $[^{11}\text{C}]\text{MeDAS}$ correlated well with the level of demyelination/remyelination in the brain and spinal cord. Conclusions: $[^{11}\text{C}]\text{MeDAS}$ -PET is a promising imaging marker to monitor the changes in myelination in vivo, which is capable of monitoring myelin-targeted drug effects.

Index Terms: Molecular Imaging, Retention, Myelin

Upcoming Events

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