PROCEEDING BOOK

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Venue: Mercure Hotel Amsterdam City

Date: December 28-29, 2019

Institute of
Applied Sciences
& Engineering Technology

IAET International Conference on Soft Computing, Artificial Intelligence, Machine Learning, Smart Materials & Information Technology (SAMI)

Conference organized by:

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This conference is dedicated to educators all over the world and to the members of the Institute of Applied Sciences and Engineering Technology (IAET) whose passion for teaching, learning, research, and service are helping to transform the academy in many positive ways.

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IAET International Conference on Soft Computing, Artificial Intelligence, Machine Learning, Smart Materials & Information Technology

Table of content

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Welcome Message

The Institute of Applied Sciences and Engineering Technology (IAET) welcomes you to the IAET International Conference on Soft Computing, Artificial Intelligence, Machine Learning, Smart Materials & Information Technology
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.

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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 Institute of Applied Sciences and Engineering Technology (IAET) who volunteered their time to help organize the conference.

ENGINEERING TECHNOLOGY

Acoustical Engineering Aerospace Engineering, Agricultural Engineering Biological Engineering and Sciences, Biological Systems Engineering Biomedical Engineering, Bioprocess Engineering Biotechnology, Building Services Engineering Chemical Engineering, Industrial Engineering Information Engineering, Informational Technology Manufacturing Engineering and Technology, Materials Engineering Mechanical Engineering, Mechatronics Nanotechnology and Nanoengineering, Naval Engineering Nuclear Engineering, Technology for Cloud Computing Technology for Community, Technology for Digital Age Technology for Human Use, Technology for Learning Civil Engineering, Computer Engineering Current issues and challenges in Engineering, Electrical Engineering Electronic Engineering, Energy Engineering Environmental Engineering, Food Engineering Genetic Engineering, Geotechnical Engineering Ocean Engineering and Technology, Optical Engineering Petroleum Engineering, Power Engineering Process Engineering, Resource Engineering Sensing Technology, Structural Engineering Systems and Software Engineering, Technology for Big Data Textile Engineering, Thermal Engineering Transport Engineering, Web Engineering Vehicle Engineering.

APPLIED SCIENCES

Artificial Intelligence, Architecture, Astronomy, Biological Sciences, Botany, Chemistry, Design, Earth Science, Ecology, Marine Science, Physics, Space Sciences, Life sciences, Computer Sciences, Logic, Mathematics, Statistics, Systems Science, Electrical Engineering, Information, Technology, Industrial Engineering, Mechanical Engineering, Applied Physics, Health Sciences and Medicine, Ceramic Engineering, Computing Technology, Electronics, Energy, Environmental Engineering Sciences, Engineering physics, Environmental Technology, Fisheries Science, Forestry Science, Materials Engineering Micro technology, Nanotechnology, Nuclear, Technology, Optics, Zoology Transportation

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Conference Schedule

IAET International Conference on Soft Computing, Artificial Intelligence, Machine Learning, Smart Materials & Information Technology

Mercure Hotel Amsterdam City
December 28-29, 2019

SAMI-2019 **Saturday, December 28, 2019**

Day-at-a-Glance

09:30 - 09:40 am	Arrivals, Doorstep and Handshake
09:40 am - 09:50 am	Introduction of Participants
09:50 am - 10:00 am	Inauguration and Opening address (Mr Bashar)
10:00 am 10:30 am	Tea - Grand Networking Session/ Group Photo

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Session 01 10:30 am 12:00 pm

Track 01: Business Economic, Management, Social Sciences & Humanities

An Exploratory Study on Understanding Learners Proactive Learning: A Phenomenological Approach Focusing on a Students Lived Experience in the Classroom

Speaker: Atsushi Masumi —— Kobe University Secondary School, Japan

Transnational Educational Mobility TEM: A Faster School to Work Transition?

Speaker: Masahisa Shinoda —— Kanazawa Institute of Technology, Japan

International comparative study of standards for new teachers professional development

Speaker: Laetitia POZNIAK—Warcoque School of Business and Economics FInance Department, University of Mons, Belgium

International comparative study of standards for new teachers professional development

Speaker: Miss Zhaohao Nian—Palacky University, Czech Republic

From the early static spaces to the current dynamic patterns Evolution of health-care centers over the time and the effect of it on humanś attitude

Speaker: N. Baghaei —Eastern Mediterranean University, Famagusta, North Cyprus

Interorganizational Mentorship: An Exploratory Investigation and Discussion

Speaker: Yeap Peik Foong —University of Newcastle, Singapore

Track 02: Engineering Technology, Computer Applications & Applied Sciences

Intelligent Packaging in the Food Industry

Speaker: Lukasz Duda —Medical University of Lodz

Innovative Radiation Cross-Linked Carboxymethyl Chitosan Hydrogel Dressings

Speaker: Karol Klosinski —Medical University of Lodz

Cross-Cultural Sentiment Analysis of Yelp Consumer Reviews

Speaker: Hyun Woo Jung —Hankuk Academy of Foreign Studies, South Korea

Lunch Time (12:00 pm - 01:00 pm)

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Conference Attendees

The following scholars/practitioners/educationist who don't have any paper presentation, however they will attend the conference as delegates & observers.

Participant Name: Owusu Ansah Matilda

Affiliaton: Institution name -Adankwame R/C Primary school, Ghana

Participant Name: Emir Haxhiu

Affiliation: Balkan Medical Education Training Center, Pristina , Kosovo

Participant Name: Visar Osmani

Affiliation: Balkan Medical Education Training Center, Pristina , Kosovo

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IAET International Conference on Soft Computing, Artificial Intelligence, Machine Learning, Smart Materials & Information Technology

SAMI-2019 Sunday, December 29, 2019

Conference second day is reserved for participants own tourism activities.

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Conference Abstracts

Track A: Business Management, Economics, Social Sciences and Humanities

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From the Early Static Spaces to the Current Dynamic Patterns Evolution of Health-Care Centers Over the Time and the Effect of it on Human's Attitude

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The issue of medication, health and treatment has been always one of the most underlying and vital issues in improvement of human life and the rate of utilizing this status is highly depended on human health in order to use desired conditions. Academic works have revealed that the better conditions are in terms of physical and mental conditions, the more the awareness of people is increased to understand the environment and to create appropriate conditions for living. Hence, this study has also investigated the way of establishment of these centers and familiarity with the process of their establishment to analyze the current patterns and the effect of the evolution on human mind. This is a descriptive-analytical research in terms of content and has tried to use physical investigations and data collection to explain issues in a hierarchical framework to express the evolution. After analysis of the process of emergence of these centers, their impact in individual and social behavior and thoughts of people is evaluated over the time and finally, a conclusion is presented through collecting the data obtained from the references. The results showed that although health centers used to be defined as attachments to different buildings at the early times, they have gained independent identity over the time and have been defined as unit buildings with certain uses due to the social needs and the advancement process of knowledge and technology. They have been advanced to an extent that some centers could be today observed for temporary residence to take medical processes in this field. Hence, the health centers have been encompassed in individual and collective opinions gradually and after a long way, so that the main medical and health activities, mental health, have faced welcoming of humans for utilization of these services in these centers.

Index Terms: Health-Care Centers, Evolution, Disease, Social Behavior

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Interorganizational Mentorship: An Exploratory Investigation and Discussion

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Many employees have experienced developmental relationship in the workplace through mentorship. This relationship is developed base on personal willingness to enter and to engage in the relationship and it does not necessarily coincide with formal organizational hierarchies. Similarly, developmental relationship can be expanded from individual relationship to organizational relationship. In todays networked business environment, one can readily concur that the strength of an organizations supply chain is one of the foundations that determines its overall competitiveness and sustainability. Strategic cooperative partnership between Multinational Corporations (MNCs) and Small and Medium Size Enterprises (SMEs) would be able to create synergy for both parties to achieve sustainable competitive advantage. Interorganizational mentorship is one of the many kinds of cooperative strategies an organization might formulate and implement to achieve core competency and sustainable competitive advantage. Even though studies suggest that many benefits could be achieved for the mentor, the protege and the organization through traditional mentorship at the individual level, these benefits could be achieved in interorganizational mentorship too at the organizational level. This paper discusses key factors that drive interorganizational mentorship efforts, factors influencing interorganizational mentorship, as well as opportunities and challenges to engage in interorganizational mentorship program between MNCs and SMEs.

Index Terms: Interorganizational Mentorship, Developmental Network, Multinational Corporations, Small and Medium Size Enterprises, Business Sustainability.

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An Exploratory Study on Understanding Learners Proactive Learning: A phenomenological approach focusing on a students lived experience in the Classroom

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The purpose of this study is to try to clarify the viewpoint of understanding learners proactive learning, focusing on lived experience (van Manen, 1997) of a Japanese high school student, which is embedded in context and cannot be grasped clearly even by the teacher. Three research questions (RQ) are guided; 1) What is to see a learner?, 2) What is required to see a learner?, and 3) What is necessary to understand a learners proactive learning? Two theoretical frameworks are adopted; Reflective Practice, and Phenomenology. The interview serves very specific purposes in hermeneutic phenomenological human science. In this study, the interview was adopted; its audio data was converted into transcripts and used as data. The data were analyzed phenomenologically to clarify potential themes that went through the entire description, focusing on the essence and structure of the students experience from an ontological point of view. The results show important suggestions. In RQ1, unless a teacher ontologically tries to understand how a student is trying to live in his or her world in the class, it would be impossible to see the truth for the student. The action of seeing the truth for a learner is defined as dismantling teachers belief, making it the state of phenomenological reduction, and ontologically seeing the learners experience. In RQ2, as an essential condition to make a teacher grow up and see the truth for a learner, having an intersubjective attitude to understand a learner is suggested. Finally, in RQ3, the author gave opinions on the discussion about the assessment of Proactive learning and humanity which Japans Ministry of Education, Culture, Sports and Technology presented in 2019. As for the emotional aspect of proactive learning, the author suggests that the understanding should be focused on rather than the assessment.

Index Terms: Phenomenology, Lived Experience, Reflective Practice, Understanding Learners, Japanese High School

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Students Recognition Change For Fundamental Competency Factors Through Project Activities In University

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Change of students recognition for fundamental competency factors through extra-curricular project activities is studied. Special ideas or tools should be required to success project activities, since most of students are beginners to try project activities. Therefore, achievement abilities are important to proceed with projects as well as a methodology of project management. To satisfy this requirement, an idea of Fundamental Competencies for Working Person, that was defined by the ministry of Economy, Trade and Industry in Japan in 2007, is applied into the project activities. This definition consists of twelve competency factors based on basic abilities required in working together with various people in the workplace and in the local communities. A change of students recognition from the viewpoint of the above definition through the project activities are evaluated. The results of questionnaire at the end of one year project term show that the students recognition for fundamental competency factors was improved by experiencing the project activities. The students especially experienced the importance of Ability to detect issues, Creativity, and Execution skill, because these competency factors are seemed to be main interests for the project students. They also want to acquire Planning skill and Execution skill in the near future to improve both the product and the process of the project activities. This means, in other words, that they recognized the lack of enough skills to complete their project activities. Such recognition would become the driving force to challenge next project activities for the students. The project term of one year seems to be not enough for the project students to accumulate significant experiences, information, and results about the project activities.

Index Terms: Project Management, Project Activity in University, Fundamental Competencies, Extra-curricular Program, Students Recognition

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Transnational educational mobility TEM: A faster school to work transition?

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In a context of globalization, several programs have been created to promote transnational educational mobility (TEM) among students, Erasmus being the most famous in Europe.
This research aims at discovering if TEM could facilitate the transition between graduation and labor market.
On the labor market, several variables can have an impact on employability : home universitys ranking, the grades obtained and education level; the social network, non-cognitive skills and having parents in the company. Thanks to the literature review our main statistical hypothesis is that a students participation in an international program should reduce the number of months a graduate i needs to get a job.
Model 1 reports the OLS estimates of a basic model of the empirical relationship between intlstudy and intlintern with mo2job. Without any student or cohort controls, the regression estimates report a statistically significant decrease of nearly 3.2 months for students who participated in international study exchange programs. This corresponds to approximately a 75% reduction of the average time required to find a job after graduation. We include subsequently the yearly cohort effects in Model 2 and the information about a graduates grades, resitexams, statescholarship and gender in Model 3. As expected, the inclusion of additional variables increases the explanatory power of both regressions. The estimated coefficients of the censored normal regression (Tobit) results are similar. Further, the estimated average marginal effect of the Tobit model is slightly larger at -2.47 months and is statistically significant at the 5% level. These results show that the participation in an international study exchange program is associated with a 57% reduction in the average number of months before a graduate gets a job..

Index Terms: Transnational Educational, Statistically, Graduation

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International Comparative study of Standards for New Teachers Professional Development

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According to the theory of teachers professional development, teachers' career development can be divided into five stages: induction, stability, new challenges and problems, professional plateau, and the last five stages. [1] from the perspective of teachers professional career development, new teachers generally refer to teachers who have been qualified for teaching for less than three years. [2] as the new teachers are in the initial stage of teacher professional development, their teaching philosophy and practice have an impact on their teaching attitude, identity and teaching methods in the ensuing career of teacher professional development. When new teachers enter the new environment, they need to interact with the new identity in the teaching context through multiple paths and enhance their understanding and identification of the new identity in professional development. The formulation and implementation of teacher professional standards provide policy support for teacher specialization and teachers as professional workers. Throughout the international field, based on the trend of globalization of teacher education standards, establishing professional standards for different stages of teacher professional development and promoting the reform and specialization of teachers education system have become the orientation of countries with developed education. Among them, American teachers professional standards started early, mainly controlled by InTASC from the national level. In 1992, the organization published the model standards for new teacher licensing, evaluation and development: an inter-state communication document, which put forward ten core standards that new teachers must have and started the development of professional standards for new teachers. [3] in addition, Australia, Britain and other countries have also made effective progress in the formulation of phased standards. Therefore, the analysis of the existing international standards has reference significance for the integration and improvement of the whole system of teachers professional standards. This article from the background, purpose, content, characteristics such as dimension analysis and contrast the United States, Australia, the UK (in Scotland, for example) the new teachers' professional development standards, to compare the similarities and differences between different countries the new teachers professional development standards, to perfect the future new teacher's professional standards, construct the complete system of teachers' professional standards provide the basis.

Index Terms: New teacher, Teachers Professional Development, New Teachers

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Conference Abstracts

Track B: Engineering Technology and Applied Sciences

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Intelligent Packaging in the Food Industry

Lukasz Duda [1], Karol Kamil Klosinski [2], Magdalena Redynk [3], Piotr Tomasz Arkuszewski [4], Kamil Paszowski [5], Piotr Kamola [6], Barbara Kosiska [7], Zbigniew Wlodzimierz Pasieka [8]
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Intelligent packaging can be defined as innovative packaging that is equipped with indicators that monitor the specified atmosphere parameters inside and outside the packaging to provide all necessary information about the product. This type of packaging is positively evaluated in many countries around the world, e.g. Australia, South Korea, USA and Japan.Intelligent packaging is able to, in addition to monitoring the quality and safety of food and inform the consumer or producer about its condition. The emergence of intelligent packaging has changed the perception of packaging because it changes the typical communication function into the function of intelligent communication. We can divide them into two systems. One is based on measuring the outside of the packaging, while the other way is to measure the quality of the products inside the packaging, and thus, the indicator comes into contact with the product, and then additional quality control and food safety is necessary. There is a higher development tendency for those packaging in which the indicator has direct contact with food. Carriers of this type of data are, for example, sodium or potassium nitrates, metabolites of microorganisms, carbon dioxide.

Index Terms: Intelligent Packaging , Communication, Food Industry

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Innovative Radiation Cross-Linked Carboxymethyl Chitosan Hydrogel Dressings

Karol K. Klosinski [1], Radoslaw A. Wach [2], Malgorzata K. Girek, [3] Lukasz Duda, [4], Piotr T. Arkuszewski [5], Malgorzata Redynk [6], Agnieszka Adamus-Wodarczyk[7],Bozena Rokita[8],Piotr J. Kamola[9], Zbigniew W. Pasieka[10]
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Hydrogels are materials of properties of solids and liquids, have numerous uses in medicine, such as wound dressings or drug controlled drug release systems. The purpose of the study is to produce flexible, carboxymethyl chitosan (CMCS) hydrogels of uniform structure, and mechanical strength similar to hydrogel dressings that are commercially available. A macromonomer PEGDA used here as a crosslinker (2-5xx-xx%) was added to the CMCS (3-20YY-YY%) solution in order to increase the degree of crosslinking initiated by ionizing radiation. Mechanical testing revealed that the PEGDA component improved the mechanical performance of the gels, that would facilitate handling when applied as hydrogel wound care material.To assess the effect of the generated hydrogels on the survival of fibroblasts, the hydrogels produced were subjected to the viability XTT test of mouse fibroblast (L929 cell line) and the Live-Dead test for human fibroblast. The lack of cytotoxicity of the cells was shown, but the cell viability decreased with the increase of the cross-linking agent used in the synthesis of hydrogels. In addition, based on the XTT assay performed with dilutions of individual hydrogel extracts, it has been shown that CMCS can promote fibroblast growth at low dilutions, i.e. at a relatively high concentration of CMCS in hydrogels. Mechanical tests of the produced hydrogels were carried out. It is concluded that the PEGDA component improved the mechanical performance of the gels, that would facilitate handling when applied as hydrogel wound care material. In order to further evaluate the biocompatibility, an in-vivo test was carried out on a laboratory rat model based on the standard ISO 10993-6. : 2016 - Biological evaluation of medical devices. Hydrogels containing a smaller amount of cross-linking agent did not show adverse effects on animal organisms. Studies on the healing efficiency of difficult wounds compared to a commercial hydrogel were also carried out. The tested hydrogels have been shown to havedemonstrated comparable or better properties. The results of the conducted research suggest that the tested hydrogels can be considered as potential wound dressings.

Index Terms: Innovative Radiation, Research, Hydrogels

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Cross-Cultural Sentiment Analysis of Yelp Consumer Reviews

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The information reflected in online reviews about various services has been consistently gaining influence over the past years. For instance, about one- third of people rely on online reviews when choosing a restaurant and over half of young adults factor reviews into their dining decisions. While the majority of such reviews is relatively short, their emotional component and expressiveness are the key factors that drive consumers decision- making. In other words, people rely on consumer reviews and are more willing to share their own opinions about the service. Nowadays an increasing number of companies consider consumers reviews in evaluation of their products and services. The downside to user-generated content is that there can be fabricated, or malignantly manipulated reviews to sway the audiences thoughts. Thus, sentiment analysis, which means classifying an opinionated document as expressing a positive or negative opinion, and classifying a sentence or a clause of the sentence as subjective or objective, and for a subjective sentence or clause classifying it as expressing a positive, negative or neutral opinion, is at many times, recommended to check if reviews are authentic. Researchers suggest that within Western cultures it is more common to see more direct sentiment expressions compared to a more reserved approach observed in Asian cultures. This study evaluates the differences in perceptions of Asian and non-Asian restaurants via exploratory data analysis; a model is then built and applied to one asian and non-asian restaurant. Given online reviews provide means of communication about the experience and quality of a restaurant, we should expect to see the variation in sentiment expressions in reviews (or maybe by reviewers) from different cultures.

Index Terms: Data Analysis, Datasets, Cultural Differences, Sentiment Analysis, Yelp Reviews

Upcoming Events

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