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Research Article

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## Towards Shrewd Object Visualization Mechanism

Published On: November 30, 2020 | Pages: 097 - 102

Author(s): Shahzad Ashraf\*

In order to measure the accurate outcome of different visualization mechanism it is imperative to adopt a shrewd strategy. Indeed, the outcome of experiment is focusing to assess the value of complex visualization approaches when comparing with alternative methods for data analysis. The interaction between participant prior knowledge and experience, a diverse range of ...

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## A Hazard Analysis Method for Embedded Control Software with STPA

Published On: November 23, 2020 | Pages: 082 - 096

Author(s): Masakazu Takahashi\*, Yunarso Anang and Yoshimich Watanabe

This paper proposes an analysis method for hazards that are occurred by interactions between hardware and software when using an apparatus installed an Embedded Control Software (EBSW). Hazard means a state that negatively affects the apparatus when some bad conditions are satisfied. Especially, the purpose of the method is clarifying the EBSW portions that cause the ...

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## Educational social networking services: The case of edmodo in the teaching practice

Published On: October 30, 2020 | Pages: 058 - 064

Author(s): Nafsika Tegousi and Vasileios Drakopoulos\*

In recent years, there has been a strong education interest in second generation World Wide Web (Web 2.0) applications such as blogs, social networking, information sharing tools, social bookmarking and more. This article presents a case of using an online social learning network offering communication, collaboration and coaching tools to K-12 schools and teachers as ...

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## **The Impact of Artificial intelligence and Robotics on the Future Employment Opportunities**

Published On: September 15, 2020 | Pages: 050 - 054

Author(s): Kamran Shaukat\*, Farhat Iqbal, Talha Mahboob Alam, Gagandeep Kaur Aujla, Liton Devnath, Abdul Ghaffar Khan, Rimsha Iqbal, Irum Shahzadi and Afifah Rubab

The widespread human-robot interaction is increasing progressively as robots have made the life of everyone easy-going and comfortable. In this work, we have analysed the behaviour and characteristics of various types of robots. We have also studied the outgrowing relation between robotics and humans. In our analysis, we also have a selection of aspects of this field, ...

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## The increasing frequency of president donald trump's social communications: Is there a limit?

Published On: July 28, 2020 | Pages: 034 - 036

Author(s): Cynthia Whissell\*

Since he became president of the US in 2017, Donald Trump has been tweeting more and more frequently on a daily basis, to the point where both political analysts and the general public have begun to comment. In several cases, more than 100 tweets have been posted in a single day. The president has other means of communicating via social media but currently tweets post ...

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## Energy trading systems on blockchain networks

Published On: July 07, 2020 | Pages: 018 - 022

Author(s): Jae Geun Song and Ju Wook Jang\*

Traditional energy trading system has some weakness in terms of network attack. So blockchain is considered for P2P energy trading systems to evade network attacks. We consider three energy trading systems on blockchain which are centralized energy trading system with one producer, P2P energy trading system with DSO and P2P energy trading system with smart contract. A ...

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## Dual-nature biometric recognition epitome

Published On: June 23, 2020 | Pages: 008 - 014

Author(s): Shahzad Ashraf\* and Tauqeer Ahmed

All humans are born with unique physically identified body characteristics to other persons which remains unchanged throughout life. These characteristics are taken into account by the emerging technology to get recognized from person to person. The technology used by the traditional human identification system sometimes becomes inefficient when data or images receive ...

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## Comparative analysis of speech coders

Published On: March 26, 2020 | Pages: 001 - 004

Author(s): Ivo R Draganov\*, Snejana G Pleshkova

In this paper a comparative analysis of some of the most popular speech coders is presented. Qualitatively and quantitatively are tested Linear Prediction Coding in its implementation LPC-10e and with the use of auto-correlation and covariance, companding coding including A-law and  $\mu$ -Law, ADPCM IMA, G.726 A- and  $\mu$ -Law, and a fully featured MELP coder. All of them prov ...

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### Review Article

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## Processing of Semantic Ambiguity Based on Words Ontology

Published On: November 05, 2020 | Pages: 070 - 076

Author(s): A Abou Shousha, Samir Hamada\*, Salwa Hamada and Mohammad Alshibli

This research provides an automatic treatment for the phenomenon of semantic Polysemy based on the ontology (meaning, accompaniment, and translation) of words and its effect on the applications of automatic processing of the Arabic language. Polysemy may have negative effect on these applications. This research works on finding the solutions that helps improving the ...

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### Short Communication

## On a new algorithm for computing GCD of integer numbers

Published On: July 06, 2020 | Pages: 015 - 017

Author(s): ST Ishmukhametov\*, BG Mubarakov, RG Rubtsova and Al Khalidi Arkan Mohammed

In the paper we give an introduction to a new algorithm counting the greatest common divisor (GCD) of natural integers called the approximating GCD algorithm introduced by S.Ishmukhametov in 2016. We compare it with the classical Euclidean GCD algorithm and the kary GCD algorithm in spirit of J. Sorenson and K. Weber and outline their advantages and disadvantages. ...

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## Creation of an artificial intelligence system for analysis of theoretical Current-Voltage Curves

Published On: June 19, 2020 | Pages: 005 - 007

Author(s): AV Kovalenko\* and MKh Urtenov

We have developed the "Deep learning for CVC 0.1" software package, which contains databases and knowledge bases of theoretical Current-Voltage Curve (CVC) using the method of deep machine learning (Deep learning). The developed software package allows you to simulate mass transfer in Electromembrane Systems (EMS), which has a single interface with a built-in help sys ...

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### Mini Review

## MANETs: How are they evolving to support multimedia communication?

Published On: November 21, 2020 | Pages: 077 - 081

Author(s): Dimitris Kanellopoulos\*

This short paper discusses critical issues of multimedia over Mobile ad hoc Networks (MANETs) focusing on the Quality of Service (QoS) support for wireless multimedia transmission. The paper explains how MANETs are evolving to support

multimedia communication. In particular, it briefly presents some novel approaches that can improve the performance of MANETs when mult ...

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## How do artificial neural networks lead to developing an optimization method?

Published On: October 20, 2020 | Pages: 067 - 069

Author(s): Ali Sadollah\*

This concise paper explains the inspiration of AI particularly artificial neural networks (ANNs) for developing new metaheuristics. Using the unique concept of ANNs and its wide applications in different fields of study, how the ANNs can be utilized for solving real life and complex optimization problems? This paper briefly links the inspiration to a practical model i ...

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## Talent Recruiting Innovations and High Start-Ups

Published On: October 06, 2020 | Pages: 065 - 066

Author(s): Sehar Shahzad Farooq\*, Irfan Mehmood and Soon Ki Jung

The talent management market is increasing rapidly, and the software and platform part of the market consists of recruitment tools, job interviewing tools, social media advertising, assessments, and Artificial Intelligence (AI) based systems [1]. The growth in talent recruiting is driven by the recent innovations in AI such as deep learning and convolutional neural ne ...

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## Machine learning methods for optical communications

Published On: September 17, 2020 | Pages: 055 - 057

Author(s): Machine learning methods for optical communications

Radio over Fiber (RoF) technology has been realized in different forms ranging from analog to more complex forms [1-6].

The enhancement of capacity and wireless coverage has posed significant challenges to the existing optical and wireless access networks. Machine Learning (ML) methods have given a new direction to meet the ever-increasing challenges in fiber-optic co ...

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## Opinion

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### **Optimal integration of electric vehicles in smart grids with renewables and battery storage systems under uncertainty**

Published On: September 01, 2020 | Pages: 048 - 049

Author(s): Erfan Mohagheghi\*, Joan Gubianes Gasso and Pu Li

There has been a huge trend to integrate Renewable Energies (REs) and Electric Vehicles (EVs) into energy networks (Figure 1). This is mostly due to the shrinking price of their application and the increasingly strict emission policy. However, the integration of REs and EVs brings new challenges to the network operation [1]. For instance, a considerable amount of REs ...

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### **Real-Time Dynamic Optimal Power Flow in Electric Vehicles Considering the Lifetime of the Components in the E-Powertrain**

Published On: September 01, 2020 | Pages: 046 - 047

Author(s): Erfan Mohagheghi\*, Joan Gubianes Gasso and Pu Li

Different types of energy sources (e.g., batteries, supercapacitors, fuel cells) can be utilized in electric vehicles to store and provide energy in the e-powertrain through power electronic devices [1-6]. The lifetime of the components in the e-powertrain depends on their load profile [7,8]. For instance, the lifetime of a battery highly depends on the depth of disch ...

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## Chance Constrained Optimization for Energy Management in Electric Vehicles

Published On: August 29, 2020 | Pages: 044 - 045

Author(s): Erfan Mohagheghi\*, Joan Gubianes Gasso, Abebe Geletu and Pu Li

E-powertrain of future electric vehicles could consist of energy generation units (e.g., fuel cells and photovoltaic modules), energy storage systems (e.g., batteries and supercapacitors), energy conversion units (e.g., bidirectional DC/DC converters and DC/AC inverters) and an electric machine, which can work in both generating and motoring modes [1-6].

An energy man ...

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## Optimal E-Powertrain Solutions for Future Electric Vehicles

Published On: August 29, 2020 | Pages: 042 - 043

Author(s): Erfan Mohagheghi\*, Joan Gubianes Gasso and Pu Li

Owing to increasing emission specification, decreasing price of energy storage systems and power electronic devices, in addition to fast-developing technology, Electric Vehicles (EVs) will become a significant share of automotive market in the near future [1]. Therefore, there is a huge competition among car manufacturers to produce EVs. The final price and driving r ...

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### Perspective Study

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## A useful taxonomy for adversarial robustness of Neural Networks

Published On: August 05, 2020 | Pages: 037 - 041

Author(s): Leslie N Smith\*



Adversarial attacks and defenses are currently active areas of research for the deep learning community. A recent review paper divided the defense approaches into three categories; gradient masking, robust optimization, and adversarial example detection. We divide gradient masking and robust optimization differently: (1) increasing intra-class compactness and inter-cl ...

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