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Souvenir

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IRDCP
REMOVING BARRIERS IN THE RESEARCH

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About Conference

International Conference on Physics, Chemistry and Biology (PCB-2020)

During the worldwide lockdown due to COVID 19 pandemic, a lot of important activities have come to a halt. However, when we look at the brighter side, all of us have more time for adding to our knowledge and insights.

With this aim, to keep contributing to learning and motivation International research and development Center for publication is going to organize a two-day International Conference with the title “**International Conference on Physics, Chemistry and Biology (PCB-2020)**” on Dec 11-12, 2020 through online mode. We hope, this online mode of the conference in COVID-19 pandemic will be an appreciable step in promoting the research activities and new information between researchers, developers, students, academicians and practitioners working in and around the world by keeping the social distance in view to stop the spread of COVID-19 disease. This conference aims is to present the current researches being carried out in the field of social science and education development around the globe.

Prospective authors from academia as well as industry are invited to submit their abstracts that illustrate original/unpublished works and industrial applications describing advances and significant innovations in the field.

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Message

I am extremely pleased to share that International Research and Development Center for Publication (IRDCP) is organizing a two days **International Conference on Physics, Chemistry and Biology (PCB-2020)** on Dec 11-12, 2020.

I am sure the state of art lectures from the invited experts and the research findings of researchers, academicians, utility engineers will enrich the knowledge of all the participants. It will provide an excellent opportunity for students to learn new ideas.

I offer my best wishes to the whole team of the organizing committee, the participants, and volunteers for the grand success of the conference.

Dr. Kiran
Convenor PCB-2020

Message

I am happy to know that International Research and Development Center for Publication (IRDCP) is organizing a two days **International Conference on Physics, Chemistry and Biology (PCB-2020)** on Dec 11-12, 2020. I am sure that, this conference would provide an ideal platform for the academicians, scholars and experts to present and exchange their research findings and Ideas.

I wish the conference a great success.

Prof. (Dr.) Hamid Saremi
President (Chancellor)
Assrar Higher Institute of Education (Deemed to be University)
Mashad - Iran
(Ex- Vice- Chancellor Islamic Azad University ,Quchan Branch - Iran)

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Abstract of PCB-2020

Modeling an experiment to measure the speed of gravity in short distances using rotating masses: frequency optimization

Carlos Alberto Fabricio Junior^{1,2}, Eduardo Sanchez¹, Carlos Frajuca¹, Fabio Silva Bortoli¹, Nadja Simão Magalhaes³, Gustavo Neves Margarido¹, Davilson Mariano da Silva⁴

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Abstract— An experiment to measure the speed of gravitational signals using rotating masses in short distances has been developed with the intention to study its behaviour when a medium different from air is allocated between the emitter and the detection and check if the speed of the interaction changes. The experiment is composed of two masses rotating at incredible rotation (the goal is rotate the masses at rotation speed higher than 600,000 RPM, that excites a sapphire bar called the detector. The amplitude of the central device (detector) is monitored by an ultralow phase noise microwave signal using resonance in the whispering gallery modes and cooled down at 4.2 K. Between the rotating masses and the detector, a different medium will be placed, and then the speed is measured and compared with the case where the medium is pure air. The modelling of the experiment is made assuming the detector as a spring-mass system. The results show that the detection is achievable

Keywords— Frequency optimization, Rotating masses, Speed of gravity

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Modeling an experiment to measure the speed of gravity in short distances using vibrating masses: frequency optimization

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Abstract— In order to investigate the behavior of gravitational signals while travelling through a medium an experiment was designed, aimed at measuring the speed of these signals over short distances. The experiment contains 2 sapphire vibrating devices that emit a signal and one sapphire device that behave as a detector, which are suspended in vacuum and cooled down to 4.2 K. The amplitude of the detecting device is measured by an ultralow, phase-noise microwave signal that uses resonance in the whispering gallery modes. Since sapphire has a quite high mechanical Q, the detection band is expected to be small, thus reducing the detection sensitivity. A new shape for the detecting device is presented in this work, yielding a detection band of several hundred Hertz. With the aid of a Finite Element Program the normal mode frequencies of the detector are determined assuming the detector as a spring-mass system. The results show that the detection is achievable then the best operational frequency is determined.

Keywords— Frequency optimization, Vibrating masses, Speed of gravity.

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Outlier Detection using clustering

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Abstract— An outlier is an abnormal behavior of anything in any field. It deviates from other members of that data set. The deviation can be measured in terms of its size, range, activity, etc. Finding these outliers will lead to eliminate the negativity in that particular field. For example, in medical field, the good health of any person is determined by that person's activeness. If that person's activeness becomes restricted, then that person is said to be in poor health. Number of approaches are used in the process of detecting the outliers. The approaches are classified into two broad categories namely Cluster-based and Centroid based approaches(i.e. using Hierarchical Clustering algorithm and K-Means) for outlier detection in data sets which help them to create a group of similar elements or cluster of data points. Clustering techniques are highly useful for grouping similar data items from data sets and after that by applying distance based calculations, detection of outlier is done, so they are called cluster-based outlier detection. Agglomerative Hierarchical Clustering and K-Means are the most common and popular algorithms for clustering and outlier detection process due to its simplicity and efficiency. In this paper, we deal with these two approaches.

Keywords— Cluster, Data, K-Means, Outlier

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Synthesis and Biological Applications of Structurally Interested Triazoles and Natural Product Berkeleyamide A

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Abstract— The present work is based upon synthesis of Triazole derivatives synthesized from α , β -unsaturated ketone containing moiety from different substrates different substrate with substituted azides via [3+2] cycloaddition reaction via Cu catalyzed reaction under reflux condition. Compounds were further screened for anti fungal activity among three strain *Candida albicans*, *Aspergillus nigar*, & *Fusarium moniliformae*. The second attempts given to the synthesis via new and cost effective route for the synthesis of Berkeleyamide -A, this natural product secondary metabolite is clinically used as an inflammatory agents while it is also under clinical trials as an anti- cancerous agents. The Synthesized compounds were analyzed by NMR, FTIR & XRD spectroscopy.

Keywords— Triazole derivatives, cycloaddition reaction, Secondary metabolite, Berkeleyamide -A.

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