JOURNAL OF SCIENTIFIC ENQUIRY



Volume 2 Issue 2

December, 2022



Sidho-Kanho-Birsha University, Purulia

JOURNAL OF SCIENTIFIC ENQUIRY

Volume 2 Issue 2 2022



T 1	c	α	•		17		•
Journal	Ω t	SC	าคท	titic	Hin	α 111	$\mathbf{r}\mathbf{v}$
oournar	O.		1011	CILIC		Yu	- 7

Volume 2 • Issue 2 Publication Year: 2022

ISBN: 2583-2352

Editor-in-Chief: Prof. Subrata Kumar Dey

Copyright © 2021, Sidho-Kanho-Birsha University, Purulia-723104, West Bengal, India

J S E Editorial

Preface to the Journal of Scientific Enquiry, Second Volume, Second Issue 2022

It is my pleasure to introduce this third issue of the Journal of Scientific Enquiry, containing a few selected articles. I welcome you to the Vol. 2 Issue 2 of Journal of Scientific Enquiry (JSE). You will recall in Vol. 1 Issue 1 and Vol. 2, Issue1, I made our commitment to publish high-quality, impactful articles.

This time JSE publishes eighteen peer-reviewed scientific articles of significance in all areas of Science research work.

Sumanta et al proposed a convolution deep model to recognize Ol-Chiki handwritten characters. They have nicely described the recognition of handwritten basic characters of Ol-Chiki script, used by more than 10 million tribal people in India mostly from Assam, Bengal, Bihar, Odisha and Jharkhand.

Bera et al highlighted the changing pattern of LULC of Nandakumar Community Development block of Purba Medinipur district, West Bengal with the help of remote sensing and geographical information system, which unveils that the agricultural land comes down to 12.36% of the total area of Nandakumar CD block in 2022 from 2000, whereas, water body is recorded to be doubled followed by built-up area increased by 139.10%.

Rajesh et al tried to increase the reliability of a redundancy allocation problem with time-dependent component reliabilities while taking single valued triangular neutrosophic numbers into account for the control parameters. **Jhantu** et al investigated μ -almost Ricci solitons on hyperbolic Kenmotsu manifolds. They have obtained some good results for μ -almost Ricci solitons on hyperbolic Kenmotsu manifolds admitting Codazzi type of Ricci tensor and cyclic parallel Ricci tensor. **Prasenjit** et al measured the dynamics of a density dependent stage structure prey-predator model under fuzzy and stochastic impreciseness, where they have constructed the crisp model with considering some assumptions and notations and transformed to the fuzzy model.

Jayanta K. Majhi studied theoretically the optical absorption (OA) spectra of Au and Ag NPs considering the shape anisotropy and interaction between the particles separately using a simple model developed by Garcia et al. **Sahazada Aziz** reported the basics of local gauge invariance, quantum electrodynamics, the problem of local gauge invariance of massive gauge boson, Goldstone mechanism, and Higgs mechanism in Standard Model (SM) of electroweak theory and tried to find out why some particles have mass and some don't.

Shabana Anjum focused and designed to determine the self-esteem and social support of orthopedically challenged students. **Mitra et al** described and analyzed the level of marital satisfaction among working couples of Durgapur, West Bengal and the results revealed significant differences on two important dimensions of the scale like valid and reliable marital quality and positive descriptions of the marriage. **Mousumi Mayra** explored the correlations contributing to resilience among frontline health professionals and strategies that foster resilience among health professionals during COVID-19 through a literature survey.

Manab Kumar Saha showed the diversity and richness of the small indigenous freshwater fish species that are found in the Purulia district of West Bengal, India. He has highlighted that among all the specimens collected, the family Cyprinidae shows the species diversity at its peak, followed by Badidae, Schilbeidae, Ambassidae, Channidae, Anabantidae, etc.

Biplab Kahar highlighted the initiation of aphid population in the crop field on or before 3rd week of December with the peak in 3rd week of February. Effect of arsenic on growth and cellular biochemistry of Rhizoclonium fontinale Kützing was explored by Panchali Bhattacharya. The effect of arsenic on the green alga Rhizoclonium fontinale was experimented with to determine whether it can be an agent for phycoremediation. Mandal et al enlisted the major angiosperm flora of the Biharinath hill. The conservation status of the angiosperm taxa is also mentioned providing IUCN Red List categories. Anirneeta et al described the drought caused due to changes in the weather pattern is common. They have also highlighted those different types of plant response in water deficit conditions should be taken into consideration and should closely be investigated through various experiments.

Anirban Panda discussed the construction of two giant molecular fractals composed of fullerene molecules at the vertices of a truncated square graph. Avishek et al highlighted the biological activities like antimicrobial, antifungal, antitumor, antiviral and anti-diabetic properties of Schiff base metal complexes. Aramita et al delineated the biological activity of natural and synthetic 2H-azirine derivatives and their synthetic methods to improve their biological activity.

With new opportunities and challenges, we will continue to strive to make JSE more useful to the science research community. The number of submitted manuscripts from different sections is encouraging, demonstrating that our journal is becoming a reliable venue for researchers to disseminate their findings. I would like to acknowledge the support of readers, authors and referees contributing to the success and make the publication of this journal possible.

Subrata K. Dev

Editor-in-Chief, Journal of Scientific Enquiry SKBU, Purulia, WB, India

E-mail: jse@skbu.ac.in

Journal of Scientific Enquiry VOLUME 2 • ISSUE 2 • YEAR 2022

Handwritten Ol-Chiki Character Recognition using Convolution Neural Network	Sumanta Daw Dr. Abhoy Chand Mondal, Rabi Sankar Pandey Dr. Sumanta Ray Baidyanath Sou Dr. Sanat Kumar Mahato	1-5
Chronological variation of land use and land cover of coastal West Bengal	Pradyut Bera Biplob Kumar Modak, Susanta Mandi ParthaModak Mrinal Mandal	6-10
Reliability Optimization of Redundancy Allocation Problem of a Series-parallel System using NAQPSO Algorithm in Triangular Neutrosophic Environment	Rajesh Paramanik Sanat Kumar Mahato Partha Karmakar Pintu Pal	11-19
μ-almost Ricci solitons on hyperbolic Kenmotsu manifolds	Jhantu Das Kalyan Halder	20-25
Dynamics of a density dependent stage structure prey- predator model under fuzzy and stochastic impreciseness	Prasenjit Mahato Subhashis Das Sanat Kumar Mahato Partha Karmakar Pintu Pal	26-40
Shift of Optical Absorption Spectra of Anisotropic and Interacting Au and Ag Nanoparticles: Correlation between Shape Anisotropy and Interaction	Jayanta K. Majhi	41-46
Why the photons don't have mass but the electrons do: An introduction to Higgs Mechanism	Sahazada Aziz	47-53
A study of Self -Esteem and Social Support among Orthopedically Challenged Students	Shabana Anjum	54-59
Perceived Marital Satisfaction among Working Couples: A Study of Durgapur, West Bengal	Sairandhri Mitra Amjad Ali	60-67
Correlates of Resilience among Frontline health care professionals exposed to Covid-19: A Systematic Review	Mousumi Mayra	68-73
Studies on Biodiversity and Resource Potential of Small Indigenous Freshwater Fish Species of Purulia District, West Bengal, India.	Manab Kumar Saha,	74-84
Survey and enumeration of aphid infestation on potatoes with the help of a yellow sticky trap and yellow water pan trap	Biplab Kahar	85-88
Effect of arsenic on growth and cellular biochemistry of Rhizoclonium fontinale Kützing	Dr. Panchali Bhattacharya	89-93
Diversity of angiosperms and their conservation status in BiharinathHill,Bankura,West Bengal,India	S.K. Mandal A. Sahis S. Maity	94-103
Drought response in rice - A brief review	S. Mukherjee Anirneeta De Avishek Dey Subrata Raha	104-111
A Note on Construction of Giant Molecules: A Study of	Dipak Kumar Kar Anirban Panda	112-119
Fractals in Chemistry Biological Importance of Schiff base Based Metal Complexes: A Brief Review	Avishek Deya Soumen Mistri	120-131
Synthesis of Biologically active 2H-azirines-A review	Aramita De AdinathMajee	132-145