



Editorial

It is indeed a great pleasure and privilege for me to introduce the current issue of Mapana-Journal of Sciences. Mapana has been committed to publishing original and novel research and review articles in the discipline of Science for more than two decades. Mapana offers authors a platform to publish noteworthy research articles in the field of Physical Sciences, Chemical Sciences, Mathematical and Life Sciences.

With every passing day, the requirement to secure virtual data becomes much more difficult. Professionals are exploring advanced techniques to secure access to system infrastructure as there is always a threat to key information. Numerous cases have been reported on a daily basis in which unauthorized users and fraudsters gain illegal access to the system and misuse confidential data such as customer information and compromise them. In the case study titled “Voice Biometric System-authentication over the voice command from remote place-A case study of Voice Biometric System,” Khan and Aithal made have elaborated upon the implementation of voice biometric system by Uniphore Company. The article has described how this Speech Recognition Technology can be used for information security concerns and boost customer trust towards the organization.

In the second article Kenath and co-investigators present a comparative study on Planet Nine-Primordial black hole or a Dark Matter object. Recently it has been proposed that Planet Nine could be a Primordial Black Hole (PBH) lurking in our solar system. Earlier it was suggested by the aforementioned authors that Planet Nine could be a degenerate object constituted mostly of dark matter (DM) particles, having their own distinct characteristic properties, which were elaborated upon. Studies have shown that if Planet Nine is a PBH, it will be extremely difficult to detect it due to its small size, angular size, luminosity, etc. On the other hand, the signature of the corresponding DM object would be more easily evident.

Trace element variations in Wheat grains by Handheld X-ray Fluorescence are reported by Daisy Joseph in this short note. The

author reported the presence of K and Ca in significant quantities along with traces of Fe and Zn. Since wheat is an Indian staple food, the objective was to find the Fe and Zn content in each of these genotypes to have high-yielding nutritionally superior genotypes.

In the fourth article Seshavatharam and Lakshminarayana highlighted the hidden energy source and described the mechanism of the controversial and spectacular ‘cold nuclear fusion’ at nuclear energy scales. They elaborated on the issues connected with cold nuclear fusion theory and experiments. The authors explained the current positive status of cold nuclear fusion experiments with new and upcoming mega funding sources. The authors successfully explained the basic mechanism of hydrated cold nuclear fusion and its thermal energy liberation secret. If it is found to be valid and worth consideration, in the near future, cold nuclear fusion experiments can be carried out with great confidence. The article proposed a unified nuclear binding energy scheme by using which nuclear Coulombic repulsive forces that are assumed to have a key role in understating nuclear fusion schemes can be given a second preference. By comparing the current progress of String theory with current cold nuclear fusion experiments, authors have tried to highlight the significance, importance and need of cold nuclear fusion implementation.

The exact eigenvalues and eigenfunctions of a spinless relativistic charged particle are explained by Basavaraj Kagali and Shivalingaswamy in their short note “Quantum States of a Relativistic Charged Particle in Crossed Electric and Magnetic Fields”. The authors have discussed the motion of the charged particle quantum mechanically-arriving at semi-quantised states, and results are compared with those from classical mechanics.

We are delighted to assert that the articles are of social relevance and have implemented novel thoughts. Let this journey in pursuit of knowledge be an enriching experience for all the readers.

Manoj Balachandran
Editor