



INTERNATIONAL  
CONFERENCE  
2023 JANUARY 23 24 25 Second Edition

**Z** TOWARDS  
**Zero**  
FOR A SUSTAINABLE TOMORROW

## DEPARTMENT OF MATHEMATICS AND PHYSICS

### Towards Sustainability: Frontier Research in Mathematics, Physics, Material Science and Engineering

Advisory Board Member: Dr. Vinayan Bhagavathi Parambath

(Battery Cell Technology Engineer, Lilium GmbH, Germany)

#### Program Schedule

23-01-2023 (Monday)		
<b>Paper Presentations 2.00 pm</b>		
1.	2.00 pm – 2.10 pm	<b>Stimulation of Quantum Information Channel Based on Superdense Coding</b> <i>C.K Hana Shareef</i>
2.	2.10 pm – 2.20 pm	<b>A Review on Benford's law and its applications</b> <i>P. Rinu Shalik</i>
3.	2.20 pm – 2.30 pm	<b>The Operation Union on Strong Fuzzy Graph</b> <i>Merin P Sam</i>
4.	2.30 pm – 2.40 pm	<b>Some Properties of the Operation Intersection on Strong Fuzzy Graph</b> <i>P.K. Hiba</i>
5.	2.40 pm – 2.50 pm	<b>Enhanced Dark Reaction of Graphene Bismuth Vanadate Titanium Oxide on Methylene Blue</b> <i>A.R.Nanakal</i>
6.	2.50 pm – 3.00 pm	<b>Fe<sub>2</sub>O<sub>3</sub>-C Composite for Lithium Ion Cells</b> <i>V. Saikrishna</i>

<b>25-01-2023 (Wednesday)</b>		
<b>Plenary Section 9.30 am</b>		
1.	<b>Resource Person</b>	<b>Dr. Sabeena M</b> (Assistant professor, Department of Physics, CUSAT, Cochin) <i>Topic: Luminescent Studies of Eu<sup>3+</sup> Doped Calcium Magnesium Silicate Phosphor</i>
2.	<b>Resource Person</b>	<b>Dr. Mohamed Ameen P</b> (Assistant professor, International School of Photonics, CUSAT, Cochin) <i>Topic: Electromagnetic Calculations of The Optical Response of Nanoantennas</i>
<b>Tea Break 11.30 am -11.40 am</b>		
<b>Paper Presentations 11.40 am</b>		
1	<b>11.40 am -11.50 am</b>	<b>Dependence of Evaporation Residue Cross Sections on Various Channel Parameters</b> <i>K. Hajara, M .M. Musthafa</i>
2	<b>11.50 am-12.00 pm</b>	<b>Alpha Decay of Superheavy Elements using Hatsukawa Formula with New Fitting Parameters</b> <i>K. Prathapan, P. Deneshan ,R. K. Biju</i>
3	<b>12.00 pm – 12.10 pm</b>	<b>Radio/Optical/X-Ray Emission from Kilo-Parsec Scale AGN Jets: Synchrotron Emission from Advected and Accelerated Electron Distribution</b> <i>Amal A. Rahman, C Harshad, Rasmina Farsana</i>
4	<b>12.10 pm – 12.20 pm</b>	<b>Dynamics of Dark Matter-Wave Soliton in Bose-Einstein Condensate</b> <i>Neha Kishor</i>
5	<b>12.20 pm – 12.30 pm</b>	<b>Area Biased Power Gamma Distribution with Properties and Applications</b> <i>C.Roshni, Dr. D.Venkatesan, Dr. C.B. Prashanth</i>

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