

**Proceedings of the 11th Interdisciplinary
International Symposium on**

**Energy, Environment, Health and Visual
Communication
(INFOFEST 2021)**

**Proceedings of the 11th Interdisciplinary
International Symposium on
Energy, Environment, Health and Visual
Communication
(INFOFEST 2021)**

Organised by

**Sree Ayyappa College (TDB)
Eramallikkara**



in association with

**Institution of Electronics and Telecommunication Engineers
(IETE)**



and

Internal Quality Assurance Cell (IQAC)

Editorial Board

Editor-in-Chief

Prof. (Dr). K C Prakash, Principal

Editors

Dr. (Er). Deepu G P (Convenor), Associate Professor

Dr. Ananth Kumar R T (Joint Convenor), Assistant Professor

Dr. Sreeraj M (Joint Convenor), Assistant Professor

Prof. (Dr). Suresh S (IQAC Co-ordinator)

Table of Contents

1. Virtual Student Recruitment System <i>Akhil S S, Akshay B and Devika N</i>	1
2. Face Mask Detection Using Convolutional Neural Network <i>Anandhu OR and Anooj P Raj</i>	2
3. Gesture Based Volume Control System <i>Anusha M</i>	3
4. Face Recognition Systems – A Comprehensive Review <i>Anusree P M and Nobert Thomas Pallath</i>	4
5. A Critical Analysis of Systematic Review in Fault Tolerance <i>Divya Surendran and K Sasikala</i>	5
6. Power Surge <i>Rithu Santhosh, Akhila S, Jeena Jacob and Sreelekshmi A N</i>	6
7. A Novel Approach on Medical Image Fusion <i>Sreelekshmi A N and N Sujatha</i>	7
8. Impact of Epidemics and Pandemics in Bengali Literature <i>Amit Ray</i>	8
9. After Effects of COVID19 in the Higher Educational Sector: Students Perception towards Old Normal to New Normal <i>Ajai Krishnan Gopalakrishnan and Sreelekshmi C Warriar</i>	9
10. Resisting the Exploitation of Nature and Restoring the Ecological Harmony in HelonHabla's Oil on Water: A Deep Ecological Perspective <i>Swatilekha Mahato</i>	11
11. Phytochemical and Antimicrobial Screening of Methanol Extract of <i>Murrayakoenigii</i> (Linn.) Spreng. <i>Akshara Raju and Nitha B</i>	12
12. Removal of used Engine Oil by a Biosurfactant Producing Bacterial Consortium <i>Dhanya V</i>	13

13. Biopod Technology -to Manage Seafood and Meat Waste and Conversion to Beneficial Nutrient Products <i>Ganga G, Sunaina Nair S S, Sreelekshmi S, Parvathy and Aravind S</i>	14
14. Studies on the Inflammatory Response of Tumor Necrotic Factor on Neuroblastoma Cells <i>Manju L, Rejiya C Sand Archana Oscar</i>	16
15. Antiapoptotic Effect of Menthol in Experimental Diabetic Encephalopathy <i>Soumya S and Mini S</i>	18
16. Curcuma Longa Mediated Synthesis of Iron Nanoparticles and Study on the Anti-Inflammatory Activity in LPS Stimulated RAW 264.7 Cells <i>Abhirami Madhu, Manju L and Rejiya C S</i>	19
17. Attenuation of NF-Kb Mediated Cellular Injury and Inflammation in Rat Lens by Oxalis Corniculata <i>Remya A S and Annie Abraham</i>	20
18. Retrodirective Cross Eye Jamming -A Review <i>Abida N P and Siby Thomas</i>	21
19. 5G Mobile Antenna Design- Review And Analysis <i>Arun M V and Shameena V A</i>	22
20. A Review On Radars In Defense And Aerospace Applications <i>Athila Jasmin and Siddik Raja</i>	23
21. A Review Of Wearable Antennas For Biomedical Application <i>Jameela K and Shameena V A</i>	24
22. Seasonal & Annual Variation Of Cirrus Fraction And Cirrus Reflectance Over The Indian Sub-Continent <i>Priya J S, Sunil Kumar R and Krishnakumar V</i>	25
23. A Novel Guided Reconstruction Of Ariel Images With Non-Linear Sharpening <i>Sabarinath G, Deepu G P and Shanooga Chandran</i>	26
24. Intelligent Traffic Light Control System - A Review <i>Shabna U and Siddik Raja</i>	27
25. A Review On Hazard Of Mobile Radiation In Human Body <i>Shadiya K and Abdul Rasheed</i>	28
26. A Review On Crack Prediction Using Acoustic Emission <i>Sreedevi T P, Abdul Rasheed and Siby Thomas</i>	29

27. A Review On Breast Cancer Detection Using Artificial Intelligence <i>Swarna Babu and Nobert Thomas Pallath</i>	30
28. Green Energy Generated Solar Cell <i>Manumohan M S, Suresh S, C O Sreekala and K G Gopchandran</i>	31
29. Antiobesity Effects of Chitosan and Chitosan Nanoparticles <i>Devika B and Nitha B</i>	32
30. Sunlight Driven Plasmonic Photocatalytic Activity of Tio ₂ : Au Nanostructures <i>R Raji and K G Gopchandran</i>	33

A Review On Crack Prediction Using Acoustic Emission

Sreedevi T.P¹, Abdul Rasheed² and Siby Thomas³

Department of Electronics, W.M.O.College, Muttill, Wayanad, Pin-673122

Email: sreedevichandran@gmail.com, Rasheed.mailady@gmail.com, wmocsiby@gmail.com

Abstract—Fretting fatigues can shorten component life dramatically. The fatigue damage evaluation of reinforced concrete structures using the acoustic emission approach has been thoroughly reviewed. Background, concepts, application, monitoring reinforced concrete construction, parameters and analysis utilizing acoustic emission technology were all examined. The layout of the fatigue test and the influence of fatigue amplitude on reinforced concrete structures, as well as the relationship between acoustic emission technique and fatigue damage on reinforced concrete structures, have all been reviewed. This review considers the correlations between crack propagation rates, acoustic emission count rates and stress intensity factor range procedure upon predicting remaining fatigue life.