

IGNITE 2022



A DAILY NEWSLETTER

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FACULTY PARTICIPATION



Mrs. R Beaula Jasmine, Assistant Professor, Department of Civil Engineering has attended a 5 day webinar from 6th to 10th June 2022 on the title **Design & Construction of Steel Structure** organized by Vivekananda Institute of Technology, Bengaluru.

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DEPARTMENT MEETING - S & H



Dr. Arul Kulandaivel, Head, Department of Science and Humanities convened the class committee meeting for all the classes of the I year. The feedback from students were received and the action plan for the forecoming examination was also discussed.

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FAREWELL- DEPARTMENT OF IT



Farewell Party was organised for the final year students of the Department of Information Technology in the Seminar Hall on 22nd June 2022. It was a heart warming moment for the faculty members and the students. As a mark of blessing the faculty members have bestowed their wishes to the students. Dr. Srinivasan Alavandar, Principal motivated the students to be committed and to maintain the code of conduct in their work. He blessed them to reach greater heights in future their future endeavours.

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FAREWELL- DEPARTMENT OF BME



Final year students of the Department of BME had a Farewell Party celebration in the department on 23th June 2022. Juniors offered farewell speeches as a sign of gratitude and appreciation for the leadership they received from seniors. By their inspirational remarks, all the faculty members wished the final-year students to fare well in their future endeavours.

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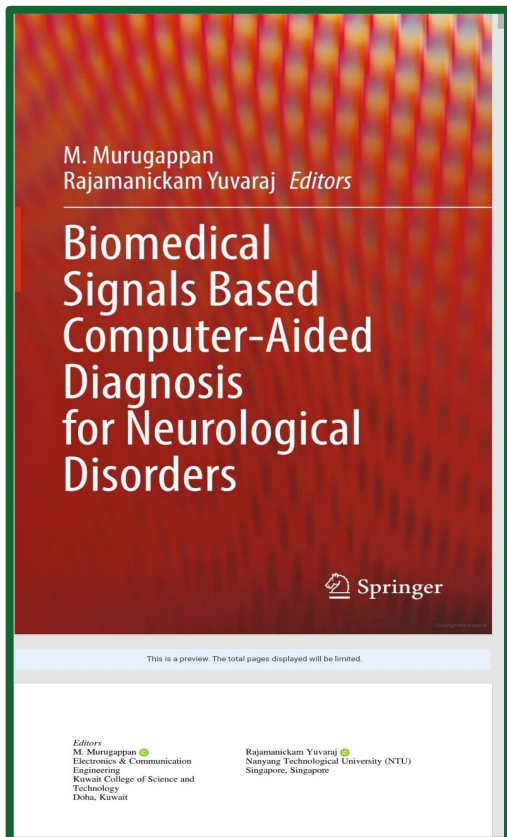


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FACULTY ACHIEVEMENT



Hilbert Huang Transform (HHT) Analysis of Heart Rate Variability (HRV) in Recognition of Emotion in Children with Autism Spectrum Disorder (ASD)



B. Anandhi and S. Jerritta

Abstract Emotion recognition has become a boon to society since it aids in the early management of uncontrollable sudden emotional outbursts in children with ASD prior to their onset. As a result, developing an alarm system assists caregivers, doctors and therapists in preventing such aggressive behaviours before they occur. Only a few studies have studied the physiological markers in ASD children and adults. The Pan-Tompkins equation was used to determine HRV from the RR index. The Hilbert-Huang transform (HHT) of heart rate variability (HRV) data was used to extract emotional characteristics corresponding to two emotions (positive and negative valence). The k-nearest neighbour (KNN) and ensemble classifiers were used to identify only the statistically important features. The HHT analysis of the HRV data achieved good classification rate with a mean accuracy of 74.5% and 73.5% in children with ASD and in TD children using the ensemble classifier. Further feature reduction was done using the principal component analysis (PCA), and it was seen that the accuracy improved to 77% and 78.3% in children with ASD and TD children, respectively using the ensemble classifier. Though the children with ASD are deficit in emotion recognition, we found no significant impairment in identifying the basic emotions. However, they were deficit in correctly predicting the positive valence state than the TD children

Keywords Autism spectrum disorder (ASD) · Heart rate variability (HRV) · Hilbert transform · Principal component analysis (PCA)

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Dr. B. Anandhi, Head, Department of Biomedical Engineering has published a Book Chapter in SCOPUS INDEXED entitled **Hilbert Huang Transform (HHT) Analysis of Heart Rate Variability (HRV) in Recognition of Emotion in Children with Autism Spectrum Disorder (ASD)**.

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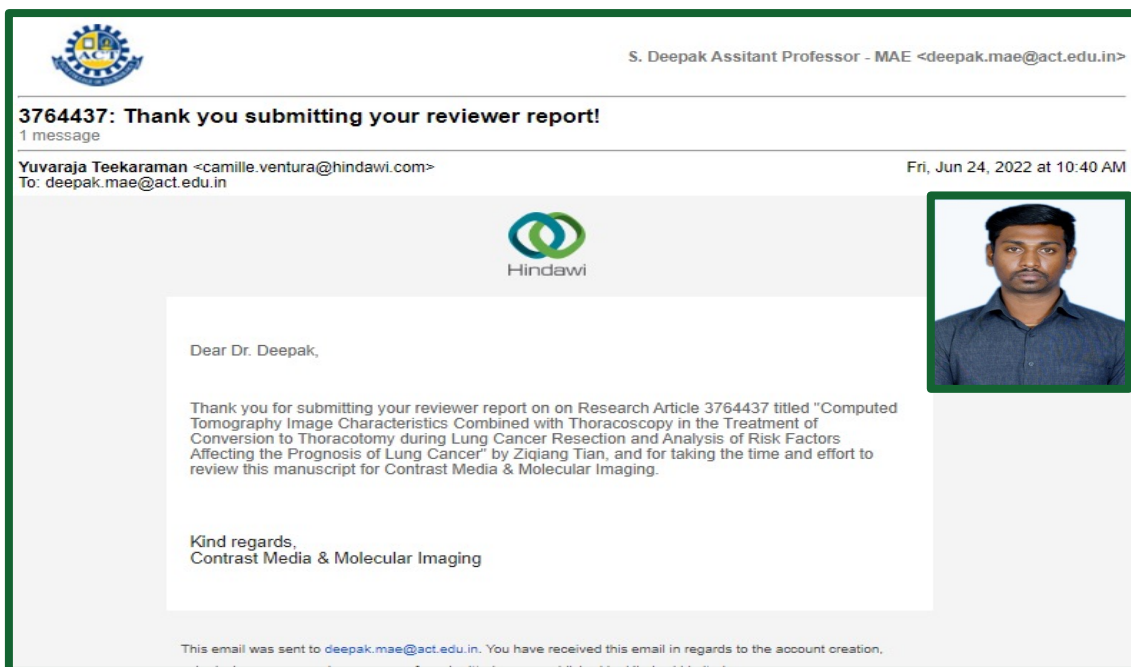


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FACULTY ACHIEVEMENT – PUBLICATION PAPER REVIEWED



Mr. Deepak Samathkumar, Assistant Professor, Department of MAE has been reviewed and reported to Contrast Media & Molecular Imaging, Research Article 3764437 titled **Computed Tomography Image Characteristics Combined with Thoracoscopy in the Treatment of Conversion to Thoracotomy during Lung Cancer Resection and Analysis of Risk Factors Affecting the Prognosis of Lung Cancer** on 24th June 2022.

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STUDENT REPOSITORY



Harini, III year student, Department of ECE has sketched a beautiful art of the Buddha.

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