Department of Electronics and Communication Engineering
Guest Lecture
On
"Role of DSP in Biometric Applications"

Biometrics is the science of measuring and statistically analyzing biological data. In information technology, biometrics refers to the use of a person's biological characteristics for personal identification and authentication. Fingerprint, iris-scan, retinal-scan, voiceprint, signature, handprint and facial features are some of the most common types of human biometrics.

Digital signal processors (DSPs), which are specially designed single-chip digital microcomputers that process electrical signals generated by electronic sensors (e.g., cameras, fingerprint sensors, microphones, etc.), will help to revolutionize this world of biometrics. The core of the biometric authentication process is made up of image processing and pattern matching or minutiae comparison algorithms. And the programmable DSP, with architecture well-suited for implementing complex mathematical algorithms, can efficiently address all the processing needs of such a system.
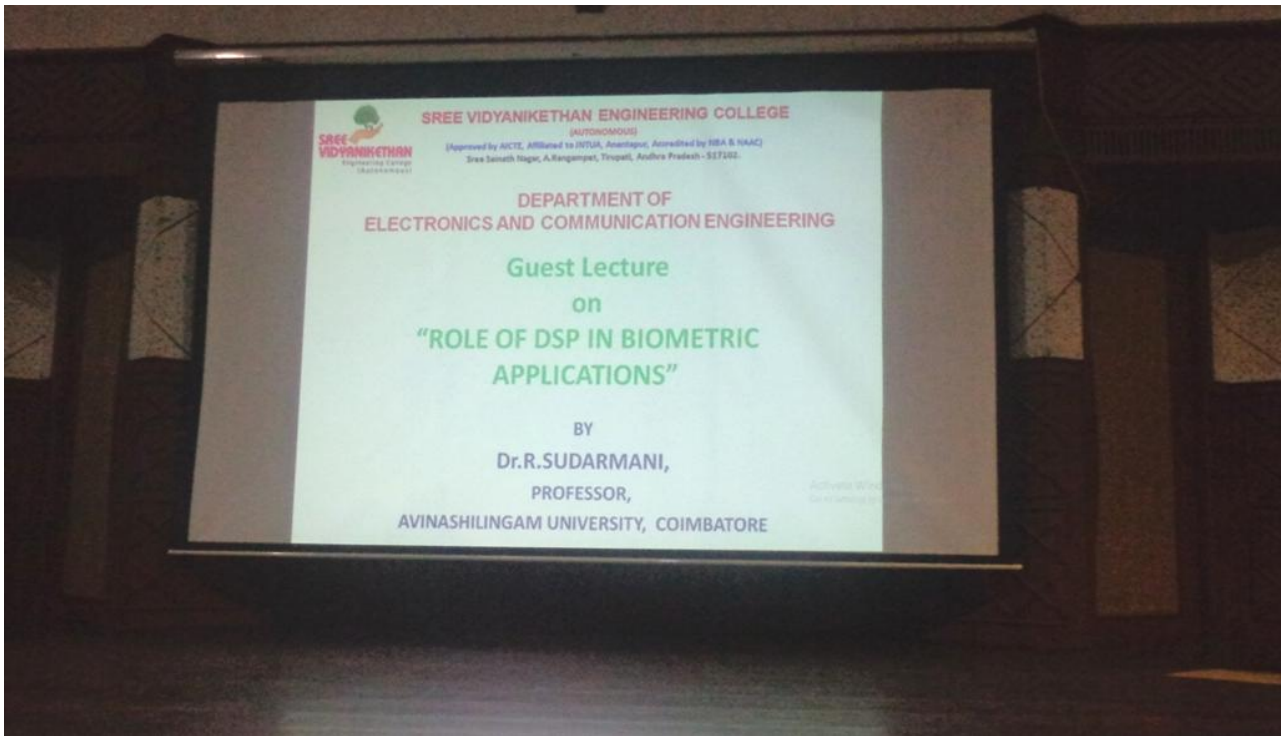
The guest lecture is planned to provide the knowledge towards the application oriented DSP in the field of Bio-metrics. This is the content beyond the syllabus which will support for self-learning and motivate for life-long learning for the student participants.

The presentation started with Elements of Signal Processing and Systems, Applications, Advantages. The roles of biometrics in fingerprint, Signature, Face recognition are explained. It was followed by the challenges in designing the biometric system. The event ended with awareness towards the E-waste management system and motivated for start-ups with E-waste recycling

OUTCOMES ACHIEVED

The student has:

- Realized the subject in different perspective.

- Understood the need of DSP in Biometrics.

- Got inputs about current trends and needs of the health care industry.

- Got knowledge for solving the industrial needs

Dr. R. Sudarmani Delivering the Lecture on the role of DSP in Bio informatics and Applications

Resource person Dr. R. Sudarmani interacting with the Participants