



Department of Electronics and Instrumentation Engineering

SRM Institute of Science and Technology, Kattankulathur

CENTER FOR HUMAN MOVEMENT RESEARCH AND ANALYSIS



About the Center

- This center was established in 2019 with the aim of developing techniques to investigate the changes in the human movement and control while performing various activities and for identifying the various disorders.
- This center aims to perform various interdisciplinary research activities on understanding the human physiological characteristics for early diagnosis and rehabilitation.

Research Areas

- Physiological Signal & Image Processing
- Human movement Analysis
- Multi-spectral imaging.
- Multi-array sensors
- Gait Analysis
- Signal and Image Processing

Center-in-Charge

Dr Sridhar P.A.

Research Assistant Professor

Department of Electronics and Instrumentation Engineering

Faculty Involved

Mrs. S.Sharanya, Assistant Professor/EIE

Mrs S. Indirani, Teaching Assistant/EIE

Dr K.A.Sunitha, Associate Professor, SRM University, Andhra Pradesh

Dr Shanthanu Patil, Associate Director, Associate Director, SRM Innovation, Incubation & Entrepreneurship Centre

Dr. Bhasi Sukumaran, Department of Clinical Psychology, SRM Medical College Hospital and Research Centre

Dr Suresh, Department of Physiotherapy, SRM Medical College Hospital and Research Centre

Research Highlights

Research Scholars	<ol style="list-style-type: none">1. Mary Christeena Thomas – Full time2. S.Sharanya – Part-time3. S. Indirani – Part-time4. A.Jegan – Part-time (Industry)5. M.Saranya – Full time
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External Funded Projects	<ol style="list-style-type: none"> 1. “Design and development of a multi-array sensor for assessment of muscle fatigue and activity status for rehabilitation” Science Engineering Research Board, India (TARE) in collaboration with IIT Madras – Rs 18,30,000 2. “Design and development of electronic devices to measure gaze, handwriting, smell and gait for management of Parkinson's Disease” -SPARC, Ministry of Human Resources Development, India in collaboration with RMIT University, Melbourne, Australia – Rs 69,30,000
Internal Funded Projects	<ol style="list-style-type: none"> 1. Multimodal Imaging Techniques for Breast Conservation Surgery to Delineate Cancer Margin” - Rs. 2,50,000 - Selective Excellence Research Initiative – 2021 Investigators: Dr K.A.Sunitha, Dr Sridhar PA 2. IOT Based Non-Invasive Blood Parameter Tracking System – Rs 1,15,000 NewGen IEDC, SRM Incubation and Innovation Center Faculty Mentor: Dr Sridhar P.A 3. CCD based sensor to detect the change in biologically altered fluorescence properties - Rs 1,25,000 NewGen IEDC, SRM Incubation and Innovation Center Faculty Mentor: Dr Sridhar P.A
Patents	<ol style="list-style-type: none"> 1. No: 201741024299 - A WALKING AID FOR HEMIPLEGIC PATIENTS – PUBLISHED - FER 2. No: 201841030385 - A MONITORING SYSTEM FOR MONITORING THE STATE OF DRIVERS AND METHOD THEREOF - PUBLISHED - FER 3. No:201841039260 - AN ELECTROMECHANICAL WALKING AID FOR A HEMIPLEGIC PATIENT -PUBLISHED 4. No:202041052527 - A WEARABLE DEVICE - PUBLISHED 5. No:202041054363 - A SELF-SANITIZING RESPIRATORY APPARATUS – PUBLISHED 6. No. 202141029052 - A SYSTEM FOR DETECTION OF CARDIAC AUTONOMIC NEUROPATHY AND A METHOD THEREOF - – PUBLISHED
Publications	International journals : 18 Book : 1 Book Chapters :4

List of equipment:

Name of the Equipment	Cost (Rs)
Trigno Research+ (Delsys USA) - Advancing research possibilities with wearable solutions for human movement assessments	Rs 4,00,000
STS VIS spectrometer (Ocean Insight, USA)	Rs 2,50,000

- used for various multispectral analysis of materials, food and objects.	
Dell OptiPlex 3070 MT Desktop - 2 Nos	Rs. 1,47,000

Collaborators

National:

- IIT Madras
- Department of Neurology, SRM Hospital
- Department of Physiotherapy, SRM Hospital
- NIT Tiruchirappalli

International:

- RMIT University, Melbourne, Australia