



# **K S R COLLEGE OF ENGINEERING**

**An Autonomous Institution**

**(Approved by AICTE, New Delhi, Affiliated to Anna University)**

**K.S.R. Kalvi Nagar, Tiruchengode - 637 215,  
Namakkal District, Tamil Nadu**

**DEPARTMENT OF BIOMEDICAL ENGINEERING**

**NEWSLETTER 2024-25**

**July - December 2024**

**2024-2025/Volume 1/Issue 1**

**NEWS LETTER**

# **K. S. R. College of Engineering – Tiruchengode**

(Autonomous Institution)

## **NEWS LETTER**



### **Vision, Mission of Institution**

#### **Vision:**

- The department aims to develop professionals having good knowledge, skills and attitude in the field of computer applications for the betterment of industry and society.

#### **Mission:**

- To provide high quality education in the field of computer applications and there by create compute professionals with proper leadership skills, commitment and moral values.
- To educate students to be successful, ethical, and effective problem-solvers and life-long learners who will contribute positively to the economic well-being of our nation.

## **Department of Biomedical Engineering**

### **Vision, Mission of Department**

#### **Vision:**

- To produce erudite Biomedical Engineers, Researchers and Entrepreneurs with ethical values to develop a sustainable environment.

#### **Mission:**

- Impart quality education to enhance problem solving skills, leadership qualities and team spirit through teaching and learning process with ethical responsibilities.
- Enrich interdisciplinary skills providing state of the art laboratories and facilities.
- Enhance research and entrepreneurship skills with social responsibilities to meet social needs.

# FACULTY SPOTLIGHT

## NPTEL ACHIEVERS



**Dr R Prabu**

Elite + Silver (Topper 5%)  
**Ethics in Engineering Practice**



**Dr A Murugesan**

Elite + Silver (Topper 5%)  
**Python for Data Science**  
Elite  
**Introduction to Machine Learning**



**Mr B B Sangameswaran**

Elite + Silver  
**Tissue Engineering & Ethics in Engineering Practice**



**Dr S Arivoli**

Elite + Silver  
**Ethics in Engineering Practice**



**Mr S Parameswaran**

Elite  
**Ethics in Engineering Practice**



**Mr P J Ragu**

Elite  
**Ethics in Engineering Practice**



**Mrs M Brindha**

Elite  
**Ethics in Engineering Practice**



**Ms V D Nandhini**

Elite  
**Ethics in Engineering Practice**



**Mrs T Yamunarani**

Elite  
**Ethics in Engineering Practice**



**Mrs K Indhumathi**  
Elite + Silver  
**Ethics in Engineering  
Practice**



**Mr.S.Madhan**  
Elite + Gold  
**Technical English for  
Engineers**



**Dr.K.Lalithambigai**  
Elite  
**Ethics in Engineering  
Practice**  
Elite (Topper 5%)  
**Material Characterization**

## RESEARCH WORK

### Journal /Conference Publications

1. **M Brindha**, S Maheswari, S Vidhyabharathi, M V Yaspe Francis."Utilizing Random Forest to Diagnose Pneumonia in Children"2024 International Conference on Artificial Intelligence for Internet of Things, AIIoT 2024 - Proceedings (IEEE), DOI:10.1109/AIIoT58432.2024.10574685
2. **M Brindha**, S Ruba Sree, V Praveen, A Vasanth."Prediction of breast cancer analysis using CNN" 2024 International Conference on Artificial Intelligence for Internet of Things, AIIoT 2024 - Proceedings (IEEE), DOI:10.1109/AIIoT58432.2024.10574680
3. D. Kavitha; B. Sharmila; M.Siva Ramkumar; M. Sivaramkrishnan; **M. Brindha**." A Retrospective of Solar-Powered Charging Stations and E-Vehicles", 2024 8th International Conference on Electronics, Communication and Aerospace Technology (ICECA) - Proceedings (IEEE), DOI: 10.1109/ICECA63461.2024.10801145
4. Dr. Asmarashid Bin Ponniran, Dr. Ashok Vajravelu, Dr.Wan Suhaimizan Bin Wan Zaki, **T.Yamunarani**, Dr. Syed Riyaz Ahammed, S.Sivaranjani, "IoT/WSN-based security/ privacy methods for forest monitoring", 2024 International Conference on Future Technologies for Smart Society
5. Rathimaan, R., **Yamunarani, T.**, Sanjay, L., Keerthana, D., Princy, M. V., & Iswarya, V. (2024, December). Advanced EEG Signal Preprocessing for Precise Non-Invasive Blood Glucose Estimation. In *2024 4th International Conference on Ubiquitous Computing and Intelligent Information Systems (ICUIS)* (pp. 1948-1954). IEEE.
6. **Yamunarani, T.**, Zaki, W. S. B. W., Elango, S., Chandrasekaran, G., Yamuna, S., Kumar, K. K., & Maheswaran, S. (2024, June). Analysis of Post-Traumatic Stress Disorder (PTSD) Using Electroencephalography. In *2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT)* (pp. 1-6). IEEE



Scopus



Scopus



Scopus



International  
Conference @  
Kuala  
Lumpur,  
Malaysia



Scopus



Scopus



7. **S. Parameswaran**, S. R. Gowsheeba, E. Praveen and S. R. Vishnuram, "Prediction of Attention Deficit Hyperactivity Disorder Using Machine Learning Models," 2024 3rd International Conference on Artificial Intelligence For Internet of Things (AIIoT), Vellore, India, 2024, pp. 1-6, doi: 10.1109/AIIoT58432.2024.10574571.  Scopus
8. **P. Sarvalingam** et al., "Extraction of Electroencephalography (EEG) Features to categorize the Mental Disorder," 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), Kamand, India, 2024, pp. 1-6, doi: 10.1109/ICCCNT61001.2024.10724402  Scopus
9. S. M, **S. Parameswaran**, S. S, I. K, S. M. S and S. T, "Improving ADHD Diagnosis with Real-Time EEG Artifact Correction and Emotional Insights," 2024 4th International Conference on Ubiquitous Computing and Intelligent Information Systems (ICUIS), Gobichettipalayam, India, 2024, pp. 1963-1971, doi: 10.1109/ICUIS64676.2024.10866175.  Scopus
10. **Dr R Prabu**, V Darvin, C Monish, V Parthiban "Disorder Detection on EEG Signals and Brain Images using a Hybrid Approach of Combining the convolutional Neural Network and Artificial Neural Network (CANN)" 2024 International Conference on Artificial Intelligence for Internet of Things, AIIoT 2024 – Proceedings (IEEE) DOI:10.1109/AIIoT58432.2024.10574624.  Scopus
11. **Arivoli Sundaramurthy**, Karthikeyan Ramasamy, Durgadevi Velusamy and Chitra Vaithiyalingam(2024), "Enhancing Smart Grid Stability: Data Driven Predictive Modeling in Distribution Systems. IJEER 12(2), 623-631. DOI:10.37391/IJEER.120239  Scopus
12. **Ragu P J**; Nandhini V D; Pavithra L; Heera R; Soumya S; Zaki, Wan Suhaimizan Bin Wan, "Electroencephalogram Features to Identify the Mental Disorders", <https://doi.org/10.1109/ICOSEC61587.2024.10722111>  Scopus
13. **P J, Ragu**, Automated Cardiac Murmur Detection via Wearable Devices: A Review (November 15, 2024). Proceedings of the 3rd International Conference on Optimization Techniques in the Field of Engineering (ICOFE-2024), Available at SSRN: <https://ssrn.com/abstract=5085983> or <http://dx.doi.org/10.2139/ssrn.5085983>  Scopus

- 14 **V D, Nandhini** and P J, Ragu and k, Dhanapal and S, Nitheeskumar and M, Senthamil Maran and D, Sowmiya, A Review Automated IV Drip Monitoring and Patient Safety (November 15, 2024). Proceedings of the 3rd International Conference on Optimization Techniques in the Field of Engineering (ICOFE-2024), Available at SSRN: <https://ssrn.com/abstract=5091488> or <http://dx.doi.org/10.2139/ssrn.5091488>
- 15 **A Murugesan**, K Meenatchi, PJ Ragu, P Femina Banu, S Dhivya, R Vanmathi, "Analysis of Methodologies for Fetal Movement Measurement and Monitoring Technology" <https://doi.org/10.1109/ICSCNA63714.2024.10864237>
- 16 Melvyn Rodger BL, A Karthikeyan, M Manjula, **A Murugesan**, Murugesan Manivel, Gokul Chandrasekaran, Power Factor Improvement using Modified STATCOM in Power System Distribution", <https://doi.org/10.1109/ICCCNT61001.2024.10724510>



Scopus



Scopus



Scopus

#### **Books/book chapter ( with ISBN only )**

- 1 Ashok Vajravelu, **Yamunarani Thanikachalam**, Mohd Helmy Bin Abd Wahab, Muhammad Mahadi Bin Abdul Jamil, S. Sivaranjani, "Human-Machine Collaboration and Emotional Intelligence in Industry 5.0" (pages 220-232), DOI: 10.4018/979-8-3693-6806-0.ch012.
- 2 K.Kannakumar, **A.Murugesan**, S.Balasubramani, Ramasamy Girimurugan, Achintya Sharma, "Enhancing Desalination and Liquid Desiccant Regeneration Efficiency Through a Hybrid Solar Still: A Comparative Study with steel scrap Thermal Storage" (Pages 20) , DOI: 10.4018/979-8-3693-2798-2.ch006.
- 3 **A. Sundaramurthy** and C. Vaithiyalingam, "Advancements in calibration techniques for ensuring accuracy and reliability of medical devices: A comprehensive report," in *Hybrid and Advanced Technologies*, London: CRC Press, 2025, pp. 413–422. doi: 10.1201/9781003559139-60.
- 4 **Arivoli, S.**, Yamunarani, T., Arulmozhi, P., Brindha, M., Hepzebah, S. C., & Chitra, V. (2025). Revolutionizing cancer care: The role of AI & machine learning. In K. M. Prabusankarlal, G. Suresh Kumar, & R. P. Suresh Jeyakumar (Eds.), Recent innovation in science and technology for sustainability (pp. 85–104). EroGanic Publications. ISBN: 978-81-19824-57-1.



IGI Global



IGI Global



Taylor and Francis

CRC Press



EroGanic Publications



- 5 Yamunarani, T., **Arivoli.S.**, Yamunadevi, S., Sangameswaran, B. B., Brindha, M., & Parameswaran, S. (2025). Physics in medical imaging: Innovations and applications in healthcare. In K. M. Prabusankarlal, G. Suresh Kumar, & R. P. Suresh Jeyakumar (Eds.), Recent Innovation in Science and Technology for Sustainability (pp. 179–197). EroGanic Publications. ISBN: 978-81-19824-57-1.



**EroGanic  
Publications**

**Patents Published /Granted**

- 1 Vigneshwaran, P., Usharani, Y., Ashwini, S., **Arivoli, S.**, & Arokia James, I. (2024). Design No. 421158-001: Smart image processing device for detection of skin cancer [Design patent]. Controller General of Patents, Designs & Trade Marks, India.



**Indian  
Design  
Patent**

## STUDENT ACHIEVEMENTS



## INTERNATIONAL MEDALIST

T Sanjay and Archith of Biomedical Engineering have won silver medal in international innovation and invention competition held at UTHM Malasiya on 05.08.2024.



Harish From I BME has won various prize in Silambam Competition

- Silver medal in Tamilnadu Chief Minister's Trophy District Level Competitions 2024 held on September at Salem.
- Secured 1<sup>st</sup> Place in National Level Open Silambam Championship on 08.12.2024.
- Won 1<sup>st</sup> Place in Salem District Silambam Association District Championship on 01.09.2024.
- Secured 1<sup>st</sup> Place in State Level Open Championship 2024 on 13.10.2024.





### TN Smart Card Holders

N Sanjay, P Sharmilan and R Bharath Kumar of Biomedical Engineering have got TN Smart Card form Tamilnadu Startup Team, Government of Tamilnadu to ignite their Startup. The event was held at our KSRCE campus on 20.11.2024.

## EVENTS ORGANIZED



Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell organized a seminar on “Innovative Approaches to Tap the Carrier Opportunities in Biomedical Sector”, on July 27, 2024 at KSRCE A Block. Mr.C.Monish, Founder, Nexgen Nextopia, Erode.



Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell organized a seminar on “Design Thinking for Innovation”, on July 27, 2024 at KSRCE A Block. Mr.S.Santhosh Kumar, Co-Founder, Nexgen Nextopia, Erode.



Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell organized a seminar on “Life Skill (Yoga, Physical Fitness and Health)”, on August 10, 2024 at KSRCE A Block. Mr.Shanmugam, Yoga Trainer, Sun Yoga, Erode.



Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell organized a seminar on “Environmental Issues- Water Shortage and Loss Biodiversity to Waste Management”, on August 24, 2024 at KSRCE A Block. Mr.S.Parameswaran, Assistant Professor, Department of BME, KSRCE.



Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell and centre for sustainable development goals organized a seminar on “Smart Healthcare Innovations in digital Health Technology”, on August 24, 2024 at KSRCE A Block. Mr.T.Sanjay, Alumini, Department of BME.



Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell and centre for sustainable development goals, UTHM, Malaysia organizes Two days International workshop on “Concatenation of Preprocessed EEG Data For Brainwave Analysis”





Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell and centre for sustainable development goals organizes Paper Presentation on “Recent Trends in Health care Technology”



Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell and centre for sustainable development goals, Aries Biomed Technology, Coimbatore organizes workshop on “Quality Control in Device Calibration”



Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell and centre for sustainable development goals organized a Hackathon on “Soldering Challenge for Prototype Development”, on October 18, 2024 at KSRCE A Block.



Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell and centre for sustainable development goals organized a Technical Event - Quiz on "Innovation in Medical Device Design", on October 18, 2024 at KSRCE A Block. Dr.S.Arivoli, Assistant Professor, Department of Biomedical Engineering, KSRCE.



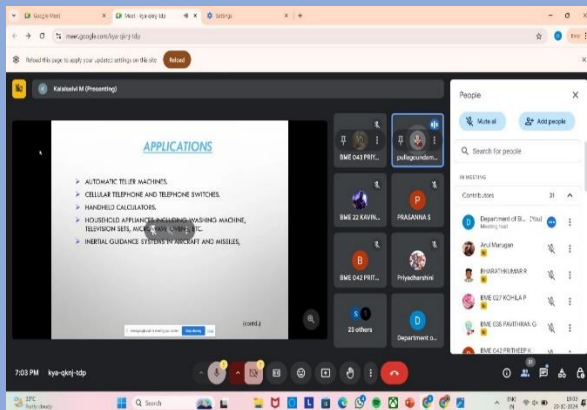
Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell and centre for sustainable development goals organized a Ideathon on "Innovative Ideas", on October 19, 2024 at KSRCE A Block.



Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell and centre for sustainable development goals organizes Intra Paper Presentation on "Recent Trends in Health care Sector", 18.10.24.



Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell and centre for sustainable development goals organized a Webinar on “Classroom to Carrier guidance”, on October 19, 2024. Ms.A.M.Mernaj, Human resources Generalist, Atozerv India Pvt Ltd, Coimbatore

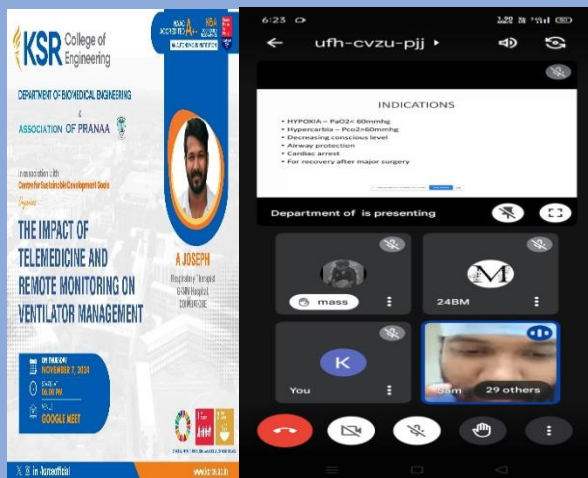


Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell and centre for sustainable development goals organized a Webinar on “Session on Proteus Software”, on October 20, 2024. Ms.M.Gowri, Software Trainee, CADD Centre, Tiruchengode



Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell and centre for sustainable development goals organized a seminar on “The Role of Trees in Sustaining Life”, on October 26, 2024 at KSRCE A Block. Mr.K.Raja, Namakkal District Coordinator, Isha Tree based Agriculture.





Department of Biomedical Engineering, in collaboration with the association of PRNAA, industry institute interaction cell and centre for sustainable development goals organized a Webinar on “The Impact of Telemedicine and Remote Monitoring on Ventilator Management”, on November 07, 2024. Mr.A.Joseph, Respiratory Therapist, GKNM Hospital, Coimbatore



Department of Biomedical Engineering, in collaboration with the association of PRNAA, industry institute interaction cell and centre for sustainable development goals organized a Webinar on “Medical Device Innovation: From Concept to Commercialization”, on November 09, 2024. Ms.P.D.Reshma, Assistant Manager, Cyrix Healthcare Pvt Ltd, Cochin.



Department of Biomedical Engineering, in collaboration with the association of PRNAA, industry institute interaction cell and centre for sustainable development goals organized a Technical Event on “Yoga for Youth Empowerment”, on November 23, 2024 at KSRCE A Block. Mrs. Kavitha, Yoga Trainer, Manavalakalai Mandram, Tiruchengode.



Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell and centre for sustainable development goals organized a Non-Technical Event on “Heartbeat Harmony (Music Competition)”, on November 28, 2024 at KSRCE A Block.



Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell and centre for sustainable development goals organized a Technical Event - Quiz on “Biosignal Decode”, on November 28, 2024 at KSRCE A Block.



Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell, BMESI, institution innovation council and centre for sustainable development goals, Monika Diabetics Center, Erode organized a Camp on “Neuropathic Camp”, 20.12.24 to 22.12.24.



Department of Biomedical Engineering, in collaboration with the association of PRANAA, industry institute interaction cell, BMESI, institution innovation council and centre for sustainable development goals, Medsby Healthcare Engineering Solutions, Coimbatore organized a Value Added Course on “Biomechanics”, 23.12.24 to 28.12.24.



## EXTENSION ACTIVITIES



Department of Biomedical Engineering, K S R College of Engineering made a generous donation to an orphanage home located at Thindal, Erode. The donation includes Clothings, Stationary items and cash, bringing joy to the children at the home.



Department of Biomedical Engineering, Association of PRANAA in association with center for sustainable development goals organized a field trip to "lake clean-ups" on 26.10.25 at Kollampalayam lake.



Department of Biomedical Engineering, Association of PRANAA in association with center for sustainable development goals organized a field trip to "Tree Plantation" on 26.10.25 at Varapalayam Village.



*DEPARTMENT OF BIOMEDICAL ENGINEERING*

2024-2025/Volume 1/Issue 1

***EDITORIAL BOARD***

***NEWSLETTER***

**CHIEF PATRON**

Shri.R.Srinivasan,  
Chairman, K S R Educational Institutions

**PATRON**

Dr M Venkatesan,  
Principal, K S R College of Engineering

**ADVISOR**

Dr R Prabu  
HoD-BME, K S R College of Engineering

**EDITORS**

Ms V D Nandhini  
Assistant Professor-BME

Ms S Deepika, I-BME  
Mr M S Dhamodharan, I-BME

July - December 2024