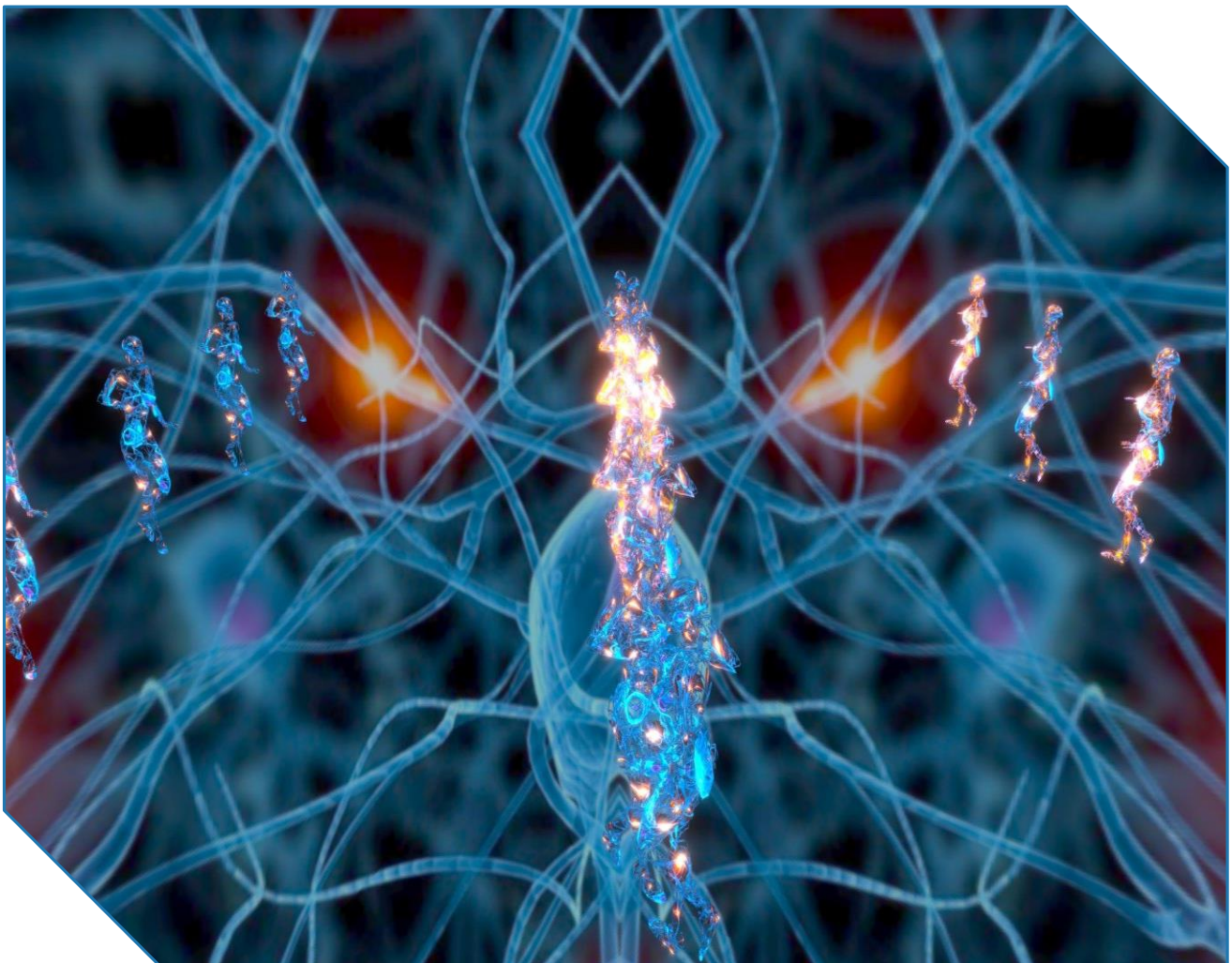
B.M.S College of Engineering
(Autonomous Institute under VTU)
Estd. 1946

DEPARTMENT OF MEDICAL ELECTRONICS

SYNAPSE

2021



CONTENTS

H.O.D.s MESSAGE:

Welcome to the Department of Medical Electronics Engineering at B.M.S.College of Engineering, Bengaluru. We are the pioneers to start Medical Electronics Engineering in the year 1992 and continued our journey to make the future, the bridge between engineering, biology, and medicine. Medical Electronics Engineering is fostering collaborations among disciplines at its core by building on basic concepts in engineering and biology. We strive to educate where the needs, opportunities, and jobs are and will be in the future. With dynamic changes in healthcare, Make in India Start-ups and global economies it is going to bring a revolution in the healthcare domain.

Over the last three decades, we have grown our expertise and competence in the core Medical Electronics Engineering curriculum and research. We have a strong undergraduate program in Medical Electronics Engineering and a postgraduate program in Biosignal Processing and Instrumentation. The primary focus of our curriculum is to impart technical know-how to students, promote their problem-solving skills and innovation of new technologies. The course contents are periodically updated for introducing new technological developments. Students are encouraged to work on various research projects.

The department has a distinguished record in both teaching and research and has established an active research profile for carrying out collaborative research with Medtech start-ups and research institutes. To our alums, we welcome your feedback, participation, and ideas to continue to help us move ahead in our educational and research initiatives. We wish to engage you to establish a strong network of support and opportunity for our students and help us map future directions for our program as we mature.

About Department:

The department of Medical Electronics Engineering was established in 1992 to expand its academic horizon to the fast-growing field of healthcare technologies. The college has laid its focus to impart education in the field of medical electronics and health sciences to translate it into real-world applications. With experienced and well-qualified faculty (90% doctorates), with an average experience of 25 years, the department has been able to contribute a large pool of talented biomedical engineers into the industry. The current intake for the undergraduate programme is sixty, and the department is also offering an M.Tech programme in Biomedical Signal Processing and Instrumentation since 2013 with an intake of 18.

With the belief that collaboration is everything, the department has networked with premier research institutes like Stanford University, Oxford University, Maastricht University, Ohio State University, Texas A&M University, Indian Institute of Science, Narayana Nethralaya, Kempegowda Institute of Medical Sciences and many more.

The department also has a Center for Innovation in Medical Electronics (CIME). It has been set up with the objective of creating a forum for industry, institutions, and hospitals to work together for developing affordable innovative healthcare devices and encouraging faculty/student research-driven entrepreneurship.

FACULTY LIST

DR. K. VIJAYALAXMI-Professor and HOD

DR. SUMA H.N-Professor

DR. JOSHI MANISHA S-Professor

DR.M.S.SUMA – Professor

Dr. S.B. BHANU PRASHANTH-Professor

Dr. ABHISHEK APPAJI M-Assistant Professor

Dr. BEENA ULLALA MATA B N-Associate Professor

Dr.R.KALPANA-Associate Professor

SIRASAPPA.Y.PATTAR-Associate Professor

Dr. NIRANJAN K R-Assistant Professor

Anandathirtha R.S.-Instructor & I/c Foreman

Panduranga Kulkarni-Asst.Instr

Venkatesh G.L.-Instructor

Ashlesh G-Technical Assistant

Guneshwar M.-F.D.A.

G P Vanitha-Attender

Dr. VIJAYALAKSHMI.K

Professor and Head

- Life Member of Indian Society for Technical Education (ISTE)
- Life Member of Bio Medical Engineers Society of India (BMESI)
- IEEE Member /Senior Member

Publications:

- **Journal** | Published On : 01-05-2020
  Lakshmi Bhaskar, Vaibhav Tripathi1,Chhaya Kharya,VijayalakshmiKotabagi2,Manvir Bhatia3,Vinod Kochupillai
  " High?Frequency Cerebral Activation and Interhemispheric Synchronization following Sudarshan Kriya Yoga as Global Brain Rhythms: The State Effects", International Journal of Yoga, Volume 13 | Issue 2 | May-August 2020,pp130-136, ISSN 0973-6131
- 2019 CCEM - PCW Best Proposal Submission (held on 1st March'19 at The Oterra, Bengaluru) to you both. The award also carries a cash prize of Rs. 10,000.00.
- Dr .Vijayalakshmi K and Dr .Rajeswari Hegde Organized A Short term training program on " Protecting against pandemic- Holistic Approach towards Health in Collaboration with IEEE BMSCE student branch, IEEE SIGHT Bangalore section, from 8.06.2020 to 13.06.2020

Dr. S.B. BHANU PRASHANTH

PROFESSOR

- Dr. S.B. Bhanu Prashanth has 32 research publications in International & National Journals, and conferences to his credit, and has also co-authored a text book on Linear Integrated Circuits – Concepts and Applications.
- He has received research grants of 35 Lakhs from VGST and DST, and is currently guiding four PhD scholars.
- He is a member of the ISSS, ISoI, and Immediate-past Chairman and Execom member of the IEEE Sensors council, Bangalore section chapter.
- His special interests are in the domains of Instrumentation Techniques, Analog Circuit Design, Embedded Systems, Optical Fiber Communication, Human Body Area networks, and Amorphous Semiconductors.
- He's a recipient of the Dr. APJ Abdul Kalam memorial-2018, Outstanding Teacher award from the ISBR of Bangalore Educational Trust.

TECHNICAL TALKS:

- Dr. S.B. Bhanu Prashanth, Professor, department of Medical electronics, delivered a technical talk on "Biosensors : A Conceptual Overview", during the AICTE Training and Learning (ATAL) Academics sponsored FDP on 'Control Systems and Sensors Technology' organized by the department of Electrical Engineering.
- Dr. S.B. Bhanu Prashanth, Professor, department of Medical electronics, delivered a series of technical talks (3) from 10th to 13th, in the training program on "Sensors in Internet of Things", organized by the department of Physics, BMSCE, Bangalore in association with TEQIP.

Dr. H. N. SUMA

Professor

- **Convener**: CIME (Center for Innovation in Medical Electronics).
- **Chief Convener**: Center for Innovation, Incubation & Entrepreneurship (CIIE)
- **Programme Director and SPOC**: Student satellite Project, BMSCE
- **TT Board Representation**: Melton Foundation, BMSCE
- **Chairman Library committee**, BMSCE
- **Doctoral committee member** - NIMHANS, Bangalore
- **Doctoral committee member** - BNMIT, Bangalore
- **Doctoral committee member** - UVCE, Bangalore

Publications:

- **Journal** | Published On : 18-04-2019
  S Guruprasad, MZ Kurian, HN Suma
  "PROBABILITY RANDOM INDEX BASED CLUSTERING FOR SEGMENTATION OF PET-CT IMAGES", Biomedical Engineering: Applications, Basis and Communications Abstract:Medical image segmentation is a vital process in medical diagnosis and evaluation of tumor response to therapy.
- **Conference** | Published On : 08-07-2018
  Deepthi Badarinath, S Chaitra, Neha Bharill, Muhammad Tanveer, Mukesh Prasad, HN Suma, Abhishek M Appaji, Anand Vinekar
  "Study of Clinical Staging and Classification of Retinal Images for Retinopathy of Prematurity (ROP) Screening", International Joint Conference on Neural Networks (IJCNN)

Dr. M.S. SUMA

Professor

- Student Counsellor
- Member of Sports Committee.
- VTU Exam coordinator.

AWARDS:

- Indo-Thai Academic Awards for Distinguished Professor at KU Home, Kasetsart University, Chatuchak, Bangkok, Thailand, September 2019.
- ESN Award 2019-Best Professor for outstanding excellence and remarkable achievements in the fields of Teaching, Research and Publications, September 2019.

Publications

- **Journal** | Published On : 22-06-2020
  Jisha P, M S Suma, M V Murugendrappa, Kalyan Raj
  "A study on the effect of PVDF on the structural and transport properties of Polyaniline" - International Journal of Polymer Analysis and Characterization (Volume 25, 2020 - Issue 4)
- **Conference** | Published On : 29-08-2019
  Jisha P, M S Suma
  "Synthesis and Electrical Characterization of Protonic Acid Doped Polyaniline for Detection of Monoterpene Vapours to Diagnose Malaria" - IEEE Xplore

SIRASAPPA.Y.PATTAR

Associate Professor

Publications:

- **Conference |** Published On : 25-03-2021
  S.Y.Pattar
  An Efficient Framework for Iris Segmentation with additional Pressure term in contour model and Classification at IEEE conference at Coimbatore on 25th of March 2021.
- **Conference |** Published On : 16-03-2019
  S.Y.Pattar
  A Novel approach towards iris segmentation and authentication presented at IEEE conference at Coimbatore on 16th of March 2019.
- **Journal |** Published On : 20-08-2017
  S.Y.Pattar,Ananth Padmanabha A.G
  1) Anantha Padmanabha A.G and S.Y.Pattar,"Textural Feature Extraction and Analysis for Brain Tumors using MRI" ", International Journal of Scientific and Research Publications, Volume 7 , Issue 8 2017, ISSN 2250-3153.
- **Journal |** Published On : 22-10-2015
  Pavithra .R,S.Y.Pattar
  2)Pavithra R, S.Y. Pattar Detection and Classification of Lung Disease – Pneumonia and Lung Cancer in Chest Radiology Using Artificial Neural Network,International Journal of Scientific and Research Publications, Volume 5, Issue 10, October 2015, ISSN 2250-3153

DR. JOSHI MANISHA S

Professor

Publications:

- **Conference Publications:**
  - Kamala C, Joshi Manisha S, “Comparative Analysis of Image Enhancement Techniques for Ultasonic Ovarian Cyst Images”, 3rd International Conf. on Inventive Research in Computing Applications Oct. 2021.
  - Pranav P, Samitha P, Joshi Manisha S, “Comparative Study of Segmentation Algorithms and Evaluation of Improved Algorithm for Gliooma Tumor Detection”, International Conference on Multidisciplinary Research towards Sustainable Development Oct-Dec 2021.
  - Vijay B, Nayanshree N, Joshi Manisha S, Sumana R, “Skin Disease Localization using Image Segmentation Algorithms”, International Conference on Multidisciplinary Research towards Sustainable Development Oct-Dec 2021

- **Journal Publications:**
  - Mansi K , Hitashree M. , Chandana Lakshman Hegde , Amrita Chauhan , Dr. Joshi Manisha, “Blood Group Determination through Medical Image Processing”, International Journal for Research in Applied Science & Engineering Technology (IJRASET) ISSN: 2321-9653; Volume 9 Issue V, May 2021.
  - Nikita Jain, Rishika I.S, Kusuma K.B, Dr. Manisha Shivaram Joshi,“Self-Stabilising Utensil For Patients with Impaired Motor Skills”, International Journal of Engineering Applied Sciences and Technology, 2021,Vol. 6, Issue 2, ISSN No. 2455-2143, Pages 128-134.
  - Vijay B, Nayanshree N, Joshi Manisha S, Sumana R, “Skin Disease Localization using Image Segmentation Algorithms” ,International Journal of Advance and Innovative Research (Conference Special), Volume8 Issue 4, OctDec 2021

Dr. BEENA ULLALA
MATA B N

Associate Professor

- Life Member of professional bodies such as ISTE, IE and BMESI.
- Organized more than 5-7 workshop at BMSCE, Bangalore.
- Participated in more than 25-30 workshops/FDP conducted at various colleges in India.
- Was one of the Jury to VII SEM students Project Work Exhibition and Chair to paper presentation organized at Dr AIT, Bangalore in the year 2018.

WORKSHOPS AND TALKS:

- ❖ Delivered a talk on " Embedded system and microcontroller use in IOT", in training program Department of physics, BMSCE 9th -21st November 2020.
- ❖ 2 WEEK COURSE ON " Digital transformation in teaching learning process" TEQIP ONLINE CERTIFICATION BMSCE. On 6TH APRIL-22ND April 2020.

BOOKS PUBLISHED - Book Published on " Image processing Algorithms for breast cancer", by Lambert Academic publishing on 7th November 2020

AWARDS: Second best poster presentation award in Surf 2020.

Dr.R.KALPANA

Associate Professor

- Life member of Indian Society for Technical Education
- Biomedical Engineering Society of India, L 561
- One of the members of panel of examiners/ paper setter/ valuator in the board of VTU from the past 12years.
- IEEE member
- *IETE fellow*

Publications:

- **Journal |** Published On : 03-04-2021
  AnshuBipin Andani1, Shreya Jithendra2, Kalpana R3, Visalakshi.T.N4 Department of Medical Electronics, BMS College of Engineering Bengaluru, India
  ISSN-1671-4512
- Dr.R.Kalpana, Associate Professor in the Dept of Medical electronics engineering, Published a journal of title named a “Clinical Data Analysis during a Pandemic - A Covid-19 Example” Journal of Huazhong University of Science and Technology, ISSN-1671-4512.
- Dr.R.Kalpana, Associate professor Dept of Medical electronics and Project team have-published a Book chapter on Springier-book series on Smart innovation,systems&technologies,**SCI-2020 vol-1**“**Analysis of heart rate variability using different techniques of breathing”**proceedings of the smart computing informatics.

ABHISHEK APPAJI

ASSISTANT PROFESSOR

- **Journal**| Published on : 27-05-2021 **Vittal, Abhishek Appaji, Arpitha Jacob, Priyanka Devi, Bhargavi Nagendra, Dona Maria Chako, Ananth Padmanabha et al** Association between retinal vascular caliber and brain structure in schizophrenia." Asian Journal of Psychiatry 61 (2021): 102707.

- ❖ Abhishek Appaji, Faculty, Dept of Medical Electronics defended his doctorate degree for his thesis titled Retinal Vascular Features as a Biomarker for Psychiatric Disorders at Maastricht University, the Netherlands.
- ❖ Abhishek Appaji, Faculty, Dept of Medical Electronics won outstanding volunteer award from IEEE Bangalore section during Annual General Body Meeting at Bangalore.
- ❖ Dr. Abhishek Appaji, Faculty, Dept of Medical Electronics was invited as chief guest for inauguration of technical fest “Saamarthya” at SSIT, Tumakuru.
- ❖ Dr. Abhishek Appaji, Institutional Coordinator for R&D (ICRD), faculty from Dept of MedicalElectronics and Sreekanth N V, faculty from Dept. of Mechanical Engineering& 3d Printing lab incharge received a grant of5000USD from IEEE Humanitarian Committee for the project titled “3D Printed Self Care Kitfor Underserved Community in Urban Slums” to combat COVID19. This project is being executed by Mr. Shekar G K, from 3D Printing Lab Propel Lab-II and Mr. Praveen N from Product Innovation Lab BMSCE.
- ❖ Dr. Abhishek Appaji, Faculty, Dept of Medical Electronics Engineering, received Best Thesis Award during 13th MHeNs Annual Research Day at Maastricht University, the Netherlands.

Dr. NIRANJAN K R

Assistant Professor

- **Journal |** Published On : 07-12-2021
  Niranjan KR
  Detection of Pneumonia Using Chest X-Ray Images and Image Processing Algorithms - A Comparative Study. Journal of Image Processing and Artificial Intelligence. Volume-7, Issue-3 (September-December, 2021). e-ISSN: 2581-3803
- **Journal** | Published On : 01-12-2021
  Niranjan KR
  A Conundrum of Peer Evaluation of Predicting Poor Prognostic Models Affecting the Mortality Rate of Covid -19. Journal of Network Security Computer Networks. Volume-7, Issue-3 (September-December, 2021). e-ISSN: 2581-639X
- **Journal** | Published On : 06-09-2021
  Niranjan KR
  REMOTE DOG HEALTH MONITOR. Journal of Huazhong University of Science and Technology. Volume 48 September 2021. ISSN-1671-4512
- **Journal |** Published On : 04-09-2021
  Niranjan KR
  EYE GUARD. International Journal of innovative research in technology. Volume 8 Issue 4 September 2021. ISSN: 2349-6002
- **Journal** | Published On : 04-09-2021
  Niranjan KR
  IOT- based contactless body temperature monitoring using Raspberry pi with camera and email alert. International Journal of innovative research in technology. Volume 8 Issue 4 September 2021. ISSN: 2349-6002
- **Journal** | Published On : 04-09-2021
  Niranjan KR
  Long range communication for medical devices. International Journal

of innovative research in technology. Volume 8 Issue 4 September 2021. ISSN: 2349-6002

- **Journal** | Published On : 01-07-2021
  Niranjan KR
  Real Time IOT based Non-invasive Glucobin Monitor for Diabetes Patients. International Journal of Research Publication and Reviews. Volume 2, Issue 9, 2021. ISSN 2582-7421 Sr. No: IJRPR 3018
- **Journal** | Published On : 24-06-2021
  Dr.Niranjan KR
  A REVIEW AND CASE STUDY TO DESIGN A PROGNOSTIC MODEL FOR GOUT IN PATIENTS WITH ROSACIC ACID European Journal of molecular & clinical Medicine ISSN 2515-8260 Volume 07, Issue11 , 2020
- **Journal** | Published On : 21-04-2021
  Dr.Niranjan KR
  A CASE STUDY ON POLYCYSTIC OVARIAN SYNDROME. Journal of Huazhong University of Science and Technology. Volume 50 Issue 6 ISSN-1671-4512

BIOMEDICAL EQUIPMENTS

Artificial Lung

An artificial lung (AL) is a prosthetic device that provides oxygenation of blood and removal of carbon dioxide from the blood. It's intended to take over the functionality of biological lungs for long periods of time. AL would be a better alternative compared to heart-lung machine, Extracorporeal Membrane Oxygenation (ECMO) and Mechanical Ventilation (MV) as these can be used on a temporary basis only.

ALs could provide a stopgap for people recovering from severe lung infections or waiting for a lung transplant – although a transplant would still be a better long-term solution for those with permanent lung damage. Currently, lung transplantation remains the definitive curative treatment for end-stage lung disease, but many patients die before finding an appropriate donor organ. ALs could overcome the donor organ shortage and the need for immunosuppression (suppression of immune response after surgery). It would provide physiologic functions through bioengineered conducting airways, vasculature and gas exchange tissue. ALs are still undergoing human clinical trials and are not yet open to the market but have had successful animal trials.

-Vaishak Harish
UG(2021)

Automated External Defibrillator (AED)

An automated external defibrillator is a lightweight, portable electronic device that automatically diagnoses life-threatening cardiac arrhythmias (irregular heartbeat). It is able to treat them through defibrillation (delivery of electricity shock to stop arrhythmia) allowing the heart to re-establish an effective rhythm.

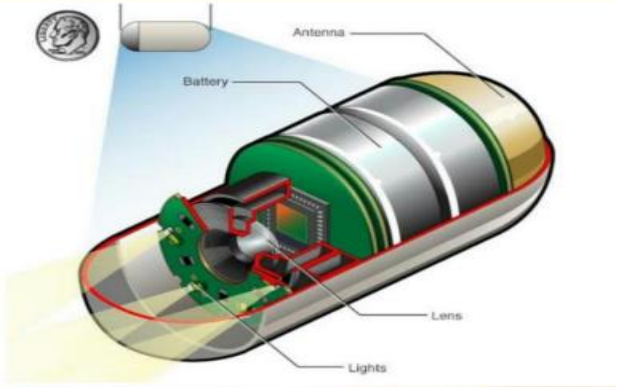
This is usually used during or after a sudden cardiac arrest (SCA), in which the heart stops functioning abruptly. Most SCAs result from ventricular fibrillation (VF). VF is a rapid and unsynchronized heart rhythm that originates in the heart's lower chambers (the ventricles). A built-in computer checks heart rhythm through adhesive electrodes. The computer calculates whether defibrillation is needed. If it is, a shock button is to be pressed on the AED. This shock momentarily stuns the heart and stops all activity. AEDs advise a shock only for VF or pulseless ventricular tachycardia (increased heart rate without a pulse originating in the ventricles). AEDs are safe to use by anyone.

Studies show that 90% of the time AEDs cab detect arrhythmias and decide whether to deliver a shock or not.

-Bhargavi B Kulkarni
UG(2021)

Capsule Endoscopy Camera

Capsule Endoscopy Camera (Camera Pill) is used to perform capsule endoscopy that uses a tiny wireless camera to take pictures of digestive tract. A capsule endoscopy camera sits inside a vitamin-size capsule which is to be swallowed. As the capsule travels through your digestive tract, the camera takes thousands of colour pictures that are transmitted to a recorder with special software that strings the images together to create a video on a belt around your waist.



This helps doctors see inside small intestine-(duodenum, jejunum, ileum), an area that isn't easily reached with more-traditional endoscopy procedures. It is used for finding the cause of gastrointestinal bleeding, examining esophagus, diagnosing inflammatory bowel diseases, such as Crohn's disease, diagnosing cancer and celiac disease. Capsule Endoscopy Camera is a safe which carries few risks. However, it's possible for a capsule to become lodged in your digestive tract rather than leaving your body in a bowel movement within several days, if there are any signs and symptoms that indicate bowel obstruction which is removed, either by surgery or

through a traditional endoscopy procedure, depending on where the capsule is stuck.

-Ashwini M

PG(2021)

Phoropter

Author: Adil Y. Parmar

A phoropter is an ophthalmic testing device. It is commonly used by eye care professionals during an eye examination and contains different lenses used for refraction of the eye during sight testing, to measure an individual's refractive error and determine his or her eyeglass prescription.

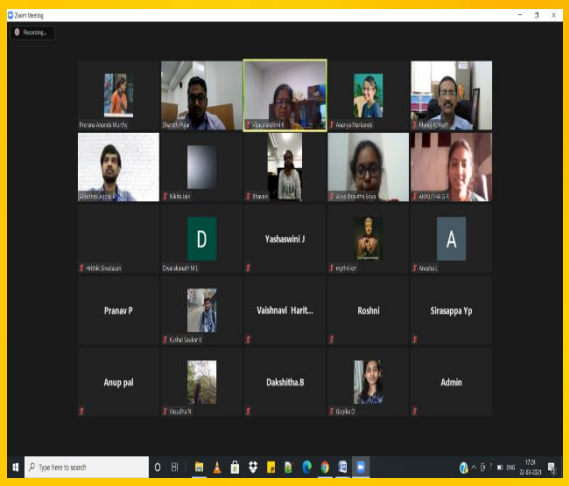
This is a special machine used to switch multiple lenses in front of your eyes to correct your vision. The device is used to manually determine “refraction” – exactly how a lens must be shaped and curved to correct your vision to a normal state.

The major components of the phoropter are the battery of spherical and cylindrical lenses, auxiliary devices such as Maddox rods, filtered lenses, prisms, and the JCC (Jackson Cross-Cylinder). The prismatic lenses are used to analyze binocular vision and treat orthoptic problems. The lenses within a phoropter refract light to focus images on the patient's retina. The optical power of these lenses is measured in 0.25 dioptre increments. By changing these lenses, the examiner

can determine the spherical power, cylindrical power, and cylindrical axis necessary to correct a person's refractive error.

-Pratiksha Umesh
PG(2021)

ACTIVITES



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March 17,2021:

Department of Medical Electronics Engineering and Department of Electronics organised Workshop on: “Advance Biomaterials for Biomedical Applications” sponsored by TEQIP-III from 17th-22nd March,2021 . We have invited the 9 outside resource persons and 1 in house resource personAll the participants learnt a lot in the workshop and give us the good feedback

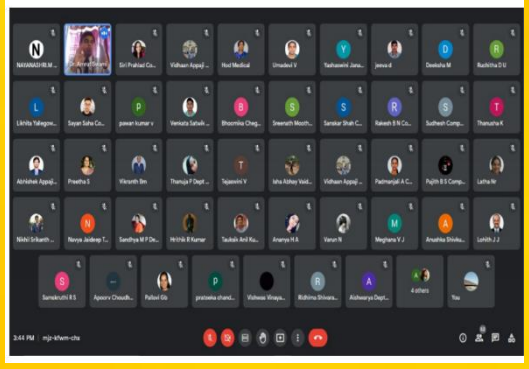
05 April 2021: Sujaya B.L (Research scholar) and Dr. S.B.Bhanu Prashanth, Professor in Medical electronics published a research paper titled “PHY-DTR: An Efficient PHY based Digital Transceiver for Body Coupled Communication using IEEE 802.3 on FPGA Platform”, in the web of science, and Scopus indexed, International Journal of Advanced Computer Science and Applications.

22 April2021: Department of Medical Electronics, Dr. Abishek Appaji, Assistant Professor, organized a lecture on Medical Devices Development. The Guest speaker is from Alumni of Medical electronics department, Mr. Sharath Bhatt,MahalasaTechnologies, Bangalore.

11 May 2021: Department of Medical Electronics, Dr.AbishekAppaji,Assistant Professor, organized a lecture on “Essence of Regulatory affairs and quality assessments” in Medical Devices Development at BMSCE. The speaker of this program is Raksha Raghavan, Lecia-Microsystems, a Danaher, corporation company Bangalore.

06.june2021: Department of COMPUTER SCIENCE ENGINEERING and MEDICALELECTRONICS, BMS College of Engineering. Has organized a webinar on "IMPORTANCES OF VACCINATION AND EFFECTS ON MUCORMYCOSIS" by an eminent speaker Dr. Amrut Arun Swami, MBBS, MD, DNB. The webinar had 96 registrations. It was successful and informative and the participants gained a lot of knowledge.

EVENT MEETING SCREENSHOT:



26June 2021: The Department of Medical Electronics Engineering hosted a talk on “Rediscoveries in Careers” by the department alumnus, Rajashree Barthakur on 26th June who is the Regional Sales Manager (West India) at Fisher & Paykel Healthcare. The talk gave students a rough idea of what to expect after graduating. It was beneficial to all the students present.

6th July 2021: Dr. S.B. Bhanu Prashanth, Professor in Medical electronics, along with the two external doctoral committee members conducted the Pre-PhD Comprehensive Viva of the research scholar Mrs. Sumathi A.

6th August 2021: The ICMAI-2021 conference paper titled “Gar-Bot: Garbage Collecting and Segregating Robot”, authored by Shreya Gupta, Kruthik H M, Chaya Hegde, Shreya Agrawal (students of EIE, Mechanical, ECE & ML) and Dr. S.B.Bhanu Prashanth, Professor in Medical electronics was published in the Journal of Physics: Conference Series 1950 (2021) 012023 (doi:10.1088/1742-6596/ 1950/ 1/ 012023.)

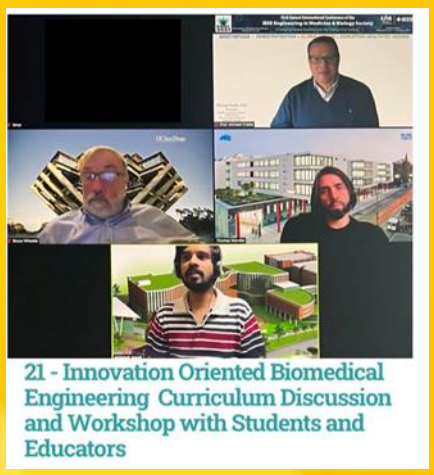
14th August 2021: Dr. S.B. Bhanu Prashanth, Professor in Medical electronics, was invited to be a member in the Board of Studies meeting by the department of medical electronics engineering, SSIT, Tumkur.

20thSeptember2021:Dr.Vijayalakshmi from Department of Medical Electronics Engineering was Invited to deliver a Inaugural Lecture for a Value added course on "Science behind Devices of Daily Utility" at National College ,Jayanagar Bangalore

2 October 2021: Dr. Abhishek Appaji, Faculty, Vaishak Harish, Supraj S A, Thilak Karthik, Students from department of medical electronics won Consolation prize for in Product demo in IEEE Region 10 Humanitarian Technology Conference 2021.

28 October 2021:Department of Medical Electronics Organized a workshop on "Profile Building for Higher Education" presented by Ms . Sowmya Prabha ,Career expert and Learning Architect from Career Labs.

November 02:: Dr. S.B.Bhanu Prashanth, Professor in Medical electronics and his research scholar B.L. Sujaya published a paper titled "An efficient hardware-based human body communication transceiver Architecture for WBAN applications." in the Global Transitions Proceedings 2 (2021) pp 152–156, with the contents list available at Science direct.



November 05: Abhishek Appaji, Faculty department of Medical Electronics was invited to talk on Innovation Oriented Biomedical Engineering Curriculum Discussion and Workshop with Students and educators as part of 43rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society.

November 11: Dr.Joshi Manisha S along with students Tanya Mathews and Yeshaswini N (Autonomy first Batch) had filed a patent with application No. 2857/CHE/2012, for the work "**Method for detection of retinopathy of prematurity (ROP) and tool therefrom".** Patent has been granted to B.M.S College of Engineering, Bangalore .

November26/27: The following are the events in Phase shift-2021 conducted on 26th and 27 th November The events are **IDEATHON X-change** and **MATTERMIND** respectively in the department the Resource persons for the events are as follows.Shreyas Sp Founder at Hy-cube works (Pre-incubated at IIM-B). IDEATHON X-change Ajay Narayan Principal Engineer of CT systems at GE Healthcare.

STUDENTS ACHIEVEMENTS

Rohan Nagendra
(1BM17ML023)

MSC IN BUSINESS ANALYSIS AND CONSULTING AT UNIVERSITY OF STRATHCLYDE, GLASGOW

DISTINCTION IN 1ST SEMESTER OF MSC

CURRENTLY WORKING ON BIGDATA FOR PUBLICATIONS

COMPLETED APPRENTICESHIP IN THE FIELD OF REMANUFACTURING

Vismaya P
(1BM17ML030)

MASTERS IN HOSPITAL ADMINISTRATION AT UNIVERSITY HOUSE, NEW BEL RD, BANGALORE

ANANYA KASHYAP B
(1BM16ML004)

ON CAMPUS PLACEMENT AS BUSINESS DEVELOPMENT EXECUTIVE AT CHC HEALTHCARE HEALTHWATCH

COMPETITIVE EXAM : IELTS

INTERNSHIP : AXXONET PVT LTD , OPERON BIOTECH

Nayanashri M
(1BM16ML014)

MBA IN Hospital Administration AT JSS Hospital MYSORE

Publication: "SKIN DISEASE LOCALIZATION USING IMAGE SEGMENTATION ALGORITHMS"
International Journal of Advance and Innovative Research having ISSN: 2394 - 7780

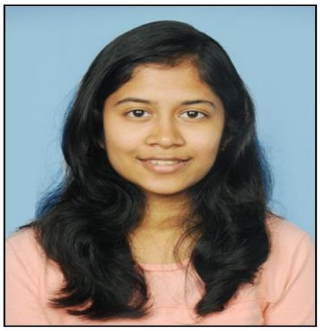
Vijay B
(1BM16ML026)

Successfully Completed the Program

Competitive exam: GATE

Award: Prathibha Puraskara

Neha Sreedharala
(1BM17ML018)



ON CAMPUS PLACEMENT AS EXECUTIVE ANALYST AT DELOITTE

PUBLICATION: IN PROGRESS

COMPETITIVE EXAM : IELTS

SCHOLARSHIP: BMSCEAN MERIT SCHOLARSHIP

SOCIAL SERVICE: ROTARACT ITEACH PROGRAM

INTERNSHIP : DEBEL,DRDO

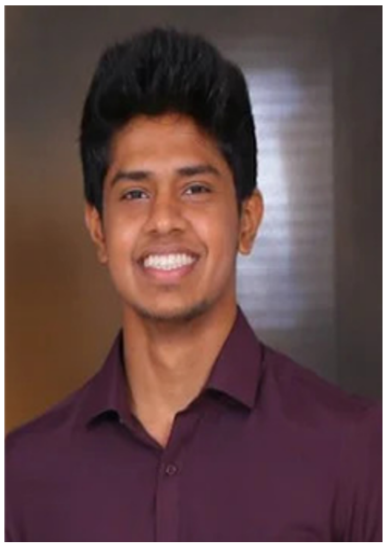
Ashwini S
(1BM18ML400)

Off campus placement as Investigation Specialist AT AMAZON DEVELOPMENT CENTER

Neha S
(1BM17ML017)

Off campus placement AS Test Engineer AT INFOSYS

Vaishak Harish
(1BM17ML029)



Higher education: received Admits from Arizona State University and Northeastern University

Competitive exam details: GRE , IELTS

Award : "Consolation" in the "R10 Product Demo Session" organized during R10
HTC by IEEE Bangalore Section on 02 October 2021

PUBLICATIONS: Deep learning model using retinal vascular images for classifying schizophrenia

Internship : Quality Assurance and Regulatory Affairs Intern at NIRAMAI Health Analytix Ltd.

MOOCs : Python 3 Specialization, AI for Medical Diagnosis, Introduction to using the Impulse 7000 device

Inderneel Dabke
(1BM17ML010)

Off campus placement as Regulatory analyst at HCL Technologies Limited

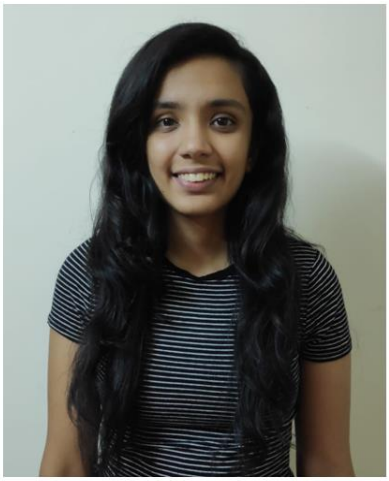
Anusha Sonar
(1BM17ML004)

Off campus placement as Graduate Engineer Trainee (GET) at Continental Automotive Components (India) Private Limited

Publication : Design of IoT Enabled, Scalable Mobile Application for ASHA Workers in COVID-19 Data Management

Internship : Biomedical Intern - DEBEL, DRDO, Ministry of Defence, Bengaluru

Shreya Jithendra
(1BM17ML026)



Internship : Intern AT MIMS Ardendale

1)Atoll Solutions Pvt. Ltd. (Internship from June 2019-July 2019)

2)Innaccel Technologies Pvt. Ltd. (October 2020-November2020)

3) Atoll Solutions Pvt. Ltd. (Current)

Publication: "Clinical Data Analysis during a Pandemic - A Covid-19 Example," Journal of Huazhong University of Science and Technology

Competitive exam: IELTS

Award: Rs. 50,000/- research grant from VTU

Social service: Currently a Foundational Skills Volunteer at Make a Difference Foundation

MOOCs : Introduction to Project Management - Coursera

Bhamini Mahendra Babu
(1BM17ML007)

Higher education: Master of Engineering in Biomedical Engineering at CORNELL UNIVERSITY

Publication: An IoT Based Intravenous Drip Rate Controlling and Monitoring Device

Competitive exam: GRE

Award: Elevate-2019

THILAK KARTHIK J
(1BM17ML011)

SUCCESSFULLY COMPLETED THE PROGRAM

Lokesh M
(1BM17ML400)

Off campus placement as Regulatory analyst in HCL ,Madurai

Award: Appreciation from BD company

Anshu Andani
(1BM17ML003)

On campus placement as Analyst at Deloitte India

Higher education: Recieved Admits from Universities for Fall'22

Publication: "Clinical Data Analysis during a Pandemic" in Journal of Huazhong University of Science and Technology

Competitive exam : GRE

Award: VTU Covid-19 Research Grant of INR50K

Social service: Youth For Seva

Internship : RxDigi Health Platform

MOOCs: Medical Technology and Evaluation - Coursera

REETHU M
(1BM17ML022)

SUCCESSFULLY COMPLETED THE PROGRAM

Supraj S A
(1BM17ML028)

Off campus placement as Founding member, Associate at BLITZLLAMA

Higher education: MEng - Biomedical Engineering - Texas A & M university

Competitive exam : IELTS

Award:
R10 HTC BY IEEE Bangalore section, 2019,2020- Zonal kho-kho winners, 2019 - Interzonals Khokho Third place, 2020- Interzonals kho-kho Runner up

Social service:
Sachh India, Durga India, Akshaya patra, Namma bengaluru foundation, S.P.A.R.K, Rotaract aagneya ,Cognition social innovation & research centre, Zomato feeding India (2019-present)

Internship : Studyroom.live

Madhav Manjunath
(1BM15ML010)

Off campus placement as Senior Research Fellow at SVyasa University, Jigani

Dushyanth Srinivas
(1BM17ML009)

SUCCESSFULLY COMPLETED THE PROGRAM

Pawan kumar V
(1BM17ML404)

Internship : “Predicting Intracranial Hemorrhages from CT scan images” at NIMHANS

MOOCs: Pharmaceutical and Medical Device Innovations, Introduction to Project Management, Write Professional Emails in English

Bhargavi B Kulkarni
(1BM18ML401)

Off campus placement as Business development associate at Byju's

NISCHITHA TY
(1BM17ML019)

ON CAMPUS PLACEMENT AT TECHNOLOGY CONSULTANT

Ashitha.S
(1BM17ML005)

On campus placement as Business analyst at DELOITTE

MOOCs : Supply chain management from MITx; introduction to python; introduction to database management and SQL

PRIYANKA KULKARNI
(1BM17ML021)

- Off Campus Placement as ACCOUNT MANAGER
- Awards:NEO
- Internship:DUKAAN,BLITZJOBS

SHREYA AGRAWAL
(1BM17ML025)

- On Campus Placement as SOFTWARE ENGINEER
- Awards : Mitsubhishi Electric Cup'19 (Selected on top 35 teams all over India for national level competition)
- Publications : IEEE PAPER on Gar-Blot: Garbage Collecting and Segregating Robo for ICMAI 2021
- Internship : Cymmetrix software

ANANYA MADHAV
(1BM17ML002)

- Dual MS in BME(Biomedical Engineering) and MS in TV(Technology Ventures)
- Managing Partner at MEDTECH FOR ALL
- Awards: Secured seed Funding at Elevate 2019 (KARNATAKA STARTUP CELL- Govt of Karntaka)
- Publications : DOI:10.1109/COMSNETS51098.2021.9352847

PG STUDENTS

Teju Reddy N
(1BM19LBI05)

Competitive exams: GATE

Award: Yoga district award

Social service: Helping people at local ashram, planted plants in my locality

Internship : Itie knowledge solutions

MOOCs : Digital biomedical

Rohini S
(1BM19LBI04)

SUCCESSFULLY COMPLETED THE PROGRAM

Internship : ICALTECH Innovation Pvt Ltd.

Pratiksha Umesh
(1BM19LBI03)

Off campus placement as R & D engineer at Caliber Assurance Services

Award: Highest academic performer

Internship : DEBEL, DRDO

MONISHA V
(1BM19LBI02)

Off campus placement as DESIGN QUALITY ENGINEER at ICALTECH Innovation Pvt Ltd.

Ashwini M
(1BM19LBI01)

SUCCESSFULLY COMPLETED THE PROGRAM