

## PRINCIPAL'S REPORT FOR THE YEAR 2022-23

### 1.0 Introduction:

The President of IDET Msgr. Wilson Erathara, Mr. Leo Thaddeus, Film Director, Rev. Fr. Dr. Anto Chungath, Executive Director, Rev. Fr. Jinto Verampilav, Finance Officer, Dr. Leon Ittiachen, Director, Dr. Sudha George Valavi, Joint Director, PTWA Executive Member, Faculty Anusree K, Advisor to Student's Council, Mr. Muhammad Naisal Ansar (Student Council Chairperson), other distinguished guests, Rev. fathers, Rev. sisters, Parents, Staff and my dear students, Ladies & Gentlemen.

I am very happy to present the 21st Annual Report of Sahrdaya College of Engineering Technology for the year 2022-23 before the august audience present here.

We are happy to state that 17 batches of B.Tech & 8 batches of M.Tech students have graduated successfully from Sahrdaya. With the Blessings from Heavenly Patron "**Sacred Heart of Jesus**" and with the Guidance and support of our Chairman, Trustees, Governing Body, Academic Council Members, Faculty & Staff, Parents, Well Wishers, Staff and Students, we could continue to maintain a very good reputation among the self-financing Colleges in the state.

HERTY WELCOME TO SAHRDAYA

Fr. Antu Chungath joined Sahrdaya family as the Executive Director in January, 2023.

### 2.0 Academic Activities:

- Dr. Leon Ittiachen has been appointed as our Director from January, 2023.
- Based on the NBA peer team visit held during 15th to 17th July 2022, UG programs in Biomedical Engineering, Biotechnology, Civil Engineering and Computer Science and Engineering are accredited by NBA with high score valid upto 30/06/2025.
- On 19/09/2022, we had the academic year inauguration, declaration of NBA Accreditation status and the inauguration of the dance and music club.
- The Ministry of Education, Government of India ranked Sahrdaya College of Engineering and Technology as PERFORMER under ATAL Ranking of Institutions on Innovation Achievement (ARIIA) - 2021.
- Admission for the academic year 2022-23 started during the month of May 2022. We could get an intake of 368 students for B.Tech (BM - 63, BT - 46, CE -10, CS -158, EC - 62, EEE - 29) and 3 students for M.Tech branches (IBT - 1, CSE - 1 & ES - 1).
- First year inauguration SAMEEKSHAM 2022 was held on 31/10/2022.
- The annual Techfest of Sahrdaya Tekwiza 2022 was celebrated on 2<sup>nd</sup> & 3<sup>rd</sup> December 2022. Mr. Titus Arnold, Director of HR Medtronic inaugurated the event.

**2.1-Results:** The pass percentage of B.Tech 2018-22 batch in various departments under APJ Abdul Kalam Kerala Technological University are as follows:-

Batch	Semester	BM	BT	CE	CSE	ECE	EEE	Overall pass percentage
2018	VII	81	75	53	64	55	30	64
2018	VIII	89.47	76.59	78.43	75.94	60.60	70	77

**2.2:** M.Tech results are as follows:

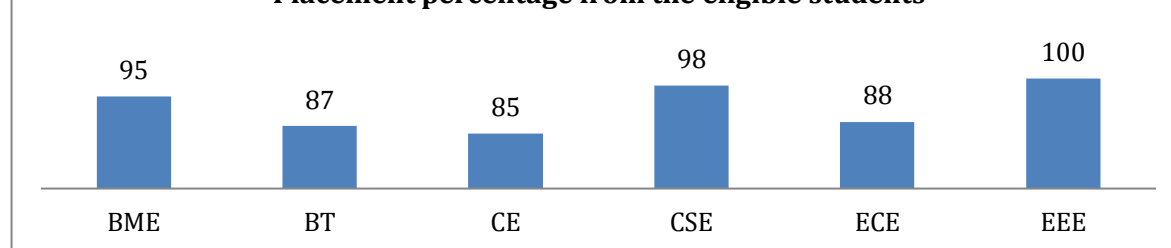
Batch	SEMESTER	IBT	CS	ES
2019	III & IV	100	100	100

### 3.0 Placements

- The placement statistics of 2018-2022 batch is shown below

Dept	Total Students in Final Year	Eligible Students	Placements	Higher Studies	Entrepreneur	Total Placements from Eligible Students	Placement % from Eligible Students	Total Placements & H.S from Final year students	Overall Placement %
BME	55	42	39	1	0	40	95	47	85
BT	47	31	23	4	0	27	87	33	70
CE	49	20	15	2	0	17	85	26	53
CSE	79	55	53	1	0	54	98	72	91
ECE	33	17	15	0	0	15	88	29	88
EEE	17	7	5	2	0	7	100	16	94
Total	280	172	150	10	0	160	93	223	80

Placement percentage from the eligible students



**4.0 Faculty and Staff:** We are proud of our Faculty and staff for their dedication and Commitment. We have 96 Faculty Members on roll of which 26 are with Ph.D and we have 24 technical supporting staff.

#### 4.1 Faculty Achievements

##### BM

- Dr. Yuvaraj V has been selected as Students Activity chair in IEEE Kochi subsection. He delivered a talk on “Roadmap to Futuristic Healthcare Technology- Biomimetics and Research Perspectives” conducted by the department of Biomedical Engineering of Karpagam University of Higher Education on 20/1/2022. Also he was the speaker for the webinar on “Benefits and Opportunities of IEEE” conducted by Mangalam College of Engineering on 29/1/2022.
- Dr. Remya George, Ms. Sony N.S, Mr. Jibin Jose, Mr. Jis Paul and Mrs. Reshma Jose were the evaluators for the Young Innovators Programme 2020 under the idea theme- Assistive Technologies conducted by K-DISC.
- A team from Biomedical Engineering Department consisting of Mrs. Reshma Jose, Assistant Professor in the Department of Biomedical Engineering and a group of Final year Biomedical Engineering students (Mr. Antony, Ms. Jumy, Ms. Angel, Ms. Jasmine, Mr. Clinto and Ms. Rinta) were the finalists for Augmentative and Alternative Communication (AAC) Device Development Project for the prototype developed by them in collaboration with the National Institute of Speech and Hearing (NISH) and APJ Abdul Kalam Technological University.
- Mr. Jibin Jose delivered a talk for the Resilience Roundtable on “Green Entrepreneurship Opportunities and Challenges in Kerala” conducted on February 1st 2022 by Kerala Startup Mission. He has been selected for a Four Day Management Development Programme (MDP) organized by KSUM in association with IIM -K from 21st to 24th March 2022. He has been selected as one of the panel of members to the monitoring committee to the university Start up cell. Also he was one of the resource persons for a webinar on “Innovation and Product Development” organized by Department of Biomedical Engineering on August 26th 2022 .

- Dr. Remya George and Mr. Jibin Jose delivered a session on “Innovation Development through Academic Project work” at Govt. Polytechnic College, Perinthalmanna in connection with i3 camp organized by IEDC with the support of Kerala StartUp Mission.
- Mr. Jibin Jose and Dr. Yuvaraj V from the department of Biomedical Engineering attended “Research Innovation Network Kerala (RINK)-Research Translation & Commercialisation” organized by Kerala Start up Mission & Innovation and Entrepreneurship Development Center, Sahridaya College of Engineering and Technology on 8th April 2022.
- As part of AAC Device Development Challenge organized by CATI-NISH and APJ AKTU, the faculty advisor, Ms. Reshma Jose was invited for the prize awarding ceremony by Honorable Minister for Higher Education Mrs. Bindu on 25th July 2022 at NISH Campus.
- Mr. Jibin Jose attended the University level monitoring committee meeting of the Startup cell on 20/10/2022 organized by APJ Abdul Kalam Technological University.
- Dr. Remya George enrolled as Chartered Engineer in Electronics & Telecom Engineering Division, Institution of Engineers India.
- Mr. Jis Paul, Assistant Professor in BM Department completed his Phd defense from Anna university, Coimbatore.
- Faculty from the Dept. of Biomedical Engineering, visited Dentcare Dental Lab Pvt. Ltd on 10th November 2022 to discuss possible collaborations and possibility of student internships and validation of project ideas.
- Faculty from the Dept. of Biomedical Engineering, Dr. Finto Raphael, Dr. Remya George, Mr. Jibin Jose and Ms. Reshma Jose visited National Institute of Physical Medicine and Rehabilitation (NIPMR), Irinjalakuda on 11th November 2022 to discuss the possibility of conducting a workshop on Assistive Technology as part of Techfest of Biomedical Engineering Department on 2nd December 2022.
- Dr. Remya George has been nominated as Assistive Technology Domain Mentor for Young Innovator Programme (YIP) of Kerala Development and Innovation Strategic Council (KSDIC) of Govt of Kerala on the innovation "Augmented reality for Deaf Children".
- Dr. Yuvaraj V chaired the technical session on “Engineering in Medicine, Biology and e-Health” in IEEE Indicon 2022 organized by IEEE, Kerala section at Cochin University of Science and Technology, Kochi from 24th-26th November 2022.
- Dr. Remya George & Mr. Jibin Jose, Assistant Professors was nominated as Chief investigator, Research Innovation Program for Women Startups implemented by SCET and SahridayaTBI Hub and funded by Kerala Startup Mission.
- The proposals submitted by Ms. Jeethu Raveendran- (Universal Colorimeter) and Ms. Reshma Jose- (Communicative and Assistive Device for Differently Abled Children) was shortlisted for Kerala Startup Mission's 'Research Innovation Programme for Women Startups' partnered by Sahridaya College of Engineering & Technology providing opportunity for Women PG students/research scholars/fellows/scientists/faculty members and received funding of Rs. 2,50,000 and Rs. 2,00,000.
- Mr. Yuvaraj has been elected as a chair, student activities, IEEE Education Society, Kerala Section and Professional Activity Chair of IEEE Kochi Sub- Section.
- Ms. Reshma Jose and Dr. Jeethu Raveendran were invited to sign the agreement on 24th of March 2023 at KSUM office at Kerala Technological innovation zone (KTIZ) and attend an Orientation Bootcamp on 25th of March 2023, where they interacted with the CEO of KSUM.
- Dr. Remya George represented APJKTU at Kerala State Higher Education Council for Cross- Disciplinary Knowledge Translation Session

## BT

- KSCSTE has approved the project proposal submitted by Dr. Ambili Mechoor & Dr. Dhanya and sanctioned an amount of Rs 3.22 lakhs under its BIRD scheme.
- Dr. Ambili Mechoor delivered a plenary lecture on 9<sup>th</sup> March 2022 in St. Mary's college, Thrissur.
- Dr. Leon Ittiachen received NPTEL Faculty Domain – advanced certification.
- Dr. Amitha Joy conducted a ‘Bioinformatics skill development programme’ in connection with World Youth skill day on 27th July 2022 at Department of Applied Biotechnology, St. Mary's College, Thrissur.
- Dr. Leon Ittiachen was the Resource person and Co-ordinator for the KSUM RINK -Research Translation and Commercialization Bootcamp.
- Dr. Midhila Padman published two of her Malayalam literature works, ‘Virus’ and ‘Daivam’.

- Dr. Amitha Joy acted as a resource person for the offline skill development program in Bioinformatics held at Department of Applied Biotechnology, St. Mary's College, Thrissur on 27th July 2022.
- Dr. Amitha Joy was approved as an external DC member for a research scholar pursuing her PhD (Bioinformatics) under APJAKTU at GEC, Thrissur.
- Dr. Uma Krishnakumar was approved as an external DC member for a research scholar pursuing his PhD in Chemical Engineering from Amrita School of Engineering, Coimbatore.
- Ms. Marria C. Cyriac successfully completed the NPTEL course in 'Introduction to Professional Scientific Communication' in March 2023.
- Mr. Francis John V successfully completed NPTEL course in 'Bioreactor Design and Analysis' in March 2023.
- Dr. Ambili Mechoor has been appointed as a subject expert of the Board of Studies in the Department of Biotechnology, St. Joseph's College, Irinjalakuda.
- Dr. Leon Ittiachen delivered a talk title 'Bioethanol: The bioenergy answer to the oil crisis' during the three day FDP on 'Sustainable Bioreactor Processes and Applications in Bioenergy and Bio-waste Management' jointly organized by Department of Biotechnology, SCET and KTU during 1-3 Feb 2023.
- Dr. Remya George (BME) and Dr. P. Praveena (BT) moderated the interaction with CEO, KSUM on the occasion of Women Researchers Meet and inauguration of Research Innovation Program for Women Startups.
- Dr. Dhanya Gangadharan received a project grant of Rs.2,00,000/- for the project "Can D Sen" from KSUM in Idea Grant 2023.

#### CE

- Dr. Drisya M was the reviewer in the third International Conference on Structural Engineering and Construction Management (SECON'22) held during 01 - 03 June 2022, organized by Department of Civil Engineering, Federal Institute of Science And Technology (FISAT), Ernakulam, Kerala.
- Mr. Sunny C P assigned as a technical consultant for the Ernakulam District Life Mission project at Kunnukara Grama Panchayath on construction of 51 Rehabilitation homes for the homeless. Suriya Homes, the construction company, is the builder partner in the project.
- Dr. Drisya M completed the traffic volume survey for the Project "Design of Intersection for Ollur Central in Thrissur district", work order received from KSCSTE - NATPAC in August 2022.

#### CS

- Dr. R. Satheesh Kumar, Professor and Head CSE, received 'Excellent Faculty Award' for the academic year 2020-2021 from Sahridaya College of Engineering and Technology. He has been appointed as the Chairperson for the External Lab Examinations of Third semester B.Tech S3 (R,S) Exam Dec 2022 (2019 scheme) examinations. He acted as resource Person for the APJAKTU Sponsored Five Day Faculty Development Program titled "Recent Trends of AI in Biomedical Engineering" held from 02/03/2023 to 03/03/2023 at Nehru College of Engineering and Research Centre, Pampady, Thrissur, Kerala. He also acted as resource Person for the two days Python Bootcamp held from 02/03/2023 to 03/03/2023 at Govt. Polytechnic College, Nedumkandam
- Dr. Manisankar S acted as a resource person for an FDP on Elastic Cloud Computing for IoT organized by Presidency University Bangalore on 23-09-2022

#### EC

- Dr. Vishnu Rajan got featured in Google' Android Educators Newsletter -July Edition.
- Dr. G R Gnana King has been empaneled as External Academic Auditor, APJAKTU 2022.
- Ms. Ambily Francis has secured topper 5% in NPTEL online certification course "Principles of Signals and Systems" with elite silver certificate conducted during January -April 2022.
- Dr. Arun Thomas received the Certificate of Appreciation for being the Active SPOC Jan - Dec 2022
- Dr. Arun Thomas: Received MSME Innovation Grant of Rs. 5 Lakhs for the project Intelligent Shopping Trolley.
- Dr. Arun Thomas: Selected for Idea grant 2022 from Kerala startup Mission.
- Saran K B: Selected for Idea grant 2022 from Kerala startup Mission.
- Dr. Vishnu Rajan was appointed as Question Paper Setter for KTU EC303 AET for 5th Sem University Examination.

- Dr. Vishnu Rajan attended invite only event Startup Bootcamp | University Edition by Google Developers collaborated with AICTE.
- Proposal submitted by Dr. Vishnu Rajan approved to conduct Android Campus Fest 2022 on collaboration with Android Educator Community, India.
- Dr. Silpa PA registered as Indian Patent agent.
- Dr. Vishnu Rajan has been appointed as the external evaluator for 22EC5104 Artificial Intelligence & Machine Learning at KL University, Andhra Pradesh. He successfully completed the course Postgraduate Diploma: Project Management on 03/20/2023 as taught by The Retail Banking School on Udemy. He had participated in Embedded C and Assembly Language Programming on Feb 30, 2023. Also he completed a course on, "Foundations of Project Management" a 4 week course, authorized by Google and offered through Coursera during February 2023
- Dr. Shilpa P. A incorporated a startup company named Nanograph Pvt. Ltd and incubated at Sahrdaya TBII Hub

#### 4.2 Workshop and FDPs attended/ organised

##### BM

- Dr. Yuvaraj V attended the participated & completed successfully AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Nanostructured Materials and Their Applications" from 07/02/2022 to 11/02/2022 at National Institute of Technology Manipur.
- Mrs. Reshma Jose from Biomedical Department successfully completed the 5-day online FDP on the theme "Inculcating Universal Human Values in Technical Education" organized by All India Council for Technical Education(AICTE) from 28th March, 2022 to 1st April, 2022.
- Mr. Jis Paul, Mr. Jibin Jose, Mrs. Remya George, Dr. Yuvaraj V, Ms. Supriya Mary Sunil and Mrs. Reshma Jose attended two-day Online Faculty Development Programme on "Recent Trends in Bio-signal Acquisition and Research Perspectives in Signal Analysis" during 25-26, March 2022 organized by Department of Instrumentation and Control Engineering, NSS College of Engineering, Palakkad.
- Dr. Remya George completed ISO/IEC 17025 : 2017 Laboratory System and Internal Audit training, Quality Council of India (19-20 Apr 2022) sponsored by Helix India Pvt.Ltd
- Dr. Remya George completed Fluke Advantage training - Defibrillator and Pacemaker Testing on February 22, 2022 and Fluke Advantage Training Electrical Safety Testing using ESA 620 On February 25, 2022.
- Dr. Jis Paul participated in Sashthrapadam Creative Residential workshop held at Muvattupuzha NEST as resource person on 20/1/2023 and 21/1/2023.
- Dr. Remya, Dr. Jis Paul, and Ms. Reshma Jose attended a five day KTU sponsored FDP-"Project based learning -Basics to Implementation" organized by the Department of Electronics and Communication from 16th to 20th January 2023. Mr. Jibin Jose was one of the speakers and delivered a talk on the topic "Introduction to Intellectual property & Indian Patent Procedures".
- Dr. Finto Raphael, Ms. Sukanya and Ms. Reshma Jose attended KTU Sponsored 5-day offline Faculty Development Programme on "Recent Advances and Research Challenges in Electric Vehicle System Design" organized by Department of Electrical and Electronics Engineering from 30/1/2023 to 3/2/2023.
- Dr. Yuvaraj V attended KTU Sponsored 3 Day FDP of Biotechnology department on "Sustainable Bioreactor Processes and Applications in Bioenergy and Bio-waste Management" from 1/2/2023 to 3/2/2023.
- Dr. Jis Paul attended APJ Abdul Kalam Technological University Sponsored Five Day Offline Faculty Development Programme on the topic "Data Science and Its Engineering Applications" organized by the Department of Computer Science and Engineering, Sahrdaya College of Engineering and Technology from 30th January to 3rd February, 2023.
- Ms. Supriya Mary Sunil participated in the five day Faculty Development Programme on "Research Innovations, Self Learning and Entrepreneurship" organized by the Department of Civil Engineering, NSS College of Engineering, Palakkad, and sponsored by APJ Abdul Kalam Technological University, Kerala from 30/1/23 to 3/2/23.
- Ms. Arathy M participated in the five day Faculty Development Programme on "Introduction to augmented and virtual reality" organized by the Department of Electronics and Communication Engineering, Christ College of Engineering, Irinjalakuda, and sponsored by APJ Abdul Kalam Technological University, Kerala from 30/1/23 to 3/2/23.



- Ms. Lavina participated in the five day Faculty Development Programme on “Research publications and ethics intended for Research scholars in collaboration with IEEE” organized by the Department of Electrical and Electronics Engineering, Jyothi Engineering College, Thrissur, and sponsored by APJ Abdul Kalam Technological University, Kerala from 23rd to 28th January 2023.
- Mr. Jibin Jose attended a One day training program on “Problem canvas creation” conducted by Kerala StartUp Mission, ICT Academy of Kerala and K-DISC on 13th February 2023. He participated in the Departmental workshop of YIP 5.0 conducted on 14th and 15th February 2023 which was appreciated by the District Collector for bringing realistic problems that helped to improve the quality and effectiveness of the program. He attended a one day Faculty Development Program organized by the Kerala Startup Mission for Nodal Officers as part of IEDC Summit 2023 on 3rd March 2023 at Rajagiri College of Engineering and Technology.
- Ms. Reshma Jose and Dr. Jeethu Raveendran have attended boot camp organized by the Technology Business Incubator & Innovation Hub (TBII) of Sahrdaya College of Engineering & Technology as part of Research Innovation Programme for Women Startups (RIPWS) project of Research Innovation Network Kerala (RINK) - Kerala Startup Mission held at the Integrated Startup Complex-KSUM, Kochi on 25 March 2023.

#### BT

- Dr.Amitha Joy participated in the Skill Development Program organized by CytoGene Research & Development, Lucknow from 04/03/22 to 06/03/22 & attended a Workshop on Computer Aided Drug Design for SARS-CoV-2 by Centre for Continuing Education, Madras.
- Dr. Dhanya Gangadharan, Dr. Uma Krishnakumar, Dr. Amitha Joy, Dr.P. Praveena, Ms. Salini. P. J and Ms. Smeera Thomas attended a One Day Faculty Development Program titled “Technical Paper Writing using LaTeX” on 22nd October 2022, organized by the Department of Computer Science and Engineering in Association with IQAC Sahrdaya.
- Ms Marria C Cyriac attended a one week international Faculty Development Program on “Advanced Research and Quality Publication” organized by the Federal Institute of Science and Technology, from 29 Aug to 02 Sep 2022.
- Dr. P Praveena, Ms. Salini. P. J, Ms. Smeera Thomas and Ms. Marria. C. Cyriac had attended a technical session titled 'Research Design – Reference Management Software & Tools for Literature Survey and Review' conducted on 19 Nov 2022 by Dr. Nishy P, Chief Scientist, CSIR-National Institute for Interdisciplinary Science and Technology, Trivandrum”, organized jointly by RDC & IQAC Sahrdaya.
- Mr. Francis John. V, Ms. Marria.C.Cyriac, Dr. Amitha Joy, Dr. Danya Gangadharan, Ms.Smeera Thomas, Dr.P. Praveena, Dr. Uma Krishnakumar participated in IP Awareness/ Training program under National Intellectual Property Awareness Mission on 30 March 2023.
- Sahrdaya faculty members attended a three day FDP on ‘Sustainable Bioreactor Processes and Applications in Bioenergy and Bio-waste Management’ jointly organized by Department of Biotechnology, SCET and KTU during 1-3 Feb 2023.

#### CE

- Dr. Drisya M attended a 5 day FDP on “Advances in highway technology and traffic systems” organized by the Department of Civil Engineering, Ramaiah Institute of Technology Bangalore from 07/02/2022 to 11/02/2022.
- Dr. Drisya M, Ms Gokila Chandran, Ms Haritha C R, Ms Jismy Antony, Ms Ragi C Ravindran and Ms Sujana R had attended a One Day Faculty Development Program titled “Technical Paper Writing using LaTeX” on 22nd October 2022, organized by the Department of Computer Science and Engineering in Association with IQAC Sahrdaya.
- Ms.Jismy Antony attended BIM international conference on 29th October 2022, organized by BIM channel in association with DZYN & CADD international.
- Ms Jismy Antony and Ms Sujana R had attended a One Day Faculty Development Program titled 'Research Design – Reference Management Software & Tools for Literature Survey and Review' conducted on 19th Nov, 2022 by Dr. Nishy P, Chief Scientist, CSIR-National Institute for Interdisciplinary Science and Technology, Trivandrum”, organized by the Department of Computer Science and Engineering in Association with IQAC Sahrdaya.

#### CSE

- Ms.Elsa Raju.A, Ms. Sreetha E S, Ms. Megha K K, Ms.J asmy Davies, - 5-day online FDP on the theme “Inculcating Universal Human Values in Technical Education” organized by All India Council for Technical Education(AICTE) from 9<sup>th</sup> to 13<sup>th</sup> May, 2022.
- Ms.Elsa Raju A Participated in one week CSI FDP on Advances in Natural Language Processing Using AI organized by the Department of Computer Science & Engineering, Vimal Jyothi Engineering College from 14<sup>th</sup> to 18<sup>th</sup> March 2022.
- Dr. R.Satheeshkumar, Ms. Anusree.K, Ms. Lakshmi M B, Ms. Megha K K, Ms. Princy T D, Ms. Anly Antony and Ms. Elsa Raju had attended a five Days Faculty Development Program titled “AI & ML – Industry Practices & Perspectives” from 12/9/2022 to 16/9/2022, organized by Vidya academy of science and technology.
- Dr. Krishnadas J attended a five Days Faculty Development Program titled “MACHINE LEARNING: A Trajectory through The World of Adaptive Algorithms” from 29/8/2022 to 2/9/2022, organized by SCMS school of engineering and technology.
- Ms. Sreetha E.S and Dr.Krishnadas J had attended five Days Faculty Development Program titled “Advancements in image processing applications SCMS school of engineering and technology” from 22-08-2022 to 26-08-2022, organized by Jyothi Engineering College.
- Ms. Anusree K attended a five Days Faculty Development Program titled “MACHINE Artificial Intelligence” from 26/8/2022 to 31/8/2022, organized by Lourdes Matha College of Science and Technology.
- Ms. Livya George , Ms. Uma E S, Ms. Megha K K, Ms. Princy T D , Ms. Anly Antony and Ms. Elsa Raju had attended five Days Faculty Development Program titled “Advanced research and quality publication” from 29/08/2022 to 2/9/2022, organized by Federal Institute of Science and Technology.
- Ms. Lakshmi M B attended a five Days Faculty Development Program titled “Demystifying Machine Learning Algorithms” from 10/10/2022 to 14/10/2022, organized by Muthoot Institute of Technology & Science.
- Ms.Elsa Raju.A participated in the five day Faculty Development Programme on “Introduction to augmented and virtual reality” organized by the Department of Electronics and Communication Engineering, Christ College of Engineering, Irinjalakuda, and sponsored by APJ Abdul Kalam Technological University, Kerala from 30/1/23 to 3/2/23.
- Ms.Anusree K attended five day Faculty Development Programme on “Introduction to augmented and virtual reality” organized by the Department of Electronics and Communication Engineering, Christ College of Engineering, Irinjalakuda, and sponsored by APJ Abdul Kalam Technological University, Kerala from 30/1/23 to 3/2/23.
- Mrs. Uma E S participated in a five day FDP on "Data science and it's engineering applications " organized by the department of computer science and engineering, SCET , from 30/01/2023 to 03/02/2023.

## ECE

- Dr. Vishnu Rajan, Ms. Anju Babu, Ms. Ambily Francis attended an AICTE sponsored FDP on "Inculcating Universal Human Values in Technical Education" during 28<sup>th</sup> to 4<sup>th</sup> March, 2022.
- Dr. Vishnu Rajan attended an FDP on “Python for Data Science” 31<sup>st</sup> January 2022 to 30<sup>th</sup> March 2022 organised by IIT Madras Swayam.
- Mr. Saran K B have attended an AICTE FDP on "Inculcating Universal Human Values in Technical Education" during 14/03/2022-18/04/2022”.
- Dr G R Gnana King attended AICTE Refresher 1 course on "Inculcating Universal Human Values in Technical Education" during “25<sup>th</sup> April, 2022 to 29<sup>th</sup> April, 2022” also attended KSUM Bootcamp on "Research Innovation Network(RINK)-Research translation and commercialisation” on 8 April 2022, AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "AI and ML for Intelligent Applications Using Python and MATLAB” during 21/02/2022 to 25/02/2022.
- Ms.Ambily Francis attended an AICTE – ATAL FDP on “Robust AI - Building through data exploration, preprocessing and representation” during 04/02/2022-08/02/2022 & participated in high-end workshop on "Next generation medical devices: focusing on therapeutics and diagnosis- Series 1" held at National Institute of Technology, Rourkela during 7/2/2022 to 11/2/2022, and also participated in an ATAL FDP "Wearable Devices" during 17/1/2022 to 21/1/2022 at St.Josephs College of Engineering, Pala.
- Ms. Vidyamol K has successfully completed 4 weeks (65 hours) online Lab Workshop on ‘FPGA Architecture and Programming using Verilog HDL’ jointly organized by Arm Education and NIELIT Calicut during 11<sup>th</sup> May 2022 to 08<sup>th</sup> June 2022.

- Dr. Vishnu Rajan attended an FDP on Android Application Development using Kotlin by Smart Internz and NEAT. He had successfully completed the Google Supported Educator Development Program on "Android Basics in Kotlin" Organized by AICTE during the period July to August 2022.
- Dr. Arun Thomas organized one day workshop in association with C-DAC on VEGA Processors.
- Mr. Saran K B organized two day workshop in association with EEE Dept on Eyantra - Robotics for S5 EEE students.
- All faculty members of Department of ECE has successfully participated in IP awareness/training program on march 30,2023
- Dr. Vishnu Rajan attended an FDP on ML and DL Applications in Computer Vision organized by Adisankara institute of Science and Technology from 30th January 2023 to 2nd February 2023
- Dr. Vishnu Rajan and Ms. Binet Rose organized and conducted a KTU Sponsored FDP on Project Based Learning- Basics to Implementation” from 16th - 20th January 2023
- Dr. G. R. Gnana King from Sahrdaya College of Engineering and Technology, Thrissur has participated in the Five day APJAKTU Sponsored FDP On “Project Based Learning - Basics to Implementation” during 16 to 20th January 2023, Organized by Department of Electronics and Communication Engineering, Sahrdaya College of Engineering and Technology, Kodakara, Thrissur, Kerala.

**EEE**

- Ms. Drisya K Sasi attended AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Topics in Hardware Security" from 27/12/2021 to 31/12/2021 at Indian Institute of Technology Ropar.
- Dr. V. Vijikala attended AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Planning and Operation of Smart Grids: Recent Trends and Developments" from 06/12/2021 to 10/12/2021 at TKM College of Engineering, AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Nonlinear Systems: Dynamics and Control" from 13/12/2021 to 17/12/2021 at Government Engineering College & a one day Faculty Training Program on “Green Energy Technologies for Sustainable Development” from 23/05/2022 to 27/05/2022 at SCMS School of Engineering & Technology.
- Mr. Sebin Davis K, Ms. Ashna Mohan, Mr. Abhijith R Prasad, Mr. Adarsh S R & Ms Maria Rose K J attended a one day Faculty Training Program on “Introduction to FUSION 360” conducted by BIMIT CAD & BIM training services, M/S Coretech Solution.
- Dr. Vijikala V, Ms. Drisya K Sasi, Mr. Sebin Davis K, Mr. Adarsh S R, Ms. Maria Rose K J and Ms. Neethu John has participated in the Faculty Development Programme "Emerging trends in power electronics and control for electric vehicle and smart grid" organized by the Department of Electrical Engineering, Government Engineering College Palakkad, sponsored by TEQIP-II during September 19 - 23, 2022.
- Ms. Drisya K Sasi, Mr. Sebin Davis K and Ms. Neethu John has attended 5-day online International Short Term Training Programme (ISTTP) titled “Research Trends in EV Technology and Sustainable Microgrids-2022” organized by Department of Electrical Engineering, NIT Jamshedpur during November 5-9 2022.
- The Department of EEE organized a 5 day KTU sponsored FDP on “Recent Advances and Research Challenges in Electric Vehicle System Design” during 30th January to 3rd February 2023.
- All the faculty members of EEE Department attended a 5 day KTU sponsored FDP on “Recent Advances and Research Challenges in Electric Vehicle System Design” during 30th January to 3rd February 2023.
- Ms. Drisya K Sasi attended a 5-day online Short-Term Course (STC) titled Emerging Applications of AI and IoT: Opportunities and Challenges-2023 organized by Department of Electrical Engineering, National Institute of Technology Jamshedpur during 22-26 March 2023.
- Ms. Drisya K Sasi successfully completed the EBSCO Training on EBSCO eBooks/ECM on 25th February 2023
- Ms. Drisya K Sasi has participated in the online training/webinar on “IEEE Xplore” organized by Sahrdaya College of Engineering & Technology Kodakara.

**ASH**

- Dr. Sudha George Valavi, Joint Director attended a one week international Faculty Development Program on “Advanced Research and Quality Publication” organized by Federal Institute of Science and Technology, from 29/08/22 to 2/09/22.
- Dr. Sukhila krishnan



1. Completed two AICTE based MOOC courses of NITTR a) Student assessment and evaluation b) Creative problem solving, innovation and meaningful R &D.
2. Attended a one week international Faculty Development Program on “Advanced Research and Quality Publication” organized by Federal Institute of Science and Technology, from 29/08/22 to 2/09/22.
3. Attended a Five day online Faculty Development Program on “Insights on Emerging research in Chemical Science” organized by School of Sciences (Chemistry), NIT Andhra Pradesh, from 10/10/22 to 14/10/22.
4. Attended the International Faculty Development Program on “Productive Scientific Discourse” organized by the Department of Applied Science, Vidya Academy of Science and technology from 10/10/22 to 14/10/22.
- Ms. Jemcy Antony participated in a national webinar “Role of Quantitative tools in Social Science Research” on 08-03-2022 organized by Department of Mathematics, in association with IQAC, St. Aloysius College, Thrissur.
- Ms. Swapna Joseph, Ms. Savita Paul, Ms. Vini Valsan, Ms. Lickny I, Ms. Jimi K J, Ms. Rani Thomas, Ms. Jemcy Antony attended the International Faculty Development Program on “Productive Scientific Discourse” organized by the Department of Applied Science, Vidya Academy of Science and technology from 10/10/22 to 14/10/22.
- Dr. Joseph Jestin, Librarian
  1. Attended a webinar on “How to Make a Blog for Your Library” Learn Step by Step” by Dr Rajesh Sharma, Librarian, KV Bilaspur organized by DELNET on 29th October, 2022.
  2. Attended the Author Workshop APJAKTU : Understanding Research Metrics and Elsevier’s Science Direct on Tuesday 22 November, 2022.
  3. Attended DELNET-CEMCA Webinar on “Leveraging OERs to Enhance Higher Learning on 30th September, 2022.
  4. Attended a webinar on “From Innovative Ideas to Scholarly books and Open access” organized by Taylor & Francis Group on 19th January 2023.
  5. Attended KTU Sponsored five days Faculty Development Programme in ‘Recent Advances and Research Challenges in Electric Vehicle System Design’ Organized by Department of EEE, SCET from 30th January 2023 to 3 February 2023.
  6. Attended a Webinar on Fostering Research and Innovations in Institutions for Strengthening Tomorrow by Dr. Krishna Venkatesh conducted by DELNET on 25th February 2023.
  7. Organized EBSCO training on Value of EBSCO Biotechnology Collection: India & eBook Engineering Core in Research and Career Development: Training for Sahrdaya College of Engineering & Technology on 25.02.2023.
  8. Dr. Joseph Jestin coordinated the IEEE Training Session: “IEEE - Enhancing Your Project Work and Research” in collaboration with Sahrdaya College of Engineering & Technology on 25th February 2023.
  9. He participated in IP Awareness/Training program under National Intellectual Property Awareness Mission organized by Intellectual Property Office, India on March 30th 2023.

#### 4.3 Paper Publications & Presentations by Faculty Members

##### ASH

- Dr. Sukhila Krishnan had written a Chapter in Book titled :Elastomer Blends and Composites., Chapter 15- Applications of elastomer blends and composites, Woodhead Publishing is an imprint of Elsevier, 2022 ISBN 9780323858335, 18 March 2022
- Dr. Sukhila Krishnan delivered an Expert Talk to Short term Course on “Advanced processing & fabrication methods of polymers for various applications” held from 30/3/2020 to 31/3/2022 at CIPET: IPT Bhubaneswar

##### BM

- Ms. Reshma Jose published a paper titled “Liver cancer detection based on various sustainable segmentation techniques for CT images” in the International Journal of Environmental Technology and Management, 2022, 25(3), pp. 166–179.
- Mr. Jibin Jose presented the paper titled “TOYBOT”: An interactive exercise companion for rehabilitation of geriatric, sedentary and obese children at the EMPOWER 2022 conference held at the IIT Research Park, Chennai from October 13th-15th 2022.

- Dr. Remya George and Mr. Jibin Jose presented the paper “Toybot: An Interactive Exercise Companion For Rehabilitation Of Sedentary And Obese Children” during IEEE Conference on Information & Communication Technology (IEEE CICT-2022) on 20.11.22 organized by IIITM Gwalior.
- Dr. Remya George and Mr. Jibin Jose presented the paper “Wearable Smart Cervical Collar with Real-time Rehabilitation of Neck Posture Correction” during IEEE Conference on Information & Communication Technology (IEEE CICT-2022) on 20.11.22 organized by IIITM Gwalior.
- Dr. Remya George and Dr. Finto Raphel presented the paper “Automated Detection And Classification Of Lung Sound Using A 3-D Printed Electronic Stethoscope” during IEEE Conference on Information & Communication Technology (IEEE CICT-2022) on 20.11.22 organized by IIITM Gwalior.
- Ms. Reshma Jose published a paper titled “Liver Tumour Classification using Optimal Opposition Based Grey Wolf Optimization” in the International Journal of Pattern Recognition and Artificial Intelligence (2022) 2240005 (23 pages), DOI: 10.1142/S0218001422400055.
- Dr. Remya George and Ms. Reshma Jose published a paper titled “Effects of long-term exercise training on physiological signals and personality traits in women in law enforcement” in the Journal of Intelligent and Fuzzy Systems Systems 44 (2023) 1085–1097, DOI:10.3233/JIFS-221588. (SCI-E)

#### BT

- Ms. Ranimol. G published a Book Chapter in the Handbook of nutraceuticals and natural products: Biological, medicinal and nutritional properties and applications, Wiley Online Library, 2022
- Ms. Ranimol. G published a paper ‘A comparative study of free laccase and laccase immobilized in copper alginate’ in Indian Journal of Biochemistry & Biophysics 59:214-23, 2022.
- Amitha Joy, Arun John, Padman Midhila and Praveena P. In silico Identification of Potential Small Molecules Targeting Six Proteins in Nipah Virus using Molecular Docking, Pharmacophore and Molecular Dynamics Simulation. Letters in Drug Design & Discovery 2022;19(1-15). (SCIE)
- Ms Salini P J published a paper titled “ Treatment of vehicle wash wastewater by Fenton process and its recycling” in Materials Today: Proceedings, volume 57, Part 6, Pages 2444-2451.
- Dr. Amitha Joy, Dr. Midhila Padman and Dr. P. Praveena published a research article titled ‘In silico Identification of Potential Small Molecules Targeting Six Proteins in Nipah Virus using Molecular Docking, Pharmacophore and Molecular Dynamics Simulation’ in Letters in Drug Design & Discovery’ (SCIE).
- The paper titled ‘Docking and Molecular Dynamics Simulation Studies for the Evaluation of Laccase Mediated Biodegradation of Triclosan’ presented by Ms. Ranimol.G, faculty of Department of Biotechnology and Ms. Devipriya. C.B, Post Graduate student in Department of Biotechnology, in the International Conference Biogangam 2022, was published in the conference proceedings ‘Advances in Biological Sciences and Research’, 2023 (Scopus).
- The paper titled ‘Phytochemicals as potential drug candidates for SARS-CoV-2: An RDRp based in silico drug designing -’ presented by Ms. Marria.C Cyriac, faculty of Department of Biotechnology and Ms. Christy Joy, Post Graduate student in Department of Biotechnology in the International Conference Biogangam 2022, was published in the conference proceedings ‘Advances in Biological Sciences and Research’, 2023 (Scopus)

#### CSE

- Dr. R. Satheesh Kumar, Professor and Head, Published a Textbook titled “Handbook of IoT and Big Data”, Scientific International Publishing House, 2022 (ISBN No.: 978-93-5625-141-0).
- Dr. R. Satheesh Kumar, Professor and Head, Filed an Indian patent titled “Machine Learning and Deep Learning based Medical Image Segmentation and Feature Extraction Scheme for Practitioners using Multi-Dimensional Clinical Data”, 2022 (Application No.: 202241005300).
- Dr. R Satheesh Kumar published a paper titled “HTLV Virus Prediction Using Enhanced Machine Learning Techniques InRStudio” in Muktsabd Journal. (UGC Indexed) 2022,
- Ms. Jasmy Davies, and Dr. R Satheesh Kumar published a paper titled “Tuberculosis detection using Convolutional Neural Network” in Muktsabd Journal. (UGC Indexed) 2022.
- Dr. R. Sunder, and Dr. R Satheesh Kumar published a paper titled “Automatic Deep Learning Glaucoma System” in Muktsabd Journal. (UGC Indexed) 2022.
- Ms. Anly Antony M, and Dr. R Satheesh Kumar published a paper titled “An Efficient Thyroid Prediction System for a Healthy Society” in Muktsabd Journal. (UGC Indexed) 2022.

- Dr. KrishnadasJ, and Dr. R Satheesh Kumar published a paper titled “ICU Mortality Prediction using Machine Learning” in Muktsabd Journal. (UGCIndexed) 2022.
- R. Satheesh Kumar “A Comparison Study on Machine Learning Approaches for Thyroid Disease Prediction”, “Virus Prediction using Machine Learning Techniques”, “A Review on Tuberculosis Identification Using Convolutional Neural Networks”, published in the proceedings of IEEE International Conference on Advanced Computing & Communication Systems-(ICACCS-2022), Organized by Sri Eshwar College of Engineering, Coimbatore, Tamilnadu, India on 25th & 26th March 2022.
- Ms. Divya R published a paper titled “Eye-Tact: An ensemble based multi-model and multidimensional approach for fall prediction and evaluation in Parkinson's Disease patients” in Expert Systems journal, DOI: 10.1111/exsy.13182, 19 October 2022, WILEY.
- Ms. Deepa Devassy presented a paper titled “Energy-Efficient Chicken Swarm Optimization Algorithm Using Multiple Cluster Head Selection in Wireless Sensor Networks” in Third International Conference on Innovation in Science and Technology for Sustainable Development.
- Dr. Manishankar S presented a paper titled A Cloud Based Interactive Framework For Emergency Medical Data Sharing Fourth Annual International Conference on Data Science Machine Learning and Blockchain Technology(AICDMB 2023) held on March 16th and 17th 2023

#### ECE

- Dr. Vishnu Rajan presented a paper, Navitrolley -An AI Integrated Path Finding Robot, 2022 International Conference on Computing, Communication, Security and Intelligent Systems (IC3SIS), IEEE Xplore.
- G. R. Gnana King, "Fusion of Multimodality Medical Images- A Review," 2021 Smart Technologies, Communication and Robotics (STCR), 2021, pp. 1-6, doi: 10.1109/STCR51658.2021.9588882.(IEEE Xplore- Scopus Indexed)
- Gnana King, G.R. (2022). Analysis of MRI and SPECT Image Fusion in the Wavelet Domain for Brain Tumor Detection. In: Rout, R.R., Ghosh, S.K., Jana, P.K., Tripathy, A.K., Sahoo, J.P., Li, K.C. (eds) Advances in Distributed Computing and Machine Learning. Lecture Notes in Networks and Systems (Book Series), vol 427. Springer, Singapore. [https://doi.org/10.1007/978-981-19-1018-0\\_53](https://doi.org/10.1007/978-981-19-1018-0_53) . (Scopus Indexed)
- G. R. Gnana King (2022) Brain Tumour classification: a comprehensive systematic review on various constraints, Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization, DOI: 10.1080/21681163.2022.2083019. (ESCI , Scopus Indexed)
- G. R. Gnana King (2022) “Comparative Analysis and Fusion of MRI and PET Images based on Wavelets for Clinical Diagnosis” in International Journal of Electronics and Telecommunications, 2022, VOL. 68, NO. 4, PP. 867-873, DOI: 10.24425/ijet.2022.143896. (ESCI , Scopus Indexed)
- Ambily Francis, Immanuel Alex Pandian and Anitha J (2022) A boon to aged society: Early diagnosis of Alzheimer's disease—An opinion. Front. Public Health 10:1076472. doi: 10.3389/fpubh.2022.1076472
- Ambily Francis, Vishnu Rajan, Immanuel Alex Pandian. "Implementation of Deep Learning Approaches for Early Detection of Parkinson's Disease from MRI Images". In Advancement, Opportunities, and Practices in Telehealth Technology 2022 (pp. 187-197). IGI Global. (Book Chapter).
- Dr. Gnana King G R, Published a book chapter entitled “ Intelligent 5G Networks and Augmented Virtual Reality in Smart Transportation” in the book “Artificial Intelligence in Cyber Physical Systems Principles and Applications” with ISBN 9781032164830, February 23, 2023
- Dr. Gnana King G R, Published Model-Based Design for Mispa CountX Using FPGA. In: Shakya, S., Balas, V.E., Haoxiang, W. (eds) Proceedings of Third International Conference on Sustainable Expert Systems . Lecture Notes in Networks and Systems, vol 587. Springer, Singapore. (Scopus Indexed)

#### EEE

- Dr. Sivamani Chinnaswamy, Ms. Aswiga R. V, Dr. V. Vijikala, “Analysis of DC and RF performance of Al<sub>0.31</sub>Ga<sub>0.69</sub>N/ Al<sub>0.1</sub>Ga<sub>0.9</sub>N/  $\beta$ -Ga<sub>2</sub>O<sub>3</sub> double quantum well HEMT on silicon carbide substrate”, ‘Wiley publication’, (SCI)
- Dr. V. Vijikala presented the paper “Brushless Direct Current Motor Analysis and Controller Design” during IEEE Conference on Intelligent Computing, Instrumentation and Control Technologies (IEEE ICICICT-2022) on 11.08.22 organized by VJEC Kannur.

#### 4.4 Outreach Activities

- Dr. Vishnu Rajan had served as a resource person for the event Google IO Extended Thrissur on June 25, 2022.
- Dr. Remya George and Mr. Jibin Jose delivered a session on “Innovation Development through academic project work” on 19/02/2022 at IEDC , Govt. Polytechnic College , Perinthalmanna.
- SAHRDAYAM 22 - Association of Sahrdaya Civil Engineering Department as technical consultant, Ernakulam District Life Mission project and Kunnukara Grama Panchayath for the construction of 51 Rehabilitation homes for the homeless; started with a site visit and discussion with Grama Panchayath officials, life mission District co ordinator and Suriya Homes the Contraction partner in the project.
- The Department of Civil Engineering had conducted the traffic volume survey for the Project "Design of Intersection for Ollur Central in Thrissur district", work order received from KSCSTE - NATPAC.
- A social Extension programme SAHRDAYAM 2023 of Constructing an house of 46.5Sqm(500 Sq Ft) for Santha P C one of our CMC staffs recommended by Kodakara Grama Panchayath was started on 23rd March and presently the super structural works up to lintel and sunshade including the concrete works are completed. The works are progressing and is expected to finish by June 2023

#### 4.5 Invited expert talk by faculty

##### Dr. R Sunder

1. Keynote Speaker for the first International Conference on Neural network and Machine learning hosted by University of Jember, Indonesia on November 29-30, 2022.
  2. Speaker for the Colloquium series Hosted by University of Jember Indonesia November 25, 2022.
  3. Guest lecture given on “Field Exposure visit to incubation unit and patent Facilitation centre” held at Theivanai Ammal College for women, Tamil Nadu, during 29-09-2022.
  4. Guest lecture given on “Lear Earn connect to professional Courses” held at Mets School of Engineering, Kerala, during 26-10-2022.
  5. Session chair in the IEEE Mysurucon 2022-2nd Edition of the flagship International Conference series of IEEE Mysuru Subsection in association with Bengaluru section Hosted by JSS Science and technology university, partnered (Academic) with NIITE Meenakshi institute of technology Bengaluru October 16-17, 2022.
- Dr. Vishnu Rajan served as a resource person for a workshop on industrial automation using microcontrollers from February 27th to March 1st, 2023, at GPTC Nedumkandam
  - Dr G R Gnana King delivered a special lecture on “Fundamentals of Image Processing” to Final Year B.Tech – CSE Students of SRM Institute of Science and Technology on 08/02/2023.
  - Dr. Jis Paul, Asst. Professor, Sahrdaya College of Engineering & Technology, Thrissur served as a Resource person in the one day workshop on "Development of Soft Skills for Entrepreneurship among Agri-Graduates" held at TBI, Mannuthy of Kerala Veterinary and animal Sciences University, Wayanad on 4th March 2023.
  - Mr. Jibin Jose, Nodal Officer, IEDC Sahrdaya delivered an expert talk on Process of Innovation Development, Technology Readiness Level, Commercialisation of Lab Technology- Transfer to the students of Sahrdaya College of Advanced Studies on 25/3/2023.
  - Dr. Leon Ittiachen, Director SCET delivered a lecture on ‘Translational Research’ to B.Tech Biotechnology students studying Bio Business and Social Entrepreneurship courses at Vellore Institute of Technology, Vellore on 17 February 2023.
  - Dr. Manisankar S acted as a resource person for an FDP on Elastic Cloud Computing for IoT organized by Presidency University Bangalore on 23-09-2022.

#### 5.0 Technical Associations:

The Technical Associations in all the six departments organized a number of Programmes to promote the technical and organizational skills of the students. A number of invited talks and symposium were organized by the Technical Association. The following are some of the major Programmes organized during the report period.

#### 5.1 EBSA (BIOMEDICAL ENGINEERING DEPARTMENT)



- The blessing of the new lab "Biomedical Workshop" and inauguration of the books donated by BM Alumni (2011-2015 & 2012-2016 batch) to the Department Library was on 11/04/2022.
- A five day internship program was offered by EBSA to the students of K.KARUNAKARAN MEMORIAL MODEL POLYTECHNIC COLLEGE, Mala from 23rd to 27th May 2022.
- A demo session on analysers was conducted by the company RIGEL on 9/3/2022.
- MODROBS AICTE 2021 (MODERNISATION AND REMOVAL OF OBSOLESCENCE) scheme was applied by Dr. Finto Raphae, Associate Professor & HoD BM and Ms. Sony N S, Assistant Professor BM is sanctioned to the Biomedical Engineering Department of SCET to modernize and remove obsolescence and thereby enhance the functional efficiency of the Biomedical Clinical Instrumentation Laboratory.
- Faculty members and students of the department of Biomedical Engineering represented the department and Sahridaya at the Health Tech Summit of Government of Kerala.
- An alumni interaction was arranged on 25/01/2022; by Mr. Leeson Varghese of 2014-18 BM Batch currently working as Biomedical Engineer at Dubai.
- An online talk on the topic "Analytical and Diagnostic Equipments" was conducted on 18/2/2022 by the Industrial Expert Dr. Peter Varkey, Sr.Manager, QA, Agappe Diagnostics Ltd, Ernakulam, Kerala.
- Mr. Dipu K Boss (BM alumnus), Business Head, Indian Subcontinent, Philips, donated an Automatic External Defibrillator (Cost 130000₹) to the Department of Biomedical Engineering,
- Dept of BME in association with EBSA is organized Expert talk on the topic "How to Build your Career in Biomedical Engineering" on 10th March 2022 by Mr. Ayyappadas, Chief Training Officer and Mr. Harish Krishna, HR Manager, Harvey Biomedical systems, Bangalore on 10/03/2022.
- The Biannual department newsletter SILIENCE- Vol 8, Issue 2 was released on 22/3/2022 by Executive Director Rv. Fr. George Pareman.
- Mr. Jibin Jose, Asst. Professor, BME conducted a talk on "Leadership Skills for Teachers" on 25/3/2022.
- The department of Biomedical Engineering conducted a two day Interactive seminar cum Hands on workshop on-"Electronic product building" by Antu Dominic chief technical officer, Truetek world, Angamaly on 3rd and 4th of June 2022.
- The students from third year BME attended the KIMS National Biomedical Conference and visited the Testing and Calibration lab facility of KIMS, Trivandrum on 13th of June 2022.
- Mr. Prayag (2010-14 Batch) currently working as Purchase head in a leading hospital in Oman visited the department and interacted with the students of S5 and S3 on 22/9/2022.
- The students of S5 BM visited the HOSPEX HEALTHCARE EXPO EVENT conducted at Adlux International Convention Center hosted by Aster Medicity in association with IMA and ISA on 24th September 2022.
- On World Heart's Day (29th September) EBSA in association with IEDC conducted a Medical Exhibition to spread awareness about different types of cardiac related disorders and demonstrated the working of different therapeutic and diagnostic equipment.
- S7 BM students visited Dentcare Dental Lab Pvt Ltd in Muvattupuzha, Ernakulam which is the largest dental lab in Asia and ISO 9001:2008 and EN ISO 13485:20012 certified on 1/10/2022 to familiarize different world-class dental prostheses products.
- An Add on program on Medical equipment testing, safety and calibration was conducted for Final year Biomedical Engineering students by Fluke India on 24th and 25th November 2022.
- A workshop on Python and Raspberry pie was conducted on 24th and 25th November 2022 for third year students by Mr. Abin and Mr. Prince of Teqard Labs Pvt Ltd, Cochin.
- Ms. Begi Margaret, a Senior Principal Consultant, INFOSYS limited and presently ETA DC manager at Hyderabad STP delivered a talk on "Etiquette and Professional Manners" for Biomedical Engineering students on 10th January 2023.
- A session on "Technical paper writing" was conducted by Dr. Pooja Das Manjulabhai and Dr. Jeethu Ravindran on 27th February 2023 for third year students.
- Mr. Linto Xavier, alumni of Biomedical Department (2009-12 Batch) currently working as Pathological Equipment specialist at Lyka Company in New Zealand visited the department and interacted with students on 16th March 2023.

- The NDLI Club of Sahridaya College of Engineering and Technology in association with EBSA conducted an Online poster making competition on March 23rd 2023 on the theme: “Good Air Quality for Healthy Life”.
- A session on “pacemaker” by Rinoj Davis (2012 alumnus) from Medtronic India was conducted on 24th March for third year students.
- Ms. Honey Hycinth, Associate Scientific Writer, Indegene and Assistant Engineer QA/RA, Dynamic Techno Medicals delivered a session on Medical Regulations and standards for final year students 31st March 2023.
- A Hands- on Training on Solid Works was conducted for second year Biomedical Engineering students on 31st March and 1st of April 2023 by Abin Kuriakose and Vinay S of Solid Works.
- The department of Biomedical Engineering released its Biannual newsletter SILIENCE on 29/3/2023.
- The students of S6 Biomedical Engineering went for an industrial visit to BPL Medical Technologies, Palakkad on 13/4/2023 to get an insight into the manufacturing processes of Biomedical Equipment.

## 5.2 BEATS (BIOTECHNOLOGY ENGINEERING)

- Department of Biotechnology Signed a MoU with Zaara Biotech on 29/06/2022.
- Department of Biotechnology organized Dr. George Thottapilly Memorial Lecture on 10/06/2022 and the session was handled by Dr. Radhika Nair, Scientist, RGCB, Trivandrum. Topic “Living with the Sword of Damocles- Giving hope to people living with metastatic disease”.
- Organized a technical talk on ‘Intellectual property rights : An engineer’s primer to the new economy by Dr. Leon Ittiachen on 28/4/22.
- Department of Biotechnology in association with BEATS organized an expert talk on 19/02/2022 in the Topic ‘Wastewater Treatment in Microbial Fuel Cell’. The session was handled by Dr K Haribabu, Assistant Professor, NIT Calicut.
- BEATS association organized an Essay Writing Competition on 02/03/2022 in the topic ‘Interdisciplinary Approach - A solution for Global Warming?’
- Organized an interdepartmental Idea Presentation Competition on 22/03/2022.
- A training session on LaTeX was arranged for S8 BT students. The session was handled by Mr. Shyam Krishna, Faculty from CS department.
- BEATS association won the overall trophy in the Arts Fest 2022.
- Organized a technical Quiz Competition ‘La Technologie’ on 11/05/2022.
- BT Department conducted a Technical talk on the topic “IPR in the Knowledge Economy-The Why Behind it all” by Dr Leon Ittiachen, Visiting Faculty for S7 students on 27/09/2022.
- 44 students of S7 BT visited Rubber Research Institute Kottayam on 29/09/2022 and interacted with various research scientists and learned the applications of Biotechnology from the Institute.
- A technical paper writing session was conducted for S7 students by Dr Ambili Mechoor, HOD BT on 30/09/2022
- BEATS conducted an Expert talk on 'Global Wind Energy Industry ' on 18/10/2022 for B Tech S5 and S3 students of the department, handled by Ms Amritha Basanth, Director of Kshema Group and UKFCET.
- 59 students of S5 BT visited Rubber Research Institute Kottayam on 27/10/2022 and interacted with various research scientists and learned the applications of Biotechnology from the Institute.
- In connection with "World Mental Health Day," the Department of Biotechnology organized an Online Photo Contest. The theme of the contest was 'Ninth Cloud'.
- As part of MoU signed with Zaara Biotech, BEATS Association Department of Biotechnology, SCET along with BRSI conducted an Exhibition on the products developed by our students in connection with the training conducted by Zaara Biotech Ltd on 18/11/2022.
- BEATS Association Department of Biotechnology SCET and BRSI organized a Two day workshop on Python Programming for S5BT students, PG and PhD Scholars on 16/11/2022, 17/11/2022 and 21/11/2022 in Accenture Lab, Bioblock.
- One day workshop on Bio-Entrepreneurship was conducted for the students from different colleges in connection with TEKWIZA 2022 on 02/12/2022.

- BEATS Association Department of Biotechnology arranged One week Internship at Biozeen 35 students of S7 BT completed a one week internship at Biozeen, Bangalore from 17/10/2022 to 21/10/2022.

### 5.3 PACE (CIVIL ENGINEERING)

- The Department of Civil Engineering signed a Memorandum of Association (MoA) with KSCSTE-National Transportation Planning and Research Centre, Trivandrum (KSCSTE-NATPAC) on 18/01/2022 for enhancing the project-based learning of students and research activities at Sahrdaya.
- The Department of Civil Engineering signed a Memorandum of Understanding (MoU) with CAD Center on 29/04/2022.
- The Department of Civil Engineering signed a MoU with SuriaHomes on 02/06/2022.
- The Department of Civil Engineering signed a MoU with the Centre for Development of Advanced Computing - CDAC on 07/06/2022.
- CE 2018-22 Batch students have conducted a traffic survey for 5 road stretches on 09/03/2022 which was a part of the Road Asset Management Survey for NH and SH in Kerala in collaboration with NATPAC.
- CE2018-22 Batch visited the Water treatment plant – Kerala Water Authority Vynthala and Wastewater treatment plant at CIAL Nedumbassery on 22/03/2022.
- CE2020-24 Batch visited Shornur Railway Station, Yard and Malampuzha Dam on 18/06/2022.
- A virtual campus tour of Sahrdaya College of Engineering & Technology, Kodakara was done by Anix Samuel N, S8 CE 2018-22. The video was released by Rev. Fr. George Pareman, Exe. Director, SCET on 08/07/2022 during the Graduation Day Ceremony of 2018-2022 Batch.
- A miniature model of Sahrdaya College of Engineering & Technology which was initiated by CE2018-22 Batch was taken up and completed by S6CE 2019-23 batch Students. The model was officially inaugurated on 14/07/2022 by Rev. Fr. George Pareman, Exe. Director, SCET.
- CE2019-23 Batch visited Idukki Dam on 30/07/2022.
- Three day Workshop in Geographical Information System (GIS) - Hands-on training session in ArcGIS Pro Software was organized by the Department of Civil Engineering from 04/01/2022 to 06/01/2022 for S7CE(2018-22) Batch in collaboration with Centre for Geo-information Technology (CGIT) and Kerala GIS community.
- A talk on “Introduction to Earthquake Resistant Design” was conducted for S5CE(2019-23) Batch on 04/03/2022. The resource person was Mr. Ciby Jacob Cherian, Assistant professor, CE.
- A talk on “Career opportunities for Civil Engineers in the public sector” was arranged on 11/03/2022 for S8CE (2018-22) Batch by Mr. Gokul Ramanan, Civilianz, Thiruvananthapuram.
- A technical talk on “Valuation in Civil Engineering” on 06/04/2022 for S8CE (2018-22) Batch by Mr. Mathews P J, Retired Exe Civil Engineer, BSNL.
- Industry interaction was arranged on 13/04/2022 for S8CE (2018-22) Batch and S6CE (2019-23) Batch. Resource person was Mr. Faisal Farooq, Director, Accurant Engineers and Consultants Pvt Ltd.
- 3 Day Workshop on Revit Architecture from 25/05/2022 to 27/05/2022 for S6CE(2019-23) Batch by Mr. Kiran U, Mr. Santhosh S, Revit trainer (s), CADD centre, Palakkad.
- One day Faculty training program on Fusion 360 on 28/05/2022 for Faculty and Lab staff of CE, EEE and ASH. Resource person was Mr. Viju Antony, Trainer, ‘BIMIT’, Irinjalakuda.
- PACE arranged Industry interaction- Technical talk on Recent Trends and outlook in Civil Engineering by Mr. Baijo Paul, MD Suria Homes on 02/06/2022 for S6CE(2019-23) Batch and S4CE (2020-24) Batch.
- Expert Talk was arranged on Introduction to Architectural Model Making by Ms. Treasa Babu, Freelance Architect on 23/06/2022 for S6CE(2019-23) Batch and S4CE(2020-24) Batch.
- A three day AutoCAD training was organized by the department of Civil Engineering for S3 CE 2021-25 Batch from 6th Oct to 10th Oct, 2022.
- A three day Workshop on SketchUp & V-Ray was organized by the department of Civil Engineering for S5 CE 2020-24 & S7 CE 2019-23 Batches in association with PACE and IEI Student Chapter from 19th Oct to 21st Oct, 2022.
- The Department of Civil Engineering has organized an Alumni Interaction for S3, S5 & S7 Civil Engineering Students in association with PACE on 4th Nov, 2022.

- The Department of Civil Engineering has organized a technical talk on “Building Rules - KBR 2019” for S3, S5 & S7 Civil Engineering Students in association with PACE on 24th Nov, 2022.
- Technical Talk on Financial Planning - Basics was organized by the department of Civil Engineering for S7 2019-23 Batches in association with PACE, IEI Student Chapter, NDLI & IEDC, Sahrdaya on 23rd Nov, 2022.

#### **5.4 ACES (COMPUTER SCIENCE & ENGINEERING DEPARTMENT)**

- Department of CSE conducted online webinar session, "Data Science & Machine Learning" for the final year CSE 2018-22batch on 19.01.2022.
- Organized an online webinar session, "Project Development using Machine Learning" for the Third year CSE 2019-23batch on 27.01.2022.
- Conducted Workshop on “Robotics Process Automation (RPA)” for S8 CSE students (2018-22Batch) on 13.04.2022.Resource Person was Mr. Jithu George, Software Trainer, EY Technologies.
- A Technical Training Session was organized for S6 students (2019-23Batch).
- Conducted Workshop on “Python Programming” Polytechnic College (KKMMPTC, Mala) students on 11/05/2022.Resource Persons were Mr. Willson Joseph, Mr.Scaria Alex and Ms. Lakshmi MB, Assistant Professors of CSE.
- Conducted Workshop on “Data Mining Techniques and Tools” S8 CSE students (2018-22Batch) on 24/05/2022. Resource Persons were Ms. Uma ES and Ms. Megha K K, Assistant Professors of CSE.
- Workshop on “LATEX-A Technical Paper Writing tool” ” S6 CSE students (2019-23 Batch) conducted on 17/05/2022 & 18/05/2022.Resource Persons: S6 CSA-Mr. Shyam Krishna S6 CSB-Ms. Divya R , Assistant Professors of CSE.
- ACES Conducted Workshop on “Art of Writing & Publishing Research Papers” ” S6 CSE students (2019-23 Batch) on 18/05/2022 &19/05/2022.Resource Persons: S6 CSA-Ms. Anly Antony S6 CSB-Dr. Krishnadas J , Assistant Professor CSE
- Department of Computer Science and Engineering under Computer Society of India -Student branch has organized a webinar on " New trends in Software Testing " on 8th January 2022.
- Organized a webinar on "Data Science and Machine Learning” for S7 CSE students on 19/01/2022.
- ACES organized an Online webinar session on "Project development using Artificial Intelligence "for S3 CSE students on 28/01/2022.

#### **5.5 ELECSTA (ELECTRONICS & COMMUNICATION DEPARTMENT)**

- Faculties of ECE Department visited the Kerala Startup Mission Maker village and Fab lab at Kochi on 25/3/2022 to learn about the latest fabrication technology in electronics industry.
- A hands-on training on report making in Latex software was conducted by Dr. Silpa P A and Ms. Ambily Francis for 2019-23 batch students on 13/5/2022.
- Industrial Interaction on Career Opportunities in Business Intelligence by Ms. Anagha Valsakumar of Accenture was conducted on 04-01-2022.
- 2018-22 Batch ECE students and two faculties visited at ITI Ltd. Palakkad for learning PCB manufacturing technologies on 04-02-2022.
- To equip the students for higher studies after their UG program, an orientation session on GATE-2023 was conducted on 27-06-2022 in association with ONES, Kochi.
- "Google I/O Extended Thrissur" was conducted in association with Google Developer society, Google Educators and TCS for registered students on 25/6/2022.
- To nurture the research skills among students, a session on “How to do a Literature Review” was conducted on 21-06-2022 by Dr. Gnana King for 2019-23 batch students.
- A 5 day long workshop on Latest trends in Electronics and allied branches was conducted for first year students of K. Karunakaran Memorial Model Polytechnic College Mala, Kallettumkara from 9/5/2022 to 13/5/2022. Dr. Vishnu Rajan, Dr. Arun Thomas and Mr. Saran KB of Dept. ECE handled various sessions on Android App development and Robotics.



### 5.6 AESON (ELECTRICAL & ELECTRONICS ENGINEERING DEPARTMENT)

- The Department of EEE in association with AESON and ONES coaching conducted a session on “Opportunities after Engineering through GATE Exam” on 5th February 2022 by Anith T Ajayaghosh, Director, ONES Coaching.
- AESON and IEEE PES conducted a session on “Indian Electricity rules and Electricity Acts” on 8th February 2022 by Prof Mohammed Kasim, Vice Chairman, IEEE Kerala Section.
- EEE Department has conducted a quiz program for +1 school students on 19th February 2022.
- AESON conducted a motivational talk for S4 and S2 students on May 5 2022 by Rev Fr. Binoy Nereparambil.
- Department of EEE in association with AESON conducted a 6 day add-on course on Electrical CAD by CAD center Kodungallur on April 20,21, 22 May 11, 12, 13.\
- Organized an Alumni interaction for students of EEE by Elsa P J, Senior hardware engineer VVDN Technologies on 7th May 2022.
- Department of EEE in association with AESON has conducted an invited talk on “Lithium Battery and its application: by Maheswaran L S , Associate Vice President, Hykon India limited on 24th May 2022.
- AESON has conducted a hands on training on “Introduction to PCB design” by Midhun C, Electronics CAD Engineer, Design Alpha on 18th June 2022 for S4 students.
- Conducted a program on Safety for students and Lab staffs by Inspectorate, Kerala.
- Department of EEE organized an Industrial Visit for S6 EEE students on 24/05/2022 to 110KV Kodakara substation, Thrissur district & an Industrial Visit for S4 EEE & S2 EEE students on 26/05/2022 to Peringalkuthu power house, Thrissur district.
- AESON in association with IEEE control system society conducted a webinar on the topic "Electric Vehicles" on 29/09/2022 via Google meet. The session was handled by Dr.Nithin S, Research fellow, WMG University of Warwick, UK.
- Department of EEE in association with AESON conducted an add on course on “Autocad with MEP Electrical” from 26/09/2022-1/10/2022 for S7EEE students. The session was handled by Vineeth Narayan and Rajeesh M , CADD Centre Kodungallur.
- Department of EEE in association with AESON conducted an “Hands on workshop on PCB Design” for S3 EEE students from 14/10/2022-15/10/2022.The session was handled by Mr Midhun C, Electronics CADD Engineer, Design Alpha.
- Department of EEE in association with AESON conducted an “Hands on training session on Eyantra Robot Firebird V” for S5 EEE students from 20/10/2022-21/10/2022.The session was handled by Mr Saran K B , Assistant Professor Department of ECE.
- Department of EEE in association with AESON conducted an Alumni interaction for S3EEE students on 31/10/2022.The session was handled by Ms Neha Krishnakumar, Systems Engineer , TCS.
- Department of EEE conducted a session on Awareness on Professionalism on 27/02/2023 for all students of EEE Department. The session was handled by Dr M R K Menon,STEM & Aerospace Educator.
- Department of EEE in association with Centre for Research & Development (RDC) conducted a Technical session on Technical paper writing for S6EEE Students on 28/02/2023. The session was handled by Dr V Vijikala Associate Professor Department of EEE & Ms Amrutha S , Research Scholar Department of Chemistry.
- Department of EEE in association with Hardware club and centre for IoT and Robotics Research (CIRR) conducted Hands on Workshop on 28,29 March 2023.

### 6.0 Student Achievements

- Mr. Sivaram Narayan of Computer Science & Engineering Department was the recipient of the Prestigious “Diamond Ring” award instituted by Sunny Diamonds for the best outgoing student of Sahrdaya College of Engineering and Technology for the year 2022-23.
- The following students received the Bank of Baroda Achievers Award 2023 - Sreema M (Best in Academics), Elwin Jose (Best All-Rounder) & Savio Samson (Best in Sports)
- Ms. Varsh V(BT- 2018 batch) secured 25<sup>th</sup> rank (AIR) in GATE 2023.

- Ms. Angela Maria Sunny (CSE), Ms. Anushka Sumesh (BME) and Ms. Suni Jose (M.Tech-CSE) secured CGPA 10/10 in university examinations.
- 2022 pass out Albin Simon, Rinta Raju, Amith V Unnikrishnan, and Mohamed Hashim U P represented Sahrdaya College of Engineering and Technology, in RESEARCH INNOVATION DEMO DAY, 28 May 2022 at Technology Innovation Zone, Kochi with the final year project 'An interactive exercise companion for rehabilitation of obese children and geriatrics', Guided by Dr. Remya George and Mr. Jibin Jose.
- Represented Sahrdaya College of Engineering and Technology, in Health Tech Summit Organized by Kerala Startup Mission, June 24, 2022 at Kochi, with the final year project An interactive exercise companion for rehabilitation of obese children and geriatrics, Guided by Dr. Remya George and Mr. Jibin Jose
- Final year project titled "Automated detection of lung sounds and diagnosis using 3D printed Electronic stethoscope" done by 2022 pass out Greshma Varghese, Jiffin Joseph, Mariya Mathan and Sourav Vinaya Kumar won Second Prize in Techathon 2022 at FISAT Angamaly, Third prize in National level project expo Hestia 2022 at TKM College of Engineering and represented Sahrdaya College of Engineering and Technology, in RESEARCH INNOVATION DEMO DAY, 28 May 2022 at Technology Innovation Zone, Kochi.
- The team consisting of Mr. Dwashil J and Mr. Rashid bagged the first prize & Mr. Sahal S and Ms. Josna Wilson bagged the second prize for the Treasure Hunt organized as part of the National Library Week Competitions conducted by the Central Library of Sahrdaya College of Engineering and Technology.
- Ms. Navya Mohan, B.Tech in Electrical & Electronics & Ms. Geethika Nair, B.Tech in Biotechnology of the 2018-2022 batch qualified GATE 2022.
- OUTSPARKLE AWARD 2020- Maritta Stephen (2016 Batch)
- OUTSPARKLE AWARD 2021- Jobel Johny (2017 Batch)
- Sivaram Narayan of S7 CS received the Best Student Merit Award from Architects & Engineers Association as a part of Engineer's day celebration on 15th September.
- Elwin Jose of S7 CSE has been shortlisted for the University NSS Award 2022.
- A project team under the mentorship of Dr. Arun Thomas received idea grant (Idea fest - 2021) of Rs. 1 lakh for the project IKET: An IOT based automated basket. The team members are Mr. Enson Christo, Ms. Agnet Soman, Ms. Alisha Jose, Ms. Anns Philo Anto A.
- Joseph K A and team under the mentorship of Dr. Arun Thomas received idea grant (Idea fest - 2022) of Rs. 2 lakh for the project Marble Maze Labrynth
- Joshua Sony C and team under the mentorship of Dr. Arun Thomas won Silver award with cash prize of Rs.20000/- in Techfest 2022 by KSCSTE.

#### **6.1 Participation in Inter Collegiate Competitions**

- Project group consisting of Angel Davis, Antony Sebastian, Merry Ann, Milna George of BT Department won the best project Award and won a cash prize of Rs 10,000/- in SCI fest organized at Sahrdaya.
- One of the project teams from S8 CSE has won 2 prizes in May 2022. The project was on "Gaming Bike" guided by Dr.Satheesh Kumar, HOD CSE. The team members are Melroy Denny, Sreerag T, Paul K Joy & Sooraj Nandan. The project won 1st Prize in Srishti 2022, a National Level competition held at Saintgits college, Kottayam. Also won 2nd prize in a Tech fest conducted at Jyothi Engineering college Thrissur. Attracted a cash prize of Rs 2000.
- One of the project teams from S6 CSE has won 2 prizes in June, 2022. The project was on "AIVA Controller (AI, IoT, VR, AR)" guided by Dr. Satheesh Kumar, HOD CSE. The team members are Gokul T Gopinath, Hari Krishnan M R, Aswin Ayyappadas, & Benson Davis. The project won First Runner-Up with a cash prize sum of ₹ 30,000/-, at CUBETHON 2022-23- at Ginger hotel kalamassery by Cubet Techno Labs. It also won First Runner-Up with a cash prize sum of ₹ 20,000/- at PINEOTHON at Recca club Kakanad by calpine groups Pvt limited.
- The following Project Groups of Final Year Students have won in Idea Fest 2021 of Kerala Startup Mission.
  10. Smart Cervical Collar, guided by Mr. Jibin Jose. Team members are Alex Abraham, Rithika Rajith, Adorna Lawrence and Amitha M.P

11. Deep Neural Network Based System For Early Detection Of Sleep Apnea guided by Ms. Sony N.S. Team members are Annu Maria Jose, Sandra Benny, Muhammed Zahir and Jisna K.S.

- A final year project of BME titled “Deep Neural Network Based System For Early Detection Of Sleep Apnea” by Annu Maria Jose, Sandra Benny, Muhammed Zahir and Jisna K.S guided by Ms. Sony N.S won the runner up award for MATLAB project in Project competition SRISHTI conducted by Saintgits College of Engineering.
- A Project titled “Mirror therapy based hand rehabilitation” from the final year BME got first prize in the National Project Competition conducted by The National Institute of Engineering, Mysore and Institution of Electronics and Telecommunication Engineers (IETE). Group Members: Clinto Martin, Greeshma Saira Eapen, Greeshma K M, Jummy Jaimy, Guided by Dr.Finto Raphel, Jibin Jose and Dr. Verghese Thomas (Adjunct Faculty, BME dept).
- A team S8 BME won third prize worth Rs. 5000/- in SRISHTI 2022, Project competition conducted at Jyothi College of Engineering and Technology, Thrissur for the project titled Adaptive Noise Suppression Device. Team members are Alfin Joseph, Amarnath P S, Minsha Zakkariya and Angel Rose Chakiath and guided by Dr.Yuvaraj Velusamy.
- Two projects from Biomedical Engineering won first and second prize at Summer Startup Festival Project Expo at GEC Thrissur
  1. First Prize - Adaptive Noise Suppression Device Guided by Dr. Yuvaraj V. Team members: Alfin Joseph, Amarnath P S, Angel Rose Chakkiath, Minsha Zakkariya.
  2. Second Prize- Mirror therapy based Hand Rehabilitation Guided by Dr. Finto Raphel, Mr. Jibin Jose and Dr. Varghese Ouseph. Team Members are Clinto Martin, Greeshma Saira Eapen, Greeshma K M and JummyJaimy.
- The following teams from BME department participated and won prizes at the project competition TECHATHON 2K22 conducted at FISAT on 18/5/2022.
  1. The project named “Mirror Therapy based hand Rehabilitation” won First prize award in the general category as well as the Best project award. The project was guided by Dr. Finto Raphel, Jibin Jose and Dr. Varghese Thomas. Team members were Clinto Martin, Greeshma K M, Greeshma Saira Eapen and Jummy Jaimy of final year BME.
  2. Project named “Adaptive Noise Suppression Device” won second prize. The project was guided by Dr. Yuvaraj V and the team members were Alfin Joseph, Amarnath P S, Angel Rose and Minsha M of final year BME.
  3. Second prize was shared by Another project named “3D printed Autosteth” guided by Dr. Remya George and Dr. Finto Raphel with team members consisting of MariyaMathan, Jiffin Joseph, Greshma Varghese, Sourav Vinaykumar from final year BME.
- The final year BME project “Adaptive Noise Suppression Device” guided by Dr. Yuvaraj V consisting of members Alfin Joseph, Amarnath P S, Angel Rose and Minsha M Z won second prize and the project titled Mirror Therapy based hand Rehabilitation guided by Dr. FintoRaphel consisting of members Clinto Martin, Greeshma K M, Greeshma Saira Eapen and Jummy Jaimy won third prize at SCI-FEST project exhibition conducted by Sahridaya college of Engineering and Technology in collaboration with Kerala Startup Mission's Research Innovation Network Kerala (KSUM- RINK).
- A project team from S5 BME under the guidance of Dr. Remya George participated in a National Level Technical Symposium - Techfinix 22 on 20th & 21st October 2022 held at Paavai Engineering College, Namakkal and won first prize in the Project Expo. Student are Vishnu Viswakumar, Rose Mary Shofy, Abhishek V S & Fathima Wafa.
- A project group from BME has won 2nd runner's title in an IEEE project competition YESIST-12 organised at Sri Venkateswara College of Engineering, Bangalore. The student members are - Savio Samson, Sharo William, Sree Lakshmi and Sneha Sunil. Project Guide is Dr. Finto Raphel, HOD BME.
- The project entitled 'MEDICOLLAR' of a group from final year BM students guided by Ms. Arathy M was selected to participate in the contest category of TECHFEST-2022 of KSCSTE jointly organized by KSCSTE with CUSAT during 26-28, October, 2022 at the CUSAT Campus and won Silver Award with a cash prize of Rs. 20,000.
- Students from S5 and S3 Biomedical Engineering participated in Biomedical Instrumentation workshop conducted as part of Tathva'22 Techfest at NIT, Calicut on 23/10/2022.
- The final year project titled “Active Shock Absorbing Neonatal Transfer System ” has been selected among the top 10 projects at the finale event of Ingenium 2023: Solving the world’s hardest engineering

problems held on 16-March and 17-March at Kochi, Kerala. The members are Mishel Prinson, Jerin Joy, Evelin Elsa Suresh and Aaron Shajan of S8 BM and the project is guided by Ms. Arathy M.

- The project teams from the department of Biomedical Engineering were selected for PRISMA 23, the project expo co-hosted by IEDC of Christ College of Engineering on April 13th 2023. The following teams won second prize with a cash prize of Rs. 1500 each.

1. Project title: Smart Commode System For Bed Bound Patients

Members are Megna Daison, Allwino Varghese, Nevin T Shine & Vishnu Priya A S

Guide: Dr. Finto Raphael

2. Project title: Active Shock Absorbing Neonatal Transfer System

Members are Mishel Prinson, Jerin Joy, Evelin Elsa Suresh, Aaron Sajan

Guide: Ms. Arathy M

3. Project title: Stroke Rehabilitation Exoskeleton For Hand

Members are Angela Liz Abraham, Florance Baby Sam, Amal Roy, Mohammed Siraj

Guide: Dr. Yuvaraj V

- A research team of our college comprising of Dr. Leon Ittiachen and research scholars Ms. Sumi Maria Babu & Ms. Sangeetha Gopal has become the Winner of 'Young Innovators Programme' organised by Kerala Development and Innovation Strategic Council (K-DISC).
- An interdisciplinary project guided by Ms. Marria C Cyriac (BT) and Dr. Silpa.P.A (ECE) titled "A device to find adulteration in coconut oil" won Second Prize in the SRISHTI 2023.
- A project team "Portable car stretcher" from BME won Second Prize in the SRISHTI 2023 and SHRESHTA 2023.
- A student project team "Game console based rehabilitation for stroke patients" from BME secured Third Prize in the project expo Srishti 2023 organised by Jyothi College of Engineering.

## 7.0 SPORTS

- A team from Sahrdaya College of Engineering and Technology secured second position in the APJAKTU E Zone Men's Basketball held at Jyothi Engineering College.
- As part of the Tech-fest TEKWIZA 5's football tournament was held in our College on 19th November, 2022 and students from 4<sup>th</sup> year CSB became the winners.
- APJAKTU E-Zone football tournament was hoisted by our college from 26th November, 2022 to 30th November, 2022. A total of twenty-five colleges had participated in the tournament.
- The APJAKTU E-Zone Men's Kho-Kho Tournament was held at Government Engineering College, Thrissur on 29th and 30th December, 2022. Sahrdaya team secured the third position.
- Sahrdaya secured First position in Mar. James Pazhayattil Memorial inter collegiate basketball open tournament 2023.

## 8.0 NATIONAL SERVICE SCHEME:

- Elwin Jose of S6 CSA, NSS 2020 - 22 Batch have received a State Level, NSS Volunteer Secretary Camp Certificate 2022 and a Meritorious Certificate for his Services as a State Level NSS Volunteer Co-ordinator 2021.
- NSS Unit No. 589 of Sahrdaya College of Engineering and technology, Kodakara conducted a webinar on the topic "National Resource Protection Force" on 3rd February 2022. The prime speaker of the day was Miss AKHILA M, (NRPF Thrissur-Palakkad regional student coordinator) and VINAY MV (NRPF Thrissur-Palakkad coordinator).
- Conducted Environmental Bi Weekly program starting from 22nd May 2022 (International Day for Biological Diversity) to 5th June 2022 (World Environment Day).
- An orientation program for the batch 2021 -23 conducted on 14th May 2022. The prime speaker of the day was Mr. V.K Sreedharan, (Secretary, Inspire India).
- Conducted a "FLASH MOB" in accordance with World Anti-Tobacco Day Awareness on 31st May 2022 in Kodakara Junction. SI C K Babu (Sub-Inspector, Kodakara Janamaithri Police) was the guest of honour for the day.
- NSS Unit No. 589 of Sahrdaya College of Engineering and technology, Kodakara conducted International Yoga Day on 21st June. The session was conducted by VIJAY Sir, NSS Program Officer, SCET, Kodakara, with the help of Aparna Venugopal (NSS Volunteer) who demonstrated all the yoga postures.



- Organized a Blood Donation Campaign led by RudhiraSena in collaboration with IMA Blood Bank, Thrissur on 29th June 2022 in the Sahrdaya Indoor Stadium. There were 46 people including students and teachers who volunteered to donate blood.
- Conducted the “Clean Energy Challenge” in association with Kerala State Energy department and Energy Management Centre on 18th July 2022.
- National Flag was hoisted by our Executive Director on the event of 75<sup>th</sup> Independence Day celebrations.
- As a part of World Ocean Day, NSS volunteers participated in the Beach Cleaning Campaign on 17/09/2022.
- The NSS unit 589 in association with IMA Thrissur Blood Bank and Lions Club of Kodakara accompanied by Rudhirasena TCR - PKD Region conducted a Blood Donation Camp on 1st October 2022.
- NSS 589 Unit conducted a NSS PRE-SPECIAL CAMP E-ASSIST from 2nd to 5th October 2022 in Panchayat L P school Koratty.
- As an initiative of State NSS Cell “Anti-drug Quiz competition 2022” was conducted in online mode on 10th October 2022 via Google form.

## 9.0 News @ IEDC

- IEDC in collaboration with Kerala Start-up Mission's Research Innovation Network Kerala (KSUM-RINK) has showcased the proof of concepts of various technologies developed at our institute with an event named Sahrdaya SCI-FEST as an exhibition on 06/07/2022. Ms. Aishwarya Dongre IPS, District Police Chief, Thrissur Rural inaugurated the event.
- A startup ‘LINES Design & Consultancy Services’ was registered under Sahrdaya TBI on 14/07/2022 by Anix Samuel N, Anu Rose, Athul Thomas and Irene Raju of CE 2018-22 Batch.
- IEDC Sahrdaya in association with Kerala Startup Mission conducted a one day bootcamp for the faculty members of engineering colleges and polytechnic institutions on 08/04/2022 at Sahrdaya.
- A total of 45 students and 3 faculties represented our college in IEDC Summit 2022 at St. Joseph College of Engineering and Technology, Pala on 5<sup>th</sup> March. IEDC Sahrdaya has been selected as the Top performer (4th position) in IPL Kerala by Kerala start-up Mission (KSUM).
- Seven groups were selected for Kerala Start-up Mission (KSUM) - Idea Grant 202.
- Mr. Jibin Jose, Nodal officer and Coordinator of IEDC has delivered a session on “Innovations development through academic projects” at Govt Polytechnic college Perinthalmanna in connection with i3 camp organized by IEDC in support of KSUM on 19<sup>th</sup> February 2022
- IEDC Sahrdaya has come with Evening Cafe for one week based on Programming Knowledge and Introduction to Coding. It was organized by coders club started on 16th June, 2022.
- Mr. Jibin Jose, Nodal officer and Coordinator of IEDC has attended a duly as a participant in 4-day management development program organized by KSUM with the IIM-K from 21 to 24<sup>th</sup> March 2022 and he invited for the inaugural function of the school innovation cell at Bharathiya Vidyabhavan's Vidyamandhir, Irijanalakuda on 15<sup>th</sup> June 2022.
- IEDC in collaboration with KSUM- RINK showcased the proof of concepts of various technologies developed at our institute with an event named Sahrdaya SCI-FEST as an exhibition on 6th of July, 2022.
- Students of College of Veterinary and Animal Sciences, Mannuthy visited IEDC facilities in our college and a half day workshop on Student Engagement and field of innovation was handled by Mr. Jibin Jose on 19th September 2022.
- ICT Academy conducted a workshop on METAVERSE near Kochi International Airport. 8 of our student EXECOMs of IEDC along with Principal Dr. Nixon Kuruvila and Dr. Arun Thomas attended the session on 30th September 2022.
- On National Innovation Day IEDC Sahrdaya conducted an Innovation one day workshop for all the students (two representing each class) on October 15th 2022.
- One day Ideation Camp and workshop was given for the first year students of batch 2022-26 and an i-Talk (Innovation talk) was given for budding innovators, inviting our alumni Mrs. Jismi Jobin (2006-2010) CEO of Jobim and Jismi on 21st October 2022.
- Two day Boot Camp for skill enhancement on the topic “Raspberry Pi and Python” was conducted for 3rd year Biomedical students on 23rd and 24th November 2022.
- Two day KICK START STARTUP BOOT CAMP was organized for 3rd year Computer Science students on 25th and 26th of November 2022.
- As a part of skill enhancement and creativity boosting, Creative Club of IEDC Sahrdaya organized a Doodle Wall Painting at the Canteen of the college on 25th November 2022.

- A Design Thinking Workshop Conducted by IEDC Sahrdaya as a Part of Kerala Development And Innovation Strategy Council (K-DISC) - One District One Idea (ODOI) on 9th December 2022.
- IEDC Sahrdaya, in connection with Kerala startup mission, RINK, organized an event Women Researchers and Innovators Meet and was held on 17th February 2023.
- IEDC Sahrdaya in association with the Department of Civil Engineering and IEI Student Chapter conducted a Hackathon on 24th February 2023.
- IEDC Sahrdaya conducted an expert talk on Process of Innovation Development, Technology Readiness Level (TRL); Commercialisation of Lab Technologies & Tech-Transfer for the students of Sahrdaya college of Advanced Studies on 25th February 2023.
- The creative club of Sahrdaya College of Engineering and Technology organized a doodle competition on 8th of March 2023
- A talk on “INTRODUCTION TO HACKATHON ” was delivered by Mr Jibin Jose Nodal officer IEDC Sahrdaya for S4 CSE and EEE students on 10th March 2023.
- IEDC of Sahrdaya College Of Engineering And Technology conducted a session on PACEMAKERS to familiarize the pacemaker technology and talk was given by Mr Rinoj Davis from Medtronic and alumnus(2012-2016) on 24th March 2023.
- K-DISC in collaboration with IEDC Sahrdaya organized a talk session on the importance of Young Innovators Programme (YIP). YIP was the flagship project of K-DISC to promote innovation and creativity among young students. Session was taken by Manu Joseph, Robotic Engineer, Codet LLC District coordinator, K-DISC on 24th March 2023.
- Kerala Startup Mission Sanctioned ₹ 25 lakhs for Research Innovation program for Women Startups (Biotechnology and Biomedical Engineering )
- K-DISC assigned Cherpu Handicraft Industrial cluster to Sahrdaya under one-district, one-idea scheme with a funding of ₹ 4.57 Lakhs
- K-DISC collaborated with Sahrdaya as an expert institution in Assistive Technology in Young Innovator Programme and sanctioned an amount of ₹ 2.14 Lakhs
- Kerala Start-up mission sanctioned Kerala Research Translation and Commercialisation Project under RINK Knowledge fest Scheme with a funding of ₹ 1.8 Lakh
- Kerala startup Mission sanctioned three idea grants (out of 40) in IEDC Idea Fest 2022 and seven idea grants (out of 68) in IEDC Idea Fest 2021 to Sahrdaya.
- IEDC Sahrdaya received a performance grant of ₹ 2 Lakh from Kerala startup Mission

### 10.0 RDC Activities

- A technical session on 'Research Design – Reference Management Software & Tools for Literature Survey and Review' was held on November 19th, 2022 (10-12.30 PM) by Dr Nishy P. Chief Scientist, CSIR-National Institute for Interdisciplinary Science and Technology, Trivandrum
- The S8 project (2018 Batch) reports of all the departments were compiled in the IEEE format and published as Technical transactions and released on 29/11/2022 by our Executive Director Rev. Fr George Pareman
- Research bulletin 2022 (Volume 2) – the research related achievements of the college was released in the BOG meeting (December 21st, 2022)

### 10.1 SCI/Scopus indexed journal papers published by the faculty

1. Reshma Jose, & Chacko, S. (2022). Liver cancer detection based on various sustainable segmentation techniques for CT images. International Journal of Environmental Technology and Management, 25(3), 166-179. (Scopus).
2. Leon Ittiachen, & Babu, S. M. (2021). Evaluation of Antibacterial activity of Biosynthesized Silver nanoparticles coated Low-Density Polyethylene films. Materials Today: Proceedings. (SCIE)
3. Ranimol, G., Paul, C., & Sunkar, S. (2021). Optimization and efficacy studies of Laccase immobilized on Zein-Polyvinyl pyrrolidone nano fibrous membrane in decolorization of Acid Red 1. Water Science and Technology, 84(10-11), 2703-2717. (SCIE)
4. Smeera Thomas, Veettil, N. T., & Subbiah, K. (2021). Isolation, characterization and optimization of chrysene degradation using bacteria isolated from oil-contaminated water. Water Science and Technology, 84(10-11), 2737-2748. (SCIE)

5. G. Ranimol, Sunkar, S. (2022). A comparative study of free laccase and laccase immobilized in copper alginate. (SCIE)
6. Priya K. V, & Peter, J. D. (2022). A federated approach for detecting the chest diseases using DenseNet for multi-label classification. *Complex & Intelligent Systems*, 8(4), 3121-3129. (SCIE)
7. Deepa Devassy, Immanuel Johnraja, J., & Paulraj, G. J. L. (2022). NBA: Novel bio-inspired algorithm for energy optimization in WSN for IoT applications. *The Journal of Supercomputing*, 1-18. (Scopus)
8. Rajeswari, M., LivyaGeorge, D. D., Vaduganathan, D., & Kumar, A. S. Customer segmentation in intelligent learning mechanism in E-banking using Frequent Item-set Hierarchical Clustering.(Scopus).
9. Sebastian, J., & Gnana King, G. R. (2022). Analysis of MRI and SPECT Image Fusion in the Wavelet Domain for Brain Tumor Detection. In *Advances in Distributed Computing and Machine Learning* (pp. 619-628). Springer, Singapore. (Scopus)
10. KV, Chaithanyadas, and GR Gnana King. "Brain tumour classification: a comprehensive systematic review on various constraints." *Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization* (2022): 1-13. (ESCI)
11. Chinnaswamy, S., Rajeswari V., Vijikala V., & Thankaraj, S. (2022). Analysis of DC and RF performance of Al<sub>0.31</sub>Ga<sub>0.69</sub>N/Al<sub>0.1</sub>Ga<sub>0.9</sub>N/ $\beta$ -Ga<sub>2</sub>O<sub>3</sub> double quantum well HEMT on silicon carbide substrate. *International Journal of RF and Microwave Computer-Aided Engineering*, e23141. (SCI).
12. G. Ranimol, Sunkar, S. (2022). A comparative study of free laccase and laccase immobilized in copper alginate. *Indian Journal of Biochemistry & Biophysics* 59, 2022; 214-223;( SCIE) CSIR- NISPR

## 10.2 Publication in Book Chapters or Books

### Books

1. Rasmi. A, R. Sunder (2022) Artificial Intelligence for Dummies. Notion Press.
2. Gnana King G R., Fundamentals of Digital Image Processing. ISBN: 979-888815803-6 (2022)
3. R. Satheesh Kumar, Handbook of IoT and big data, ISBN : 9789356251410; Scientific international publishing house, (2022)

### Book Chapters

1. Kumar, S., Sukhila Krishnan., & Mohanty, S. (2022). Applications of elastomer blends and composites. In *Elastomer Blends and Composites* (pp. 305-329). Elsevier.
2. Sowmiya, M., Thilagavathi, C., Rajeswari, M., Divya, R., Anusree, K., & Krishna, S. (2021). Review of Existing Systems In Biomedical Using Deep Learning Algorithms. In *Handbook of Deep Learning in Biomedical Engineering and Health Informatics* (pp. 1-24). Apple Academic Press.
3. M. Anly Antony, R. Satheesh Kumar, G. R.Gnana King, V. Yuvaraj, and Chidambaranathan (2021). Technical Assessment of Various Image Stitching Techniques: A Deep Learning Approach. In *Handbook of Deep Learning in Biomedical Engineering and Health Informatics* (pp. 51-81). Apple Academic Press.
4. R. Satheesh Kumar, G. Keerthana, Artificial Intelligent Techniques for Wireless Communication and Networking, Enabling Artificial Intelligence and Cyber Security in Smart Manufacturing., (2021)

## 10.3 Publication in Conference Proceedings

5. Christy Joy, Ms. Marria C Cyriac (2022). In silico molecular docking and MD simulation analysis of flavonoids as potential inhibitors of SARS CoV-2. In *International Conference on Advances in Biosciences and Biotechnology 2022*.
6. Sandra C George, Jiss Prabhu P Tom, Ninju Kuriakose, Roni Shaji, Ambii Mechoor (2022). In silico studies of flavonoids as potential inhibitor of Rhizopus Delemar In *International Conference on Advances in Biosciences and Biotechnology 2022*.
7. Sidharth Menon, Neethu M. Thomas, Aiswarya D. Menon, Meha Christy, Amitha Joy (2022). Virtual screening for identification of novel drug for Parkinson's Disease. In *International Conference on Advances in Biosciences and Biotechnology 2022*.
8. Angel Davis, Antony Sebastian, Merry Ann, Milna George, Uma Krishnakumar (2022). Green Synthesized Nanoparticles as a Biofilter Media. In *International Conference on Advances in Biosciences and Biotechnology 2022*.
9. Marria C Cyriac, Chithra Valsan & Leon Ittiacchen (2022). Investigation on the antibiotic resistance pattern of bacterial isolates from respiratory tract- A retrospective approach. In *International Conference on Advances in Biosciences and Biotechnology 2022*.

10. Marria C Cyriac, Chithra Valsan & Leon Ittiacchen (2022). Preliminary Evaluation of Antibacterial Efficacy of a Polyherbal Formulation on Antibiotic Resistant Pathogens. In International Conference on Advances in Biosciences and Biotechnology 2022.
11. Greshma Varghese, Jiffin Joseph, Mariya Mathan, Sourav Vinaya Kumar, Remya George, Finto Raphael. Automated detection and classification of lung sound using a 3-d printed electronic stethoscope., IEEE Conference on Information & Communication Technology (IEEE CICT-2022) (IEEE Explore)
12. Albin Simon, Rinta Raju, Amith V Unnikrishnan, Mohamed Hashim U P, Remya George and Jibin Jose. Toybot: an interactive exercise companion for rehabilitation of sedentary and obese children. IEEE Conference on Information & Communication Technology (IEEE CICT-2022) (IEEE Explore)
13. Adorna Lowrence, Alex Abraham Eapen Amitha M P, Rithika Rajith, Remya George and Jibin Jose. Wearable Smart Cervical Collar with Real-time Rehabilitation of Neck Posture Correction. IEEE Conference on Information & Communication Technology (IEEE CICT-2022) (IEEE Explore)
14. Manasy Suresh M; Vishnu Rajan; Vidyamol K & Gnana King ; Model Based Design for MISPA Countx using FPGA at the 3rd International Conference on Sustainable Expert Systems (ICSSES-2022) September 2022. (Springer)
15. Ann Mariva Lazar, Ms. Binet Rose Devassy and G.R Gnana King “Real Time Operated Medical Assistive Robot” Congress on Intelligent Systems, 2022.
16. Roshini Mohanan; Jisha Jacob & G R Gnana King “A CNN Based Underage Driver Detection System” at the 4th International Conference on Communication, Computing and Electronics Systems (ICCCES - 2022) September 2022. (Springer)
17. Chaithanyadas K V & G R Gnana King “Detection of Pancreatic Tumor from Computer Tomography Images using 3D Convolutional Neural Network at the 6th International Conference on Computational Vision and Bio Inspired Computing (ICCVBIC 2022) November 2022.(Springer)

#### Faculty registered for Ph.D

Sl No.	Name of the faculty	Dept	Year of Registration	University/Institute
1	Ms. Livya George	CSE	2022	Amrita School of Engineering (Amritha Vishwa Vidyapeedam)

#### List of research scholar

Sl.no	Name of the Student	Dept	Supervisor	Year of Joining	Fellowships, if any
1	Sonu Varghese K	CSE	Dr. R Satheesh Kumar	2022	CERD Fellowship

#### List of Research Funds Sanctioned During 21-22

Name of the Project	Name of the Principal Investigator/ Co Investigator	Department of Principal Investigator	Amount Sanctioned	Duration of the project	Name of the Funding Agency	Type (Government/non-Government)
Cherpu Handicraft Cluster	Mr Jibin Jose	BME	457000	1 year	K-DISC	Government
Protectectia	Dr Vishnu Rajan	ECE	50000	1 year	KSUM	Government
Navitrolly-AI Based Smart navigating trolley	Dr Vishnu Rajan	ECE	50000	1 year	KSUM	Government
Madhumeha-sakhi Non invasive smart diabetic assist based on breath Analysis	Vidyamol	ECE	50000	1 year	KSUM	Government
Iket-An IOT Based Automated Basket	Dr Arun Thomas	ECE	100000	1 year	KSUM	Government
Smart Cervical-collar	Mr Jibin Jose	BME	40000	1 year	KSUM	Government



Deep neural network based system for early detection of sleep Apnea	Ms Sony N S	BME	50000	1 year	KSUM	Government
Aesira	Ms Praveena	BTE	40000	1 year	KSUM	Government
Intelligent Shopping trolley	Dr. Arun Thomas	ECE	425000	1 year	KSUM	Government
Spirulina: A promise for self-employment and health	Dr. Ambili Mechoor, Dr. Dhanya Gangadharn	BTE	322000	1 year	KSCSTE (BIRD)	Government
CanDSEN	Dr. Dhanya Gangadharan, Dr. Jeethu Raveendran	BTE& BME	200000	1 year	KSUM	Government
Marble Maze Labyrinth	Dr. Arun Thomas	ECE	200000	1 year	KSUM	Government
CRAYO TANK-TOP	Mr. Saran KB	ECE	150000	1 year	KSUM	Government

### 11.0 IQAC

- As part of quality improvement initiatives from IQAC, faculty members nominated from various departments attended a 1 Day FDP on Latex Organized by CSE Dept. on 22/10/2022.
- IQAC has formulated the official ISO-Latex template for University and Institution level Project and Seminar reports and replaced the conventional MS Word template. Mr. Shyam Krishna, Asst. Professor CSE was the talent behind the initiative.
- IQAC Sahrdaya has conducted a one day workshop on Technical Paper Writing using LaTeX on 22nd October 2022 for Seminar, and Project Coordinators (S3, S5, S7) of Sahrdaya.
- IQAC Sahrdaya has celebrated "The world quality week" with a training on Seminar, Project report and Technical Paper Writing using LaTeX on 9th November 2022 for selected Final year students of Sahrdaya.
- IQAC coordinated the KTU External academic and NBA files system Audit on 22.11.22.
- IQAC Sahrdaya has scheduled a one day FDP on OBE Philosophy and Attainment Calculation for Newly joined Faculties on 17.12.22
- IQAC Sahrdaya has compiled an Internal Audit manual for academic departments and administrative committees. An internal auditors training has been proposed to the nominated auditors in the month of January 2023
- IQAC Sahrdaya has initiated the curriculum gap filling add-on course delivery for First year students by respective departments in the month of December 2022.
- IQAC Sahrdaya has initiated the data collection for filing NAAC AQAR 21-22.

### 12.0 Industry Institute Interaction cell (IIIC)

- Signed MoU with Part matters on 20th sep 2022
- Signed MoU with ASAP on 5th Aug 2022
- Signed MoU with ICTAK on 1st Aug 2022
- Signed MoU with K-DISC on 17th July 2022
- Signed MoU with Zaara biotech on 28th June 2022
- Signed MoU with Jobin and Jismi on 12th May 2022
- Signed MoU with C-DAC on 9th June 2022
- Signed MoU with Suria Homes on 2nd June 2022
- Organized Hack-Tech: Hackathon on future technologies along with IEDC in association with part matters on 22nd Sep 2022
- Organized an Industry expert talk on Supply Chain solutions and IOT on 20th Sep 2022
- Conducted Sci-Fest 2022: Sahrdaya Project Expo on 6th of July, 2022 along with IEDC
- Conducted round table discussion on the topic "Lab to Market" as part of Sci-Fest on 6th July 2022
- Organized Hands On training on VEGA Processors by C-DAC on 9th June 2022
- Details of courses offering through ASAP 2022-23 academic year
  - ✓ Introduction to Python ( L&T) - 60 students

✓ Introduction to AI/ML - 24 Students

### 13.0 ICC (Women Grievance Cell)

- International Women's day celebrated on 08/03/2022. The Theme was "Gender equality today for a sustainable tomorrow".
- Department of Biotechnology and Internal Compliance Cell jointly organised Cancer Awareness Talk on the topic Catching up the culprit early: Prevention and Detection of Cancer by Dr. Asha Nair, Scientist, Rajiv Gandhi Centre for Biotechnology, Trivandrum on 10/06/2022.
- Internal Complaints Cell (Women's Cell) of Sahrdaya College of Engineering and Technology along with BEATS Association organized a talk on "Women empowerment and health" on 15/10/2022. For female students of BT, ECE and BM Departments by Dr. Gopika of Vaidyaratnam Oushadhashala.

### 14.0 IEEE CHAPTER @ SAHRDAYA

- Venus Campaign organized "She Meets", a state-level meet for women entrepreneurs and engineering students at Sahrdaya College of Engineering and Technology on 06-03-2022. The Chair of IEEE Kerala Section Dr. Mini Ulanat inaugurated the campaign.
- Swetha Manoj of S8 BM won first position and Nimitha Narayan of S4 CSE won 2nd position for the Best Campus Ambassador Award in All Kerala Industrial Application Society Conclave organised by IEEE at RIT Kottayam.
- IEEE day was celebrated on 11/10/2022.
- IEEE Sahrdaya had their national flag ship event – Altair on 11<sup>th</sup>, 12<sup>th</sup> & 13<sup>th</sup> November, 2022

### 15.0 Anti-ragging, Anti Narcotic, Anti Alcoholic & Anti-Tobacco cell

- Anti-Narcotic, Anti Alcoholic & Anti-Tobacco cell in association with Nerkuttam and Sradha conducted an awareness talk on Consequences of Alcoholism and Narcotism on 18/05/2022. Resource person was Sri. Rajendran P V, Civil Excise Officer, Excise Range Office, Irinjalakuda.
- We had the inauguration of the statewide Anti-Narcotic campaign by our Executive Director; Principal, Dr. Nixon Kuruvila led the pledge against narcotics on 01/10/2022.
- An Anti-Ragging awareness program was arranged for students on 18/10/2022 by the Anti-ragging Committee. The Circle Inspector of Police, Kodakara police station addressed the students.

### 16.0 CENTRAL LIBRARY & NDLI CLUB:

- The renovated Digital library, systems donated by the SCET Alumini Association, was inaugurated by the Executive Director Rev. Fr. George Pareman on 17-3-22.
- Central library Conducted a Quiz Competition and Treasure hunt on Apr 29th 2022, in connection with World book Day 2022
- In connection with the National Reading Day (June 19), Central Library conducted an Idea Contest and J3M competitions for the students on 17th June, 2022.
- In connection with the National Library Week Celebration, Central Library in association with NDLI Club, Sahrdaya organized various competitions on 18th November 2022 at Central Library, SCET.
- NDLI Club in Association with Anti-Narcotic Cell, Sahrdaya conducted an English Essay Writing Competition on 27th October 2022.
- NDLI Club in Association with ECE Dept., Sahrdaya conducted an Industry Interaction on the topic "Business Intelligence and Data Analytics" by Ms. Anagha Valsakumar, Application Development senior Analyst, Accenture Bangalore on 18th October 2022.
- NDLI Club in Association with CSE Dept and IEDC arranged a talk on "Sustainability Practices" on 8th November 2022.
- NDLI Club in association with the Department of Computer Science and Engineering organized an Online Quiz on Library and Information Science on 20th February, 2023.
- NDLI Club in association with the Civil Engineering Department conducted "Make a Scene based an image" competition on 3rd March, 2023.
- NDLI Club in association with the Department of Electronics and Communication Engineering arranged a session on the topic "Reengineering of Mind for a successful career" by Fr. Roy Joseph Vadakkan on 3rd March, 2023 at Multimedia Hall, SCET.

- NDLI Club in association with the Biomedical Engineering Department conducted an Online Poster Making competition on the theme “Good Air Quality for Healthy Life’ on 30th March, 2023.
- Department of Biotechnology in association with NDLI Club conducted “Test Your Quantitative Aptitude” on 30th March 2023.
- NDLI Club in association with the Electrical and Electronics Engineering Department organized an Online Quiz competition on Current affairs on 31st March, 2023.
- In connection with World Book Day, Central Library conducted a photography contest on the theme “I Love My Library” on 28th April 2023.

#### **17.0 OTHER IMPORTANT PROGRAMES:**

- College conducted an online career orientation programme on 29/04/2022 for Plus Two science students. The session was handled by Dr. Brijesh George (Academician, International Trainer & Career Expert).
- The 15th convocation ceremony of 2016-20 batch was conducted on 30/04/2022. Dr. Rajasree M S (Vice-Chancellor, KTU) delivered the Convocation Address.
- "All About Nothing", Podcast team of Sahrdaya conducted one day Workshop "Toss & Talk" for all the Podcast crew members on 27/06/2022.
- The 16th convocation ceremony of the 2017-21 batch of B.Tech students and 2019-21 batch of M.Tech students was on 25th October 2022. Dr. Saji Gopinath, V C , Digital University Kerala delivered the convocation address.
- Arts day – “AROHAM 2K23” for the academic year 2022-23 was celebrated on 19th and 20th April 2023. Ms. Dana Razik, musician inaugurated the function. The following students were selected as the best performers of Arts Day ;
  1. Sargathilakam – Sruthy M – S4 BT
  2. Kalathilakam – Archana Sivadasan – S8 CS A
  3. Kalaprathibha – Sreerag Menon – S6 CS A
- College day 2023 is scheduled on 28/04/2023. Mr. Leo Thaddeus, Film Director will inaugurate the event.
- Graduation day, Send off, Placement day celebrations of 2019-23 batch of B.Tech and 2021-23 batch of M.Tech will be conducted on 05/05/2023.
- The renovated Digital library, systems donated by the SCET Alumini Association was inaugurated by the Executive Director Rev. Fr. George Pareman on 17-3-22.
- Women Researchers and Innovators Meet & Inauguration of Research Innovation Programme for “Women Start-ups” was held on 17<sup>th</sup> February 2023.
- Our Executive Director released the college newsletter Techno Beads.
- Centre for Medical Equipment Testing got inaugurated at Department of Biomedical Engineering by Hon. Vice Chancellor, Dr Ciza Thomas
- Smart Classroom is established at Department of Biotechnology as a CSR project of Arjuna Natural Pvt Ltd
- Multipurpose Indoor Stadium got renovated and opened on 13th of April, 2023.

#### **18.0 Conclusion:**

I thank our Chairman, Board of Trustees, Members of Academic Council, Faculty members, Staff and Students for their cooperation help and Support for the development of Sahrdaya.

**Dr. Nixon Kuruvila**  
**Principal**