Research & Development

The Centre for Research & Development was established in 2010 with Prof. Dr. K Babu Joseph formerly Vice Chancellor Cochin University of Science And Technology (CUSAT) as it's Dean. He has initiated new ideas to kindle the research interest of the staff and students. Dr. K.T. Mathew, Emeritus Professor and former Principal of the college had taken the charge of the Centre in 2014.

Presently it's headed by Dr. Anishin Raj M. M, Associate Professor, CSEDept along with the following team of dedicated and hard working personnel.

Dr.Ansihin Raj M.M	Dean R&D, Associate Professor CSE
Dr.Pramod Kumar	Associate Professor, ME
Dr.Lovely Mathew.	Associate Professor, S&H
Dr.Sajan T. John	Associate Professor, ME
Dr.Anoop C. K.	Associate Professor, CE
Dr. B. Aruna.	Professor, EEE
Dr.Vidyeswari V	Assistant Professor, S&H
Dr.Anu George	Associate Professor, MBA
Dr.Karthikeyan B.	Associate Professor, IT
Mr.Shunmugesh K.	Assistant Professor, ME
Mr.Jobin Jose	Assistant Professor, CSE
Mrs. Rose Mary Baby	Assistant Professor, S&H
Mr.Joby George	Assistant Professor, ME

Research & Development

• Last year marked another eventful year in the history of centre for Faculty Development and Research, VJCET. As you know, the research and development activities of any Institution have vital role to play in the quality determination of the institution and it is extremely important for professional colleges. The quality of education imparted to the students will be counted in terms of the research output of the institution by taping the technical skill and the innovative talents of both staff and students.

Some major initiatives/ decisions taken by CRD are

- A research project on "Development of Level Sensor For Lead Lithium Loop System" was obtained from Board of Research in Nuclear Sciences(BRNS), Department of Atomic Energy, Government of India for the year 2017 to 2019. This Research project worth Rs 33.08 lakhs is sanctioned in August 2017 underDr. K KRajan, Dean IIC as Principal Investigator. Research Project Work is in progress in collaboration with Institute for Plasma Research, Ahmadabad .

- Research project titled "Development of Lead - Lithium to Helium Heat Exchanger and Circulation Type Electrical heater for Heat exchanger Test Facility (Phase-1)" was formulated, got clearance from Institute for Plasma Research, Ahmadabad and accepted by BRNS of Rs.29.48 lakhs for the year 2018-2020.Dr. B Aruna is the Principal Investigator, Mr.Vinoj and Dr. K K RAJAN are the Co Investigators.

- CFDR has started consultation cell along with the Department of Civil engineering. Here WATER ANALYSIS, FOOD ADULTERATION TESTING, DRC TESTING and SOIL TESTING is conducted on a non profitable basis. It is a huge success among the local population as these tests are very expensive and time consuming elsewhere.

- R&D will arrange Summer Internship programme for the interested students (S5-S6) at IITG during the month of April/May, so that they are capable of writing excellent project proposals in the coming year- which is a part of their curriculum under the initiative of Dr. Lovely Mathew.

- One of the main events of R & D Centre was the installation and inauguration of Centre for Nano-Tech and Smart Materials by Dr.Kuruvilla Joseph, Ph.D., Dean (Student Activities), Senior Professor, Indian Institute of Space Science and Technology on 29/11/1216

- It is proposed to invite Minor project proposals from the faculty members of various departments of VJCET (at least one from each dept) thereby encouraging them to publish a journal article based on their work or a review paper based on their area of interest

- Another issue (Vol3, issue 1) of our research journal Technology and future has been published. In an R& D meeting conducted, our director stressed the importance of research and publications. He put forth some directives for the improvement and timely publication of our research journal. Hence, from the next issue onwards, the compilation and editing activities will be done by the respective departments.

- It is decided to promote final year B Tech students by inviting project proposals from them and financial assistance will be given from R&D to the best project proposal, one from each department. Experimental guidance will be given especially to the students of

Mechanical and Civil departments in the field of material science and directing them to IITG, IIUCNN, and NCT for the analytical part of their projects.

- It is insisted that all PG projects will be completed only when a research paper will be published in any national / international journals or presented in any national / international conferences. The project guide / coordinators should discuss this with the students and help them in this endeavor.

- The space for VJCET Entrepreneur Development Cell (EDC) has been finalized. EDC along with FAB LAB will be an added advantage to the R&D. The renovation and furnishing of these two major ventures will be taken up shortly.

- Another important activity initiated by the CFDR cell is the documentation of all faculty research works. Department wise consolidation of faculty research papers for the past 3 years is progressing smoothly.

- Three day Short Term Training Programme on Power System Simulation software Mi-Power by TridaxEngineeriringSoftwaresprivatLtd.The Power System Software from 21st June to23rd June-2018 organized by Department of Electrical and Electronics Engineering, VJCET.

- Six-day Faculty Development Programme on Advancements in Electrical machines and Industrial Instrumentation from 25th June to 30th June-2018 organized by Department of Electrical and Electronics Engineering, VJCET

- Five-day Faculty Development Programme on "Application of Power Electronics in Modern Power Systems" from 3rd – 7th January, 2017 organized by Department of Electrical and Electronics Engineering, VJCET

- A two day Conference on Recent developments in computational methods for renewable energy is conducted by IT department in association with SERB, Department of Science and Technology, Government of India at VJCET on 12/04/18 to 13/04/18.

- Two day workshop on "IoT and Data Analytics Using R" is conducted by IT Department on 27-11-2017 to01-12-2017.

- Talk on Interior Design and new software "Lumion" by Mr.Joseph Denny PindisPindis Learning Centre Thripunithura, Organized by CEA on 09/02/2018

- Talk on Employability skill development and scholarships provided by Kerala State Rutronix, Mr.AmalAshokan, United CADD Solutions, Kothamangalam, organized by CEA on 25/01/2018

- A National Conference on Security, Parallel Processing , Image Processing &Networking(SPIN2K17) has been conducted by R&D cell of VJCET , in association with Department of CSE, ISTE & CSI student chapter on 8th December 2018

- One Week FDP on Frontiers of Computer Applications has been conducted during 16th-20th July 2018 in assocaition with department of CSE, ISTE chapter of VJCET.

- Five-day Faculty Development Programme on "Grid Connected Renewable systems" from 7th – 11th December, 2015 organized by Department of Electrical and Electronics Engineering, VJCET.

- An expert lecture on Software Quality–Industry Practices and Process has conducted on 25th april 2017 by R&D cell of VJCET in assocaiation with IIC. The guest of honour is Mr. Manoj T. ArtlUMENPvt.Ltd. Ernakulam

- CRD of VJCET organized a 3 day workshop on Statistics for Research from 12th -14th Feb, 2015. Dr.Bhasi, Director, School of Management, CUSAT, Dr.Biju Augustine, Associate Professor, RIT, Dr. T M Jacob, Associate Professor, Nirmala College were the main resource persons.

- National Technological Day was celebrated with much pomp and delight on 8th May, 2015 with the support of Kerala State Council for Science, Technology and Environment. Dr. Honey John, Associate Professor, IIST, TVM gave a technical talk on nano science and its application. Quizzes, Gaming, project exhibit etc were also arranged.

- CRD along with Science and Humanities Dept organized a 2 day seminar on innovations in Engg Sciences on 1st and 2nd July, 2015. Dr.Achutsanker, Head of Dept. of Computational Biology and Informatics University of Kerala, Dr. Sunny Kuriakose, Dean, FISAT, Dr.SudheeshChethil, Associate Professor, Physics, IIST, Dr.JobinCyriac, Associate Professor, Chemistry, IIST, and Dr.shaijumon C S, Reader, Humanities , IIST were the main resource persons.

- CRD along with CS department, CSI and ISTE organized a 1 day seminar on Big Data & Cloud Computing on 13th August, 2015. Dr.Pethuru Raj and Mrs.Anupama C. R , Infrastructure Architect, IBM-Bangalore captivated the delegates with their informative and interactive sessions.

- CRD along with CS department, CSI and ISTE organized a 2 day workshop on Advanced Speech Processing on 10th and 11th Aug, 2015. Dr.Govind D, Assistant Professor, Amrita University, Coimbatore was the main resource person.

- CRD organized an invited talk on Towards Inculcating an Innovative Culture by Professor V G Idichandy, Dept of Ocean Engineering, IIT Madras (Former Dean of Students & Deputy Director) on 19th September, 2015.

- Presently, CRD is conducting MOOCS class on Technical Communications through IITBOMBAYX programs The main workshop on Technical Communication will begin from 30th Nov – 5th Dec, 2015

- CRD will also organize 2week ISTE STTP workshop on Introduction To Structural Engineering conducted by IIT Bombay in the month of December.

- The Research Council has a well managed publication division. Recently our journal have received the ISSN code- ISSN 2454-4051 The fourth issue of Biannual Research Journal TECHNOLOGY & FUTURE will be published in December 2015. Some main events of CRD are listed below

- 2 week ISTE-STTP on Control systems from 15th -19th, September, 2014 conducted by IIT Kharagpur.

- 2 week ISTE-STTP on Design of Algorithm from 25th -30th, May 2015 conducted by IIT Kharagpur.

- 2 day e seminar on Steps to Research conducted by CS Department of Amaljyothi college of Engg., Kanjirappally. Our CRD supported their initiative and organized the e seminar on 19th and 29th Sep, 2014.

From the Deans Desk

The research and development activities of any Institution has vital role to play in the quality determination of the institution and it is extremely important for professional colleges. The quality of education imparted to the students will be counted in terms of the research output of the institution by taping the technical skill and the innovative talents of both staff and students. In order to attract and encourage the young talents, the Research and Development Centre of our college was started in 2010 with Prof. Dr. K Babu Joseph , former Vice Chancellor CUSAT as its Dean. In 2014-15, Dr. K.T. Mathew, Emeritus Professor and former Principal of the college took charge and he has initiated new ideas to kindle the research interest of the students. Presently it's headed by Dr. Pramod Kumar, Associate Professor, Mechanical Engineering Dept along with a team of dedicated and hard working personnel.

One of the main sub divisions of CRD is Viswajyothi Center for Emerging Paradigms in Education (V-CEPE). V-CEPE comprises of three projects namely eOUTREACH, Spoken tutorial and Aakash. In April 2012, we have been confirmed as a Remote Center (1179) of IIT Bombay in their prestigious eOUTREACH project. It is an Audio Visual training project conducted by Professors of IIT Bombay and IIT Kharagpur for training engineering college faculties. Through this project, we have completed four main workshops in Research Methodologies, Engineering Thermodynamics, DBMS and Analog Electronics, design of algorithms signals and systems, control systems, and over the years, we have trained nearly 200 internal and 50 external faculties. The coordinators of the these workshops had a chance to attend the coordinators workshop

at the respective IITs free of cost. These workshops were highly informative and innovative. Also the laboratory sessions, tutorial sessions and assignment sessions fastened a sense for team work and the importance of time management. The quiz sessions were thought provoking. We take this opportunity to thank the participants for their dedication and support and also the management for steering us through. Also expecting the support, participation and creative instructions for making the upcoming events more successful ones.

Another main subdivision of CRD is the research council, which takes care of all the research, development and publishing activities of the college. Research Council has a lot of ambitious plans and one such idea is the formation of Innovators Forum where more than 160 students have enrolled as members. The young enthusiasts met once a fortnight and discuss current and innovative developments in their respective domains. They are asked to give presentations on a topic and are motivated to conduct research work of their own interest utilizing the facilities of the college. The staff and. students were encouraged to undertake project works and few of them were successfully completed.CRD also helps the final year student to receive financial help from the college or other agencies for successful completion of their projects.

Dr. Anishin Raj MM

Dean R&D, Associate Prof. CSED

INDUSTRY PARTNERSHIP - MOUS SIGNED

Sl No	Name of MoU Partner	Objectives	Date of Signing	Duration
1	Infosys Limited, Electronic City, Hosur Road, Bangalore-560100	1.Enriching the technical education process 2.Jointly work for enhancing the quality of education imparted to Students and Faculty 3.Collaborate for enriching the technical education in new subject areas, teaching-learning process	2/3/2006	Renewal every three years

		4.Enabling students to meet industry needs and to be recognized globally.		
2	Progressive Cybernetics Pvt Ltd, 41672/A1, 2nd Floor, Lovely Avenue, Puthiya Road, Kaloor, Cochin-682017	1.Recognizing the importance of research and development in the area of Computer Science and Information Technology in a cost effective way. 2.Imparting Industrial Training about cutting edge technologies to the students and Faculty. 3.Appreciating the need for creation of large reservoir of highly qualified man power in all fields related to Computer Science and IT. 4.Club the expertise and resources of students to promote the quality of manpower in the field of Engineering with emphasis on software development and job training.	18/8/2016	5 years
3	Pepperpot Systems and Solutions Pvt Ltd, Infopark, Koratty P.O, 680308	1.Research and development in the area of Computer Science and Information Technology. 2.Imparting Industrial Training about new technologies to the students and Faculty. 3.Creation of highly qualified man power in all fields related to Computer Science and IT. 4.Promote the quality of manpower in the field of Engineering with emphasis on software development and job training.	20/8/2016	5 years
4	Renaisoft Solutions Pvt Ltd, First Floor, Puzhakkarayil Building, SH15, Thalayolaparambu, Kerala-686605	1.Cost effective research and development in the area of Computer Science and Information Technology. 2.Imparting Industrial Training about new technologies to the students and Faculty. 3.Creation of highly qualified man power in all fields related to Computer Science and IT. 4.Pooling their expertise and resources	4/10/2016	5 years

5	CT Control Technology (India) Private Limited	1. Exchange of personnel through deputation as per the rules of the respective institute 2. Organization of joint conferences, seminars and workshops 3. Practical training/Intership for VJCET students 4. Joint guidance of students project/thesis in advanced instrumentation systems design and manufacturing	3/9/2016	5
6	Suvire Electric (P) Limited	1.Organization of joint conferences, seminars and workshops 2.Exchange of personnel through deputation as per the rules of the respective institute 3.Joint guidance of students project/thesis in advanced instrumentation systems design and manufacturing 4. Practical training/Intership for VJCET students	23/1/2017	5
7	Telecom Sector Skill Council [TSSC]	Telecom Sector Skill Council TTSSC] which is an industry led apex body and committed to ensure adequate skilled manpower to boost growth and productivity in Telecom sector by developing necessary framework for standards, Curriculum and Quality assurance at all levels in Vocational/ technical programs to meet the needs of telecom industry and participation in regional and vocational telecom sector development initiatives. The MoU signed between AICTE and TSSC can be viewed on the AICTE website www. aicte-india. org.	22/6/2017	-
8	INTERCAD SYSTEMS PVT LTD	This MoU details the modalities and general conditions regarding collaboration between vJCET and M/s iWs InterCAD Systems pvt Ltd for enhancing, withinthe country, the availability of highly qualified manpower in the areas of cAD, CAM, and cAE Software	9/8/2017	5 years

		Solutions and related fields without any prejudice to prevailing rules and regulations in VJCET and M/s IWs InterCAD Systems Pvt Ltd without any disregard to any mechanism evolved and approved by the competent authorities under Govt. of India in so far as such mechanism applies to vJCET and M/s IntercAD Systems Pvt Ltd' The areas of cooperation can be extended through mutual consent.		
9	Metrolla Steels Ltd.	This MOU details the modalities and general conditions regarding collaboration between VJCET and M/s Metrolla Steels Ltd, for enhancing, within the country, the availability of highly qualified manpower in the areas of mechanical engineering and manufacturing, without any prejudice to prevailing rules and regulations in VJCET and M/S Metrolla Steels Ltd, without any disregard to any mechanism evolved and approved by the competent authorities under Govt. of India in so far as such mechanism applies to VJCET and Metrolla Steels Ltd. The areas of cooperation can be extended through mutual consent.	1/7/2017	5 years
10	G&G Constructions	1.Exchange of personnel through deputation as per the rules of the respective institute ,for limited periods as mutually agreed upon. 2. Organization of joint conferences ,seminars and workshops. 3. Practical training/Internship for VJCET studentscan be providedat M/s G&GConstructions . 4.Jointguidance of studentprojects/thesisinResearch , Design, Construction andConsultancyin the field of	7/10/2016	5 years

		Civil Engineeringand technology and other areas of national interestat VJCET by M/s G&GConstructionsonmutuallyagreeableterms.

5 M/s G&GConstructionswould accommodateB.Techstudentsof their programmein such anumber thatM/s G&GConstruction sdeemsconvenienttoit for the purpose of imparting industrial training.

6. M/s G&GConstruction smay seekassistance /guidance of VJCET facultymembers in product/process modification, modernization, troubleshooting, etc.

7. Would allow theindustrial visitsof studentsfor half/full dayto providethem with an exposureto variousequipment , instrument, etc.

8. M/s G&GConstructionsmay showcase its business activities at the seminar/workshop/conference ,etc. at VJCET.
9. M/s G&GConstructionsmay avail library, Internet, computational facilities at VJCET. | | |
| 11 | M/s Infra Housing Pvt.Ltd. | 1.Exchange of personnel through deputation as per the rules of the respective institute ,for limited periods as mutually agreed upon.

2. Organization of joint conferences ,seminars and workshops.
3. Practical training/Internship for VJCETstudentscan be providedat M/s Infra Housing Pvt.Ltd., | 8/9/2016 | 5 years |

		4.Jointguidance of studentprojects/thesisinResearch , Design, Construction andConsultancyin the field of Civil Engineeringand technology and other areas of national interestat VJCET by M/s Infra Housing Pvt.Ltd.,onmutuallyagreeableterms 5 M/s Infra Housing Pvt.Ltd would accommodateB.Techstudentsof their programmein such anumber thatM/s Infra Housing Pvt.Ltddeemsconvenienttoit for the purpose of imparting industrial training. 6. M/s Infra Housing Pvt.Ltd. may depute its personnel as visiting faculty at VJCET to teach any of the regular Courseor specialized topics. 7. M/s Infra Housing Pvt.Ltd . may seekassistance /guidance of VJCET facultymembers in product/process modification, modernization, troubleshooting, etc 8. Would allow the industrialvisitsof studentsfor half/full dayto providethem with an exposureto variousequipment , instrument, etc. 9. M/s Infra Housing Pvt.Ltd may showcase its business activities at the seminar/workshop/conference,etc. at VJCET.		

		10. M/s Infra Housing Pvt.Ltd . may avail library, Internet, computational facilities at VJCET.		
12	ANTONAL GROUP OF COMPANIES	- To recognizing the importance of research and development in the areas of computer science and information technology in a very cost effective way, as well as imparting industrial training about the cutting edge technologies to the engineering/technology/sciences students as well as faculty members. - To appreciating the need for creation of large reservoir of highly qualified manpower in all fields related to computer science and information technology. - To club their efforts by pooling their expertise and resources, - To form a nucleus for promoting excellent quality manpower in the fields of engineering, technology and sciences with special emphasis on software development and, the associated on the job training and related fields etc.	8/12/2016	5 years
13	Zixent Technologies	To recognizing the importance of research and development in the areas of computer science and information technology in a very cost effective way, as well as imparting industrial training about the cutting	7/10/2016	5 years

		edge technologies to the engineering/technology/sciences students as well as faculty members. ● To appreciating the need for creation of large reservoir of highly qualified manpower in all fields related to computer science and information technology. ● To club their efforts by pooling their expertise and resources, ● To form a nucleus for promoting excellent quality manpower in the fields of engineering, technology and sciences with special emphasis on software development and, the associated on the job training and related fields etc.		

Industry Organized Faculty Development Programmes

Deep Drive Enablement Program

Topic	:	Mobile Application Development using Android
Date	:	20-6-16 to 24-6-16
Venue	:	Adishankara Institute of Engineering an Technology, Kalady
Name of Faculty Attended	:	Bency Cleetus, Rini Simon
Organized By	:	Infosys Limited
No Of Beneficiaries	:	2

Faculty Development Programme

Topic	:	Data Mining and Text Mining
Date	:	5/3/2016
Venue	:	TCS, Cochin
Name of Faculty Attended	:	Soumya Mathew
Organized By	:	TCS, Cochin
No Of Beneficiaries	:	1

FDP

Topic	:	Energy Conservation Building Code for Electrical Engineers
Date	:	3.5.2017 and 4.5.2017
Venue	:	PETARC, Moolamattom
Name of Faculty Attended	:	Dr. K K Rajan, Dr. Sony Kurian
Organized By	:	KSEB Ltd
No Of Beneficiaries	:	1

Internet of Things and Cloud Foundry

Topic	:	Internet of Things and Cloud Foundry
Date	:	16.2.2016
Venue	:	TCS Cochin
Name of Faculty Attended	:	Mrs.Anju Susan George and Mrs. Diana Baby
Organized By	:	TCS Cochin
No Of Beneficiaries	:	2

R-Programming and Block Chain

Topic	:	R-Programming and Block Chain
Date	:	15.05.2017
Venue	:	TCS Kochi
Name of Faculty Attended	:	Mr.Jacob Mathai
Organized By	:	TCS Kochi
No Of Beneficiaries	:	1

Data Mining and Text Mining

Topic	:	Data Mining and Text Mining

Date	:	03.05.2016
Venue	:	TCS Kochi
Name of Faculty Attended	:	Mrs.Juliet A Murali
Organized By	:	TCS Kochi
No Of Beneficiaries	:	1

Cloud Computing

Topic	:	Cloud Computing
Date	:	28.03.2017 to 31.03.2017
Venue	:	Vidya Academy of Science &Technology Thrissur
Name of Faculty Attended	:	Mr.Prince Kurian & Mr. Santhanu P Mohan
Organized By	:	Infosys
No Of Beneficiaries	:	2