Annual DIGEST 2017-2018
Vision

To become a technical university of International Standards through continuous improvement

Mission

Impart Quality Education and Training in Engineering and Technology, to prepare students for life and work equipping them to contribute to the technological, economic and social development of India. The college pursues excellence in providing training to develop a sense of professional responsibility, social and cultural awareness and set the students on the path to leadership.
Dr. N. Mahalingam was a simple yet multi-faceted legend. A Gandhian by principle, a patriot, and a proud son of the soil, Arutchelvar Ayya was a man of pious living. His exemplary social contributions in numerous fields of the socio-economic spectrum have benefitted scores of institutions and individuals.

An agriculturist by birth, he graduated as an Engineer and Technologist. Through his persistent endeavour, he rose to become a genius in planning and execution, eventually to be hailed as an industrialist and pioneer of establishing various industries and institutions. He held several important positions and played major roles fostering the development of agricultural, industrial, human resource and institutional development at the state and national levels. His social and humanitarian considerations took his journey beyond the boundaries of industries and scholarly tenets he nurtured. His social mission, true to his belief in St. Vallalar, had been his pursuit of excellence. The Government of India duly recognized his meritorious deeds and honoured him with the prestigious Civilian Award – PADMA BHUSHAN in 2007. His values and approach towards life are still inspiring our people and institutions.
KUMARAGURU COLLEGE OF TECHNOLOGY (KCT), Coimbatore, is an autonomous Engineering College, established in 1984 under the auspices of Ramanandha Adigalar Foundation, a part of Sakthi Group founded by Arutchelvar Dr. N. Mahalingam and has been in the pursuit of impact and excellence. Today, the institution with its 7000 staff and students, is exploring ways to enhance knowledge, and pursue research for the benefit of society and progress of the Economy under the able guidance and adept administration of Dr. B. K. Krishnaraj Vanavarayar, Chairman, Sri. M. Balasubramaniam, Correspondent and, Sri. Shankar Vanavarayar, Joint Correspondent. The institution is accredited by NAAC. Several undergraduate programmes are accredited by NBA as it meets the quality benchmark. With the persisting support of all its stakeholders, KCT continues to progress.
Born in an aristocratic family in Samathur, a village in the southern state of Tamil Nadu, India, he qualified himself as a barrister and later entered into business. The high ideals of Swami Vivekananda and Mahatma Gandhi had a profound impact on him.

As Chairman of the Bharatiya Vidya Bhavan, he has done yeoman service to spread the glory of India through lectures and inspires the people of the region. As a prominent leader of the Rotary movement, he has worked for Universal peace and brotherhood. In appreciation of his service, Rotary has honoured him with the “Outstanding Citizen Award” for the year 2001. Rotary Club of Aarch City, Madras, gave him the ‘Lifetime Achievement Award’ in June 2007.

In the field of education, his contribution has been significant. He is the President of N.G.M.College, Pollachi and Chairman of Kumaraguru Institutions, Coimbatore. He has served in the management committees of many leading schools and colleges and worked for making values an integral part of the curriculum.

During his tenure as Chairman of The Indian Cotton Mills’ Federation, New Delhi, the apex body of the Textile Industry, a ‘Vision Statement for the whole of Textile Industry’ was prepared with the help of CRISIL and the same was released by the then Hon’ble Finance Minister Sri P.Chidambaram.

In appreciation of his Global Perspective and Secular credentials, he was invited by H.H.Pope John Paul II to attend the “Day of Prayer for Peace in the World’ held at Vatican, Italy, during January 2002. In appreciation of his social work wedded to the Gandhian ideals, he was awarded the Degree of Doctor of Laws (Honoris Causa) by Sri Avinashilingam University, Coimbatore, in the year 1999. Sri Ramakrishna Mission, Coimbatore, in commemoration of their Platinum Jubilee Celebrations, awarded him the Vivekananda National Award for Excellence in 2006.
Sri. M. Balasubramaniam is a astute Industrialist and the Correspondent of KCLAS and is also the Vice Chairman and Managing Director of Sakthi Finance Ltd. He holds a Master’s in Commerce from the Loyola College, Chennai and MBA in Finance from the University of Notre Dame, USA.


He is a member of the Senate of Bharathiar University and member of the Governing Council of Nachimuthu Polytechnic, Nallamuthu Gounder Mahalingam College and Kumaraguru College of Technology. He was Vice Chairman and Chairman of CII during 1997-98 & 1998-99. He is also member in the Indian Chamber of Commerce.
Shri Shankar Vanavarayar
Joint Correspondent, Kumaraguru Institutions

Shri Shankar Vanavarayar is an accomplished business and organisation leader, a spirited patron of arts, history and heritage, a successful entrepreneur and an inspired educationist. In a highly dynamic and diversified professional career spread over 15 years he has held leadership positions in businesses, education institutions, social development organizations and programs within The Sakthi Group, and in the Confederation of Indian Industry (CII). He has a proven track record in building teams, strategic planning, managing programs and operations in multiple domains spanning business (textiles, automotive, financial services, agri-foods, retail), education (arts, science & technology), culture and heritage, community and social development, international youth affairs, cross-national institutions and alliances etc.

As the National Chairman of Young Indians (YI) in 2011-2012, he played a key role in the creation of the Commonwealth Asia Alliance of Young Entrepreneurs (CAAYE). He also led Indian delegations and has represented India as the Global Young Leader in the BOAO Forum in Hong Kong (2011) and China (2012) and has delivered keynote speeches at the Commonwealth Business Forum London, CHOGM Perth Summit (2011), G20 France, and Aspen Institute Seminar, Italy (2010). In his role as Managing Trustee of The Vanavarayar Foundation and keeping with the legacy of his ancestors, he has organized tours, lectures, book publications and awareness programs towards the cause of preserving and portraying the architecture, heritage, culture and history of the Kongu region. As Member of the Apex Body of Siruthuli, he led several projects aimed at enhancing water conservation and rejuvenation through education programs, communication campaigns, and by fostering wider community participation.

As the President of Kumaraguru Institutions and as Vice-Chairman of National Council for Higher Education in CII, he aims at transforming the Indian higher education system through path-breaking reforms in governance, learner centric academic programs and infrastructure, research & innovation driven industry partnership, international collaboration among others. Shankar has led strategy, events, publications, communications and policy making within CII at the regional (South India) and the national level in areas such as higher education, youth affairs, entrepreneurship, family business and skill building.
An overview of the annual activities of all academic departments are specified in this section. The overview is segmented into imperative advancements, goals for next year, Research Activities, Publications, Consultancy Services offered by the department, achievements, Milestone events, MoU, Social Impact programmes and Alumni association events.
The Department of Aeronautical Engineering of KCT was established with a vision to attain excellence and global reputation in Aeronautical Engineering Education and Research. Well qualified and dedicated faculty team specialized in different areas of Aeronautical and Aerospace Engineering contribute to effective teaching learning. The department has a state of art laboratory and infrastructure facilities to support the research and consultancy activities. Computational Fluid Dynamics, Experimental High speed and Low speed Aerodynamics, Composite Materials and UAV are the thrust areas focused in the department. Students take part in Aero modelling Club and Students for Exploration and Development of Space (SEDS) club activities round the year to enhance their leadership qualities.

A special lecture on ‘Aerospace Challenges of the 21st Century’ was given by Dr. Ganesh Rajagopalan, Iowa University, USA on 28 July 2017.

Dr. V. R. Sanal Kumar is the International Project Coordinator of the Indo-Russian research project under the DST-RFBR inter-disciplinary scientific cooperation under grant INT/RUS/RFBR/DIR/P-3/2016 in collaboration with IISc, Bangalore.

Pavithra Murugesh of III year presented nine technical papers in the international conference organised by AIAA at Atlanta, USA.

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Department received funds from UGC, DRDL, KCT Management for the total amount of Rs 15 lakhs for pursuing research projects.

Undertook industry consultancy project from Ezon Energy Solutions (P) Ltd Coimbatore on ‘Design and Development of H-Type Vertical Axis Wind Turbine’ in association with KCIRI.

Shock wave and High speed jet flow research facilities worth Rs 39 Lakhs supported by the management of KCT were established.

Three one credit courses were conducted involving industrial experts from GKN Aerospace Ltd, Sukra Helitek and GE Global research.

Organised a National Conference on ‘Recent Trends in Innovations & Technologies’ in which participants from various colleges presented their technical papers.
Research

The broad areas of research handled in the department are Aerodynamics, Computational fluid dynamics, Aerospace materials, Wind turbines and Unmanned aerial vehicle. Three faculty members have registered for PhD for the academic year 2017 - 18.

Significant Researches

FACULTY

A project on ‘CFD Analysis of Settling Chamber for Trisonic Wind Tunnel’ was undertaken by Dr. P. S. Prem Kumar, ASP, sponsored by DRDO with Rs 9.44 Lakh financial support.

A project on ‘Experimental and computational studies on propeller characteristics’ was undertaken by Dr. P. S. Prem Kumar, ASP. UGC funded a sum of Rs. 2.22 lakhs for this project. KCT management funded a sum of few lakhs for this project. The project was started in April 2017 and is expected to be complete by July 2018.

A project on ‘Development of the Multifactorial Computational Models of the Solid Propellants Combustion by Means of Data Science Methods’ was undertaken by Dr. V. R. Sanal Kumar. The project was started in April 2016 and is expected to be complete by July 2018.

The Science and Engineering Research Board (SERB) of the Department of Science and Technology approved the travel grant (File No. ITS/2018/002316) to Dr. V. R. Sanal Kumar for presenting AIAA papers in U.S.A.

Research plan for the academic year 2018-2019

To conduct experimental studies on supersonic flow using high speed jet and shock tube facilities.

To obtain research project funds from ISRO/ARDB.


High temperature creep characteristics of Magnesium Nano composites using Creep Testing Machine.

Studies on natural fibre reinforced polymer composites for acoustic absorption applications.

Milestone Events

A two day ‘Science Academies Lecture Workshop on Shock Waves in Science, Engineering and Medicine’ sponsored by Science Academies was conducted on 06 and 07 October 2017.

A two day workshop on ‘UAV in Autonomous Mode: Fabrication and Testing’ in association with Mechatronics department was conducted.

Guest lecture on ‘Essence of Entrepreneurship and the Opportunities in Aviation’ by Mr. R. Vishnuvardhan, Entrepreneur.

A two day Career Guidance Programme for the students on ‘Commercial Airplane Aerodynamics’ by A. Alagu Vairamuthu, Assistant Manager – Technical Services (Structure) from Jet Airways, was organised on 22 and 23 August 2017.

Dr. Ganesh Rajagopalan, Professor from Iowa University gave a special lecture on the topic ‘Aerospace Challenges of the 21st century’, on 28 July 2018.

National Conference on ‘Recent Trends in Innovations & Technologies’ in association with Electrical and Electronics Engineering department on 08 April 2018.

A two day KCT Space week 2017 programme was conducted in association with SHAR-ISRO & Indian Air force on 04 and 05 October 2017.
Publications

Out of 18 publications by the faculty and 10 publications by the students, a few are mentioned below.

Sample Publications

FACULTY


STUDENTS


Achievements

FACULTY

Mr. P. S. Prem Kumar, ASP submitted PhD titled ‘Optimization of Oil Cooler Duct Location for a Pusher Type Turboprop Aircraft’ under the guidance of Dr. C. Senthilkumar/Aerospace Department, MIT, Chennai.

Mr. M. Senthil Kumar AP (SRG) received an award from KCT management under the category of young researcher and best contribution in department.

Dr. S. Jayalakshmi, Professor was selected under AICTE INAE teacher research fellowship scheme for doctoral research in IISc Bangalore.

STUDENTS

Flight Cadet Sudharshanan P of II year represented the Tamil Nadu, Puduchery and Andaman & Nicobar Directorate at Republic day parade in Delhi and took part in the Rajpath parade on 26 January 2018.

Naveen Kumar R, Praveen Kumar V, Manoj Kumar M, Kishore Kumar S, Soundharya Lakshmi G of III year participated in “Boeing National Level UAV competition” at IIT Kanpur from 15 to 18 March 2018. The team is one among the top 50 teams from India.

BOOK CHAPTERS PUBLISHED BY FACULTY


Consultancy

A goodwill project was undertaken with Ezon Energy Solutions (P) Ltd Coimbatore on ‘Design and Development of H-Type VAWT’ in association with KCIRI on April 2018.

Industry Partnership

Partnership for student Internship and projects with Aeronautical Development Agency, DRDO, Bangalore.

Partnership for student placements, internship and projects with GKN Aerospace, Bangalore.

Partnership for student placements and internship with Tata Advanced Systems Ltd, Hyderabad.

Partnership for student Internship and projects with National Aerospace Laboratories, Bangalore.

Partnership for student Internship and projects with CEMILAC, DRDO, Bangalore.
Social Impact

- Organised KCT Space Week in association with SHAR-ISRO & Indian Air Force for school and college students, around 1200 students from various schools and colleges participated in this event on 04 and 05 October 2017.

- Organised ‘Aircraft Design Contest’ as a tribute to Dr APJ Abdul Kalam. Mr. C. Thiruaghana Sambandam, Scientist, ADA, & Mr. Prasad Rao, Scientist HAL, Bangalore were invited as chief guests. Around 120 college students from various institutions took part.

- Outreach programme organised for school students on ‘Career fair’ for Ooty & Kotagiri Region Schools on 23 and 24 October 2017.

- Aero modelling Camp and flying fest camp for school students was conducted from 07 to 19 May 2018 by the Aero Modelling Club, KCT. Around 100 school students were a part of it.

Alumni

Guest Lecture on ‘Opportunities and Challenges for Higher Studies Abroad’ was delivered by Ms. Tharikka, (2011 batch) Graduate Research Assistant, Auburn University, USA was conducted for third and second year Aeronautical Engineering students on 18 August 2017.

Guest Lecture on ‘Road to become an efficient Engineer – Challenges & Opportunities’ by Mr. Vignesh Dhanapal (2008 batch), Stress engineer, Ferchau India Engineering Pvt. Ltd, Bangalore was conducted for third year Aeronautical Engineering students on 23 March 2018.

Goals & Plans for next year

To sign MoU with airline industries to promote Aircraft Maintenance Engineering Practices.

To undertake funded research projects from government/private organisations.

To establish the centre of excellence on Unmanned Aerial Vehicle (UAV).

To secure NBA accreditation.
The Department of Automobile Engineering of KCT was established with an aim to create a pool of graduates who turn out to be trendsetters in the automotive field. The department’s laboratories and testing centres which are 9 in number are known for its high-end automotive equipments and research work. Students with able guidance of the faculty, and hands-on training in the labs make their way to internships and industry projects in leading companies. Major areas of current research interests are the Green Vehicle Technologies, Alternative fuel technology, Vehicle design & Performance optimization, Safety Standards in Automotive Engineering, and Advanced Automotive Systems.

Conducted Anna University approved 7 day Faculty Development and Training Programme on “ME6603 - Finite Element Analysis” from 22 to 28 May 2017.

“BAJA SAEINDIA 2018 - Mega Design Workshop” was conducted on 23 and 24 September 2017 by SAEINDIA in association with the Department of Automobile Engineering.

“One day International Workshop on Motorsports Engineering” was conducted in KCT on 07 October 2017 in association with ARA Institute of Canterbury, New Zealand and The Federation of Motor Sports Clubs of India (FMSCI).

Crash Course on “Motorsports Engineering” was organized in association with ARA Institute of Canterbury, Christchurch, New Zealand on 10 and 11 October 2017.

“International Seminar on Advanced Fluid
Research

Research in the department is concentrated in areas like Computational flow dynamics (CFD), Structural analysis of vehicles, Materials and Manufacturing, Engine testing, Emission control, Vehicle automation.

Significant Researches

FACULTY

A project on “ECU remapping for Honda I-Vtec Engine by Mr. R. Kishore, AP was sanctioned by ARA Institute of Canterbury, New Zealand & AIM Technologies funded a sum of Rs. 1 lakh for this project.

A project on “Performance Tuning of V8 engine using simulation software” by Mr. R. Kishore, AP, ARA Institute of Canterbury, New Zealand & VANNIK Developments funded a sum of Rs. 1.5 lakhs for this project.

A project on “Development of special car seat for physically challenged people” by Mr. A. Prabhakaran, AP, TNSCST funded a sum of Rs. 0.08 lakhs for this project.

A project on “Prevention of Car Window Jamming” by Mr. A. Prabhakaran, AP, received a fund of Rs. 0.13 lakhs for this project from Texas Instrument.

A project on “Development Study of Copper Tulip Liner for Choosing Appropriate Manufacturing Process Based on FE simulation” by Mr. J. Saiganesh, AP, received a fund of Rs. 9.2 lakhs from DRDL.

A project on “Design and Development of H-Type VAWT” by Mr. J. Saiganesh, AP, received a fund of Rs. 2.8 lakhs from EZONE Energy solutions.

STUDENTS

A project on “I- Water Waste Remover” was done by Mr. M. Sachin (15BAU049). This research was guided by Mr. A. Prabhakaran, AP.

Milestones

“KCT MINI DIRT BIKE” was conducted on 17 March 2018. Around 20 teams from Engineering colleges across Tamil Nadu participated. The event consisted of technical inspection for evaluating the design, fabrication, rigidity, innovative features, cost report & marketing presentation of the bikes and qualified teams participated in the static and dynamic events after that.

The Automotive Research Association of India (ARAI), Pune in association with Department of Automobile Engineering conducted a 3 Day Proficiency Improvement Program (PIP) on “Futuristic Automotive Technologies” on 17 and 18 August 2018. About 109 participants from Roots industries, Jayem Automotives, TVS motors, ILENSYS, John Deere, Volvo trucks, students of KCT and other Engineering colleges attended the programme.

In association with SAE KCT Collegiate club, conducted Tier I level competition for students. Competitions such as Modelling and Animation Competition, Analysis Competition, Business Plan Competition, Technical Paper Competition, Auto Quiz Competition, Prototype Modelling – Challenge, Welding, Mechatronics, Manufacturing Tech Challenge, Mechanical Engg. Design Cad, Electronics, Internet of Things were conducted.

Mr. Graeme Harris, Senior Lecturer, Department of Mechanical Engineering, Ara Institute of Canterbury, New Zealand visited KCT as a part of a Faculty Exchange Program from 03 to 13 October 2017.


The department conducts a Skill Development Training for the unemployed rural candidates under Pradhan Mantri Kaushal Vikas Yojana (PMKVY) scheme for Automotive Service Technician level-4. Currently 15 candidates are undergoing training in this scheme.

Conducted the 2nd National Conference on “Automotive System Design, Manufacturing & Integration” on 28 April 2018.
Out of the 13 publications by the faculty and 02 publications by the students, a few are mentioned below.

**Sample Publications**

**FACULTY**


Dr. G. Thenmozhi – “Analysis of Double Chambered single and Cascaded Microbial Fuel cell (Characterization study based on the Enrichment of Fuel)” International Conference on Engineering and Advancement in Technology.

Mr. J. Andrew Pon Abraham, Dr. S. John Alexis, Mr. C. Naveen Kumar, Mr. G. Rajkumar, Mr. R. Kishore – “Design and Analysis of LCV Chassis (TATA 407), In the Journal of Advanced Research in Dynamical and Control Systems, Vol.No:9, Sp-14/2017.

**STUDENTS**

Mr. S. Satish, Mr. J. Saiganesh, Mr. T. Karthik – “Design and Analysis of Suspension system for a three wheel electric vehicle”, Journal of Advanced Research in Dynamical and Control System, Vol. No:9, Sp-14/2017.


**Consultancy**

Consultancy service was provided to L.G. Balakrishnan Bros Limited., Coimbatore on Two Wheeler Performance Testing - Chain Slag Measurement by Mr. G. Rajkumar, Assistant Professor. Revenue of Rs. 10,000 was generated.

Consultancy service was provided to Jayem Automotive, Coimbatore on Two Wheeler Performance Testing - Chain Slag Measurement by Mr. T. Karthik, Assistant Professor. Revenue of Rs. 10,000 was generated.

Consultancy service was provided to ARAI, Pune on Fuels & Lubricants Property Testing by Mr. S. Sivakumar, Associate Professor. Revenue of Rs. 10,000 was generated.
Alumni

Consultancy Projects:
Mr. M. Venkatesalu, Design Engineer, Ampere Vehicles Private Limited, Coimbatore (2013 - 2017 batch Automobile Engg.) provided consultancy on Suspension Test of Electric Three wheeler suspension with his organisation.

Mr. R. Giridharan, Engineer, R & D at LGB Rolon Science, Coimbatore (2013 - 2017 batch Automobile Engg.) provided consultancy on tests to run the test for the rear two wheeler suspension.

Mr. S. Aravinth, Testing Engineer, Jayem Automotives Private Limited, Coimbatore (2011 - 2015 batch) tested the Two Wheeler using the Two Wheeler dynamometer as consultancy work.

Achievements

FACULTY
Three external candidates completed Ph. D degree under the guidance of Dr. S. John Alexis, Professor and Head, Auto.

STUDENTS
Mr. Kowshigan, Mr. Jagdish and Mr. Kasi Aravinth, IV year students won third place in Dr. APJ Abdul Kalam Innovation Eco-System event held at Sri Sairam Engineering College, Chennai.

Mr. Bala Prasath, II year student, won II prize in MMSC Student Cup 2017 at MMRT, Chennai.

Mr. Bala Prasath, II year student, won III prize in MRF MMSC FMSCI Indian National Racing Championship 2017 at MMRT, Chennai.

Mr. Kowshigan, final year student, won 2nd prize at state level LOGO DESIGN contest, CIT.

Mr. S. Gopinath of III year presented a paper entitled “Analysis of Double Chambered single and Cascaded Microbial Fuel cell (Characterization study based on the Enrichment of Fuel)” in the International Conference on Science, Technology, Engineering and Management (ICSTEM’18) AT KIT, Coimbatore.

Social Impact

- Organised an Open Day to Automobile Engineering for school students on 18 November 2017. In total 150 students participated from the following schools Ksir’s School, Vivekam Matriculation school, SNS Academy, Amirta Vidyalayam School, T.K.S Matriculation School, Maharishi Vidyamandhir, N.G.R.A School and Government School (Kolathupalayam).

- In association with Motor Vikatan organised “Career Guidance Workshop on Automotive Engineering” for higher secondary students and their parents at Kumaraguru College of Technology, Coimbatore, on Saturday, 22 April 2017.

- In association with Auto Zone organized four wheeler free service camp at KCT for staff & students on 26 & 27 October 2017. Technical Team from AutoZone conducted free check-up, Tire maintenance, Tire Balancing & AC gas recycling for the vehicles of KCT staff & students.

Goals & Plans for next year
To launch laboratory for Electric Vehicle. | To start preliminary work for Autonomous Vehicle. | To build Hybrid vehicle.
BIO TECHNOLOGY

The Department of Biotechnology of KCT is a recognized centre for research in Biotechnology by Anna University. The research studies in the department stretch to the length and breadth of the field, from degrading carcinogenic dyes in the textile dyes to banana peel proteases in wound dressing material. The department holds an R&D budget of Rs. 1.21 crores obtained through various government funding agencies like DST, DBT, AICTE.

A seven day STTC programme on ‘Basic Techniques in Mammalian Cell and Plant Tissue Culture’ was conducted from 9 to 15 July 2017. A total of 25 participants were trained in the basics of animal and plant tissue culture techniques.

A fourteen day STTC on ‘Extraction Process Design, Isolation and Applications of Polyphenols and Value Added Biomaterials’ sponsored by Department of Biotechnology, Govt. of India was conducted from 23 October 2017 to 05 November 2017. Around 30 external participants from various institutes were trained in the design and isolation of Polyphenols.

A workshop on ‘In Vitro Cell culture: Natural Products Efficacy and Toxicity Analysis’ was conducted during 07 to 09 November 2017. A total of 25 participants attended the workshop. They were provided hands on training on testing the efficacy and toxicity of natural products in cell lines.

A three day International workshop on ‘Image Analysis for Treatment of Human Infectious Diseases’ in association with Carl Zeiss, Bangalore was conducted from 10 to 12 May 2018. A total of 31 participants attended the workshop. Participants are currently pursuing their PhD/working as faculty members at various institutes in and around Coimbatore.

AICTE sponsored Faculty Development Programme on ‘Medical and Healthcare Textiles’ was conducted in association with Textile Technology and Fashion Technology departments on 4 to 17 December 2017. A total of 50 external participants registered for the event. The FDP laid a foundation to various applications of medical and healthcare aspects in Textile industries.

A contest on ‘Transform Ideas to Innovation’ was conducted on 02 April 2018. Around 26 participants were trained in the basics of animal and plant tissue culture techniques.

Imperative Advancements

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Head of the Department

Diseases’ in association with Carl Zeiss, Bangalore was conducted from 10 to 12 May 2018. A total of 31 participants attended the workshop. Participants are currently pursuing their PhD/working as faculty members at various institutes in and around Coimbatore.

AICTE sponsored Faculty Development Programme on ‘Medical and Healthcare Textiles’ was conducted in association with Textile Technology and Fashion Technology departments on 4 to 17 December 2017. A total of 50 external participants registered for the event. The FDP laid a foundation to various applications of medical and healthcare aspects in Textile industries.

A contest on ‘Transform Ideas to Innovation’ was conducted on 02 April 2018. Around 26 participants were trained in the basics of animal and plant tissue culture techniques.
The broad areas of researches carried out in the department are Genomic Analysis, Medical Textiles, Wastewater treatment process, Biomaterials, Natural Products Research. One faculty has registered for PhD in the academic year 2017-18. Four full-time Ph.D scholars have registered for their doctoral studies.

### Significant Researches

#### FACULTY

A research on ‘The Development of Foldscope Based Device to Measure Leaf Hairiness: A Plant Breeder’s Tool & Rapid Estimation of Microbes Using Foldscopes for Pest Control’ is being carried out by Dr. N. Saraswathy, PI, and Dr. K. Kumaravel, Co-PI. A financial grant of Rs 8 lakh is sanctioned for this project by DBT.

A research on ‘Fabrication of Soybean protein electro-spun suture loaded with Rubiacordifolia and Eichhorniacrassipes - A cost effective novel antimicrobial non-absorbable suture from plant protein for surgical site infection’ is planned by Dr. BhaarathiDurai, PI and Dr. N. Saraswathy, Co-PI. A proposal is submitted to DBT-BIRAC.

A research proposal on ‘Development and Evaluation of Fingernails Images Based Tool for Mass Screening of Micronutrient Deficiencies in Children’ by Dr. N. Saraswathy, PI and Dr. K. Ram, Co-PI was submitted to DST for a financial grant of Rs. 23.09 lakh.

A research on ‘National level Short Term Training Course (STTC) entitled Extraction Process Design, Isolation, and Applications of Polyphenols and Value Added Biomaterials’ was carried out by Dr. V. Muthukumaran - Course Director of Mechanical Engineering and Dr. T. Sathish Kumar -Course Co-director of Biotechnology. A financial grant of Rs 3.95 for a period from 23 October to 05 November 2017 was sanctioned by DBT for this project.

A research on ‘Screening and Isolation of Natural Colorant from Marine Algae for Food Application’ was carried out by Ms. V. Vijayalakshmi. A financial grant of Rs 8,500 was sanctioned by TNSCST, Chennai. Mr. P. Muthukumaran, AP II, was the faculty guide for this project.

A research on ‘A Novel Herbal Tea Formulation for Liver and Kidney Protection and Rejuvenation Nutritional, Physicochemical and Sensory Analysis’ was carried out by Mr. S. J. Kabilan. A financial grant of Rs. 20,000 was sanctioned by Students Re’ project scheme, KCT. Dr. R. Baskar, ASP, was the faculty guide for this project.

A research on ‘Formulation and Evaluation of Ointment for Acne Treatment’ was carried out by Ms. Elakiya C, Ms. Gowsika V and Ms. Ananya K. A financial grant of Rs. 8,000 was sanctioned by Ré, KCT. Ms. V. Veerabhuvaneshwari, AP I, was the faculty guide for this project.

#### STUDEENTS

A research on ‘Bioprocess Design and Simulation’ was conducted on 05 February 2018. Over 60 students from colleges around Tamil Nadu participated in the event.

#### Consultancy

Dr. Stephan Rapheal, offered consultancy to Pasteur Institute, Connoor, for Design of Aptamers for DPT and Tetanus Vaccine.

Dr. Ram K offered consultancy to Prof. Srikanth, Head, Dept. of Biological Science, BITS PILANI Goa campus on Metagenomics Analysis.

#### Research plan for the academic year 2018-2019

The primary focus of the department for the forthcoming year is to work towards the establishment of centralized image analysis centre in the department. In addition, the department also focuses on various aspects of dye degradation in industrial scale, natural products and their applications in Food, Healthcare sectors, etc.
Publications

Out of 25 publications by the faculty and 05 publications by the students, a few are mentioned below.

Sample Publications

**FACULTY**


**STUDENTS**


MoU

MoU was signed with Phyto Specialities, Chennai, for faculty and student Research, Consultancy and Internship.
Milestone Events
Dept. of Bio technology and Civil Engineering, KCT in association with Tel Aviv University, Israel and Tech Univ of Liberec, Czech Republic conducted a 3 day International Conference on ‘Waste Water Management (ICWW 2017)’ from 17 to 19 August 2017 sponsored by AICTE.

A 3 day International workshop on ‘Image Analysis for Treatment of Human Infectious Diseases’ was conducted from 10 to 12 May 2018.

An awareness programme on ‘Popularisation of Science-Awareness on Micronutrient Deficiency and Diabetes’ was conducted on 05 August 2017 sponsored by Tamil Nadu State Council for Science and Technology.

Achievements

STUDENTS
Mr. Raghu Prasad K E, Novosymes presented for ‘Voice for BT’ inter collegiate public speaking contest on Biotechnology Certificate of Participation (top 10 rank) on 11 September 2017 organized by Sastra University, Thanjavur.

Ms. Sugathy, JRF- DST WTI and Ms. V. Aswitha, PA-DST WTI won the first prize for paper presentation in National Symposium conducted by Dept. of Chemical Engg., Coimbatore Institute of Technology.

Ms. P. Sagarika, Ms. A. Jennifer, Ms. M. Manopriya, Ms. G. Swathi and Ms. I. Hanupriya received an award from the Honourable President of India President Ram Nath Kovind for the First Place in World Food Hackathon 2017 conducted by the Government of India at New Delhi.

Ms. Anushya Menon and Ms. Kousalya received the first prize for poster presentation in one day national seminar on Recent Food Processing, 2017 conducted by Avinashilingam University, Faculty of Engineering on 04 August 2017.

Ms. Anitha V won Gold Medal in NDRF 48th All India Student Design Competition.

Alumni
Career Day 2017 was organized on 18 November 2017 to establish a relationship with industries and alumni to promote in-plant training and placement in the industry for students. Resource persons from Industry and alumni participated in the event and interacted with the students.

An Industry Panel Discussion was conducted on 16 February 2018 to enhance the curriculum and career opportunities. Resource persons from industries and students attended the interaction along with the faculty members of the department.

The department conducted a one credit industry course on ‘Clinical Research’ in association with Spinos Life Science and Research Ltd, Coimbatore, on 02 September 2017 to promote scope and career opportunities in CRO field.

The department conducted a one credit industry course on ‘Pharmacovigilance’ in association with Oviya Med safe, Coimbatore, on 05 January 2018 to promote internship and domain specific placements.

Social Impact
- An awareness program on “Popularisation of science-awareness on micronutrient deficiency and diabetes” sponsored by TNSCST, Chennai was conducted to 100 school students and residents of Palamalai, Coimbatore District on 5.8.2017.

Goals & Plans for next year
To establish a facility for Image Processing and Analysis for disease diagnosis.

To establish an industry sponsored laboratory in the area of phytochemical analysis.

To acquire externally sponsored projects from government/private agencies in the technical fields of metagenomics analysis.
The Department of Civil Engineering of KCT was established with an aim to shape up highly competent and technologically capable professionals and able academicians. The department’s vigour led to the establishment of Centre for Water and Environmental Studies (CWES) and Structural Technology Centre (STC) in 2003 for research and development and to offer their expertise to various structural design and testing projects. The department specialises in Structural, Geotechnical, Environmental and Water resource, Transportation and Construction engineering.

Imperative Advancements

Dept. of Civil Engineering and Bio technology, KCT in association with Tel Aviv University, Israel and Tech Univ of Liberec, Czech Republic, conducted a three day International Conference on ‘Waste Water Management (ICWW 2017)’ from 17 to 19 August 2017, sponsored by AICTE.

AICTE sponsored 14 day Faculty Development Programme on ‘Design and Detailing of Earthquake Resistant Structures’ was conducted from 7 to 20 December 2018.

Through the department, 4 industrial visits and guest lectures by industry experts has been organised for the students exposure.

Faculty members of Civil Engineering department have undergone Faculty Development Programmes at various reputed institutions such as IIT’s and NIT’s.

Structural Engineering lab generated a revenue of Rs. 3,69,050/- (Rupees Three Lakhs Sixty Nine Thousands and Fifty only) during 2017-2018.

Geotechnical Engineering lab generated a revenue of Rs. 1,84,300/- (Rupees One Lakh Eighty Four Thousand Three Hundred only) during 2017-2018.

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Geotechnical Engineering lab generated a revenue of Rs. 1,84,300/- (Rupees One Lakh Eighty Four Thousand Three Hundred only) during 2017-2018.

Industry Partnerships

Partnership with Highway Constructions Private Limited for knowledge sharing and student activities related to internship & placement.

Partnership with CEBACA for training students with reference to the field level training and placement.

Partnership for consultancy with Isha Foundation, Coimbatore.
Research

A team of members are working on research projects approximately Rs. 6,29,000 funded by UGC Minor research and KCT. Through the above research, about 68 papers have been published in National & International Journals in the academic year 2017-2018.

Students are supported through TNSCST, and KCT Re’ funds for their innovations towards scientific and societal research. In this academic year, we have received about Rs. 19600 for the same. Student project funded by TNSCST won the best project award and also contributed about 19 Journal publications.

For this academic year, about 3 concept note for waste water treatment has been submitted to DST. The same has been accepted for next level of screening. Apart from the above, a DDP proposal has been submitted and presented before the screening panel. Two of the faculty members have registered for the Ph.D programme under Anna University.

Significant Researches

FACULTY
A project on ‘Arsenic (III) Removal from Drinking Water Using Fly Ash Agglomerates’ was undertaken by Dr. G. L. Sathyamoorthy, Professor.

An interdisciplinary project work on ‘Anaerobic and Methane Production Process from Organic Wastes Using Novel Membrane Reactors’ was conducted by Dr. G. L. Sathyamoorthy, Professor.

A project on ‘A Novel Approach to Utilize Plastic Waste and Foundry Industrial Waste in Flexible Pavement Construction’ was done by Dr. J. Premalatha, Professor, Dr. G. L. Sathyamoorthy, Professor and Mrs. S. Anita, AP-I.

A project on ‘Supporting pillars for Solar panel erection’ was done by Mr. K. R. P. Satheeshkumar, AP-II.

A project on ‘Development of adsorbent using tannery sludge’ was done by Dr. A. Geethakarthi, AP.

STUDENTS
A project on ‘Flexural Strength of the Slab Using Pet Fibers’ was done by the student team S. Maanasi (14BCE049) and V. Mohana (14BCE058). The project was funded by Re, the research cell of KCT with a sum of Rs. 19,000.

A project on ‘Floating Concrete’ was done by the student team, S. Karthick (14BCE040) and N. Sheik Faridh (14BCE098). The project was funded by TNSCST with a sum of Rs. 10,000.

A project on ‘High Performance Concrete’ was done by the student team, A. Muthu Krishnan (15BCE045), K. Siddharthan (14BCE203), M. Balaji (15BCE032), and Adarsh R Pai (15BCE044). The project was funded by TNSCST with a sum of Rs. 9,600.

Research plan for the academic year 2018-2019

Research will be directed towards the proposed centre of excellence domains (Project management, and smart & liveable cities) along with existing research on water & environmental studies, and Structural Technology Centre.

It is proposed to procure Primavera for assisting research on time minimization towards project execution in project management.

It is proposed to take up study on urban growth/expansion indicators for Coimbatore in collaboration with the University of Birmingham.
Milestone Events

New course on M.E-Environmental Engineering is offered with the approval of AICTE and affiliated to Anna University.

Received Rs. 17 lakh MODROBS funding for modernization of existing Soil Mechanics Laboratory.

Tie up with PAN IIT for various students related activities such as seminars, theory to practice lectures, innova competitions.

Patent submitted by Mrs. Lisa Mary Thomas and Mr. Alan Paul on ‘Crash Barriers’.

Initiated talks with Parambikulam Aaliyar project farmers association for sharing technical expertise towards effective water utilization.

Publications

Out of 68 publications by the faculty and 19 publications by the students, a few are mentioned below.

Sample Publications

FACULTY


STUDENTS


Consultancy

Dr. P. Eswaramoorthy, Professor and Dr. N. Ramsundram, ASP, offered consultancy to Tamil Nadu Electricity Board on Design for Hydro Turbine. A revenue of Rs.47,800 was generated.

Dr. V. Gayathri, ASP, offered consultancy to ISHA Foundation, Coimbatore on Soil Test Report. A revenue of Rs. 30,000 was generated.

Dr. V. Gayathri, ASP, offered consultancy to AMPTECH power transformers, Coimbatore, on Soil Test Report. A revenue of Rs. 15,000 was generated.

Dr. K. Ramadevi, ASP, offered consultancy to TEEMAGE, Kangeyam, on Quality Test for Steel, cement, aggregates and sand. A revenue of Rs. 17,800 was generated.

Dr. K. Ramadevi, ASP, offered consultancy to Jayachandran Barrels, Coimbatore, on Non-Destructive Testing (NDT). A revenue of Rs. 12,600 was generated.

Dr. G. L. Sathyamoorthy, Professor, offered consultancy to Isha Foundation, Coimbatore, on Water Sample Quality Testing. A revenue of Rs. 18,000 was generated.

Mr. P. NandhaKumar, AP-I, offered consultancy to Isha foundation, Coimbatore, on Topographical Survey. A revenue of Rs. 6,500 was generated.

Achievements

FACULTY

Dr. G. L. Sathyamoorthy, Professor, received a grant of Rs. 5 Lakhs for organizing International Conference on Waste Water Management (ICWW 2017) during August 2017

Dr. K. Ramadevi, ASP, received financial support of Rs. 5 Lakhs from AICTE towards 14 days Faculty Development Program.

Mrs. Lisa Mary Thomas, AP-I, received Indian Academy of Sciences summer research fellowship for two months at IIT Bombay.

Dr. A. Geethakarthi, ASP, was declared as the best reviewer by Publons for the year 2017.

Dr. P. Eswaramoorthy, Professor, was felicitated with partnership award by Coimbatore Builders Association during teacher’s day celebration at PSG Institute of Technology.

Mr. G. Karthikeyan, AP-I, and his team of students received a grant of Rs.9,600 for their project titled ‘High Performance Concrete’.

Mr. A. Vishnu, AP-I, and his team of students received Rs.10,000 for their project titled ‘Floating Concrete’.

Mrs. S. Anita, AP-I, mentored project for final year students for ECI CHHATRA VISHWAKARMA awards and was shortlisted to participate in the final 55 teams out of 965, in which our college received the Best Institution award for the year 2017.

STUDENTS

A. Abinayaa of final year of M.E in Structural Engineering (2016-2018) was the runner up in National Award for Best Innovative Structural Steel Design organized by INSDAG, Kolkata.

K. Deiva kumar (14BCE012), S.Elavarasu (14BCE019) and N.Ramesh (14BCE216) - Final year students of batch 2014-2018 won Tamil Nadu Skill Summit 2017 for the project ‘Utilization of Foundry Sand and Plastic Waste in Flexible Pavement’.
MoU
MoU was signed with TamilNadu Institute of Urban Studies, Coimbatore, for knowledge transfer.

MoU was signed with Dimensions Private Limited, Coimbatore, for student programmes and consultancy services.

MoU was signed with Glass Foundation Academy, Chennai, to offer an elective course on Glass Façade Engineering.

MoU was signed with Shristi Consultants, Coimbatore, for students training programmes on civil oriented design packages.

MoU was signed with Edifice Placement Solutions, Coimbatore, for training students towards field oriented training.

Alumni
Dr. S. Shanthakumar Professor and Head, Vellore Institute of Technology, Vellore (1998 batch), delivered a lecture on Industrial Waste Management to III and IV year Civil Engineering students on 13 April 2018.

Social Impact
- Digital river morphology for a stretch of 5 km along the river course that drains into Chinnavedampatti Lake by Mr. P. Nandhakumar, AP-I team of technicians and students.

Goals and Plans for next year
To develop a strong industry-academic connect through industry sponsored facility.

To create a dynamic facility that may transform into future centre for excellence in two main specializations namely, project management and smart & liveable cities.

To establish formal connect with government and private agencies for design consultancy.

To connect with renowned universities across the world in the field of Civil Engineering to improve the learning process.

To share the expertise available for the welfare of the society.
Rs.17,00,000 sponsored by AICTE through MODROBS funding for the modernization of existing Soil Mechanics Laboratory.

68 faculty publications in National and International journals.

18 (PG) + 1 student publication in National and International journals.

10 faculty members as peer reviewers in National and International journals.
The Department of Computer Science and Engineering has progressed with a vision and a strong commitment to develop competent professionals with excellence in Computing and Engineering Science. The department has well equipped computer laboratories and a rich repository of softwares covering a wide spectrum of applications. The focussed areas of education are programming, data structuring, computer networking, software engineering, database management system pouring into researches such as data mining, data security, cloud computing, etc.

Imperative Advancements

Dover organized a 24-hour hackathon called the Think ‘O’ Fest. There were around 150 participants from PSG, VIT and participants from KCT and CSE faculty mentored their teams. There were a total of 24 teams out of which 21 students from the department took part in the fest.

Climathon 2017, a 24-hour hackathon brought together the creative young minds to understand and create solutions for the regional issues owing to the climate change and source factors that need immediate attention. Our college, for the first time with guidance from the Government sectors and Non-governmental organizations organised Climathon in Tamil Nadu and CSE faculty mentored their teams.

In connection with Infosys Campus Connect program, CSE department, School of Computing organised a five day “Deep Dive Faculty Enablement Programme on Internet of Things” from 11 to 15 September 2017. Twenty One colleges from different states took part in the programme and 51 faculty members participated.

The Global Academic Internship Programme offered at NTU, Singapore, is a 21 day exclusive training program for students from various institutions across the globe. Sachin.V of II year, Priyanka.V of IV year and Vishnupriya.R of IV year opted for this programme.

CSE Department and KCIRI have been working together to bridge the Industry – Academia gap by giving opportunity for faculty and students to work on real time projects. Seven real time projects were undertaken with project involving 34 students and 7 faculty mentors for General Motors (GM) Bangalore, Palayamkotai Prison and other small scale industries.

Sixty Eight students of CSE department got Internships in various industries with stipend amounting to Rs. 8,70,000.

The Department of Computer Science and Engineering

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**Research**

The broad areas of research handled by the department are Networks and IOT, Information Security, Image Processing, Artificial Intelligence, Cloud Computing and Data Analytics. Total researches carried out by the faculty in the year 2017 – 2018 are 16 and total researches carried out by the students in the year 2017 – 2018 are 11. Two faculty have registered for PhD this academic year. A total of three researches are proposed with a financial grant from DRDO for 8 lakhs, DST for 7 lakhs and CSIR for 5 lakhs.

**Significant Researches**

**FACULTY**

A project on “Task Scheduling in Cloud” was completed by Ms. M. Suguna, AP-II. This research was guided by Dr. D. Sharmila, BIT, Sathy.

A research “Enhanced Protection for Textual Healthcare Documents in Cloud Environment” was done by Mrs. R. Kalaiselvi, AP-III. This research was guided by Dr. K. Kousalya of Kongu Engineering College, Erode.

A research "Unusual Social Event Detection using Call Data Records" was done by Mrs. V. P. Sumathi, AP-II. This research was guided by Dr. K. Kousalya, Kongu Engineering College, Erode.

**STUDENTS**

A project on “Word Sense Disambiguation” was done by student Ms. Sandhiya. The project was guided by Ms. S. Rajini, ASP, KCT.

A Research work titled “Preserving Data Confidentiality by Shuffling” was done by Ms. B. Dhiva. The research was guided by Ms. R. Kalaiselvi, AP-III, KCT.

**Research plan for the academic year 2018-2019**

- I-Stem 2019 conference in Dec 2018
- To publish 30 papers in Scopus indexed journals
- To upgrade the inflow of funding to 10 lakhs
- To file 4 patents
- To organise research workshops for faculty

**Milestones**

FORGE in collaboration with KCT launched PROTOSEM (shorter version for Prototyping Semester), a full-semester curriculum integrated program offered independently by the Incubator. This course is currently completed by 5 of III year students in the fifth semester.

Department of CSE established brainstorming sessions at the 48 hour RiGathon organised by RiG team of KCT. Brainstorming sessions were about results and jump-starting a way of working, not just stopping with idea generation.

Organised more than 30 programs in various categories which includes 12 one credit courses for our CSE students.

Root Research Talk merged with the “Demystifying Information Security” workshop, an initiative of the Forum of Information Utility, Security and Privacy (USP) was initiated with the support of KCT Management. This initiative aimed at nurturing the roots of research at KCT.

Faculty attended various FDP, Seminar, Workshop, certification course and Conference which are around 130 in number.

**Industry Partnerships**

- Partnership with Infosys Ltd, Electronics City, Hosur Road, Bengaluru, for offering Industry electives and faculty enhancement programmes.
- Partnership with General Motors, Bengaluru, for consultancy and student projects.
- Partnership with EMC Corporation, offering Faculty training, one credit courses and certification courses.
- Partnership with InfraStack labs, Bengaluru, offering one credit courses.
- Partnership with Zohocorp, Chennai, for student internships and for offering one credit course, Zoho creator (Front End Design)
Out of the 68 publications by the faculty and 27 publications by the students, a few are mentioned below.

### Sample Publications

**FACULTY**


**STUDENTS**


### Consultancy

Dr.J.Cynthia, Professor, Ms.S.Uma Maheswari, AP-I and RamaPrasath,Siddarth of IV CSE offered consultancy to GMTCI, Bangalore on Project Database Management Tool up gradation and the revenue of Rs.36,000 was generated.

Dr.D.Chandrakala, Professor and Srinidhi K, Vimaladevi V, Madumitha of III CSE offered consultancy to emTarang Technologies, Bangalore on Recommender System.

Ms.S.NithyaRoopa, AP-I, offered consultancy to TNPD, Palayamkottai on Smart Billing Application Wage Calculation for prisoners

Dr.J.Cynthia, Professor and Ms.C.Bharathi Priya, AP-II, offered consultancy to TNPD, Palayamkottai on Scarper Escape Detection System.

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68 faculty publication in National and International Journals

27 student publication in National and International Journals

02 faculty members as peer reviewers in National and International Journals

MoU with Rochester Institute of Technology (RIT), Rochester, New York, U.S.A
Dr. J.Cynthia, Professor acted as a resource person for AICTE sponsored FDP – “Internetworking Techniques and Framework for Next Generation Smart Environments”, Department of EEE, Kumaraguru College of Technology on 14 December 2017.

Ms.V.P. Sumathi, AP-II, and Ms.N.Jeba, AP-I, were resource persons at AICTE sponsored workshop on “Embedded System Design Using Raspberry Pi” at Sri Venkateshwara Engineering, Bengaluru, from 12 to 14 October 2018.

Ms.V.P. Sumathi, AP-II, and Ms.C.Bharathi Priya, AP-II, were resource persons for a Workshop on “Hands on Internet of Things Using Arduino”, at Jeppiaar Engineering College, Chennai on 28 and 29 August 2017.

Ms.D.Aswni, AP-I, and Ms.X.Francis Jency, AP-I, were resource persons for a workshop on “IOT using Arduino”, at Jeppiaar Engineering College, Chennai.

Mr.V.Senthil Kumar, AP-I, Ms.S.Nithya Roopa, AP-I, and Mr.R.Kirubakaran, AP-I, won Bronze medal at Infosys Campus connect program conducted at Chennai.

Dr.J.Cynthia, Professor, received “IASTE Excellence in Teaching and Research Award 2017” by IASTE on 10 September 2017.

N. Vidyasagar of III year got the Best Coder Award in KCT RIGATHON.

R Sruthi and Rinik Aravind of Final year secured an internship with Rs. 40,000 per month in Amazon, Chennai.

S. Ramprasad and Mr.Siddarth of Final year secured an internship in General Motors, Bangalore.

Mr.Sumanth and Mr. Pon Mahil Arasu of III year along with Dr.J.Senthil, Principal, KCT, attended American Society of Engineering Education (ASEE) conference 2018 at Salt Lake City, USA to present student researches on behalf of KCT.

A 2 day hands-on workshop on Agile and Devops was conducted on 21 and 22 September 2017 by Mr.Deraviyam Jacob, (1999 batch), Consultant, TCS, Bangalore.

Seminar on Cloud Computing - Existing and Future was conducted on 01 September 2017 by Shadic Sherriff, (1998 batch), IT Infrastructure and Cloud Consultant, Chennai.

Achievements

FACULTY

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STUDENTS

M.Esakkimuthu of III year secured I prize in Smart India Hackathon 2018, conducted at Mumbai.

P. Mahendran of III year secured an internship with Zoho.

B. Priyadharshini of III year won I prise in AURA 2017 (Dance Event), PONDICHERRY.

Alumni

A training programme on “Effective usage of computer applications and e-services” was given to students of Government School, Chinnamettupalayam by Sathya D, AP-II & Betty P, AP-I on 14 October 2017, 21 October 2017 and 28 October 2017.

A training programme on “Effective usage of Microsoft Office” was conducted to the Police Officials at the Office of the Superintendent of Police, Coimbatore by Sudha V, AP-II and Jeba N, AP-I on 07 April 2018.

Social Impact

- A training programme on “Effective usage of computer applications and e-services” was given to students of Government School, Chinnamettupalayam by Sathya D, AP-II & Betty P, AP-I on 14 October 2017, 21 October 2017 and 28 October 2017.

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MoU

Rochester Institute of Technology (RIT), Rochester, New York, U.S.A, for enhancing joint student projects, internships, joint degree programs, research collaboration and publications.

ICTACT for Institutional membership.

Goals & Plans for next year

To establish Centre of Excellence in Data Analytics.

To establish Centre of Excellence in association with sales force and Sakthi Finance.

To collaborate with industry to equip the students to become employable.

To enhance teaching learning methodologies on par with International University Standards.

To focus on International students and faculty exchange programme.
The Department of Information Technology depicts a ceaseless progress. Industry aligned courses such as mobile applications programming, business intelligence and its applications, building enterprise applications are offered that keep students informed of varieties in the field. Student entrepreneurs are encouraged of their start-up ideas. A unique study is offered across the board on Innovation and Entrepreneurship. The department as a whole research on Machine learning, Mobile computing, Cyber security etc.

Imperative Advancements


Conducted the following Hackathons

- “Think o Fest” by Dover India Innovation Centre in association with EPICS India Consortium from 22 to 24 September 2017.
- “Climathon for Coimbatore” on 26 and 27 October 2017.

Improved International collaboration

- Sanjay Pradeep & Sabarirangan of IV year underwent internship at TelAviv University from 9 June 2017 to 24 July 2017.
- Jeya Shree G of IV year underwent internship at University of Texas at Dallas, USA, from 1 to 30 June 2017.
- Two students of IV year attended Internship at Tentacle Technologies, Malaysia, Kuala Lumpur from 06 January 2018 to 02 February 2018.
- Two days Seminar on “Working with GENI test bed” in association with Rochester Institute of Technology, USA.

Implemented Protosem successfully in collaboration with Forge.

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at Tentacle Technologies, Malaysia, Kuala Lumpur from 06 January 2018 to 02 February 2018.
Research

Data Science, Network and Internet of Things and Security are the broad areas of research carried out in the department.

Significant Researches

FACULTY

A project on Smart Agriculture for Sustainable Food Production related to smart agriculture for farmers was completed by Dr. Ramalatha Marimuthu - Professor, Mr. A.Suresh-AP, Mr.S.Kanagaraj-AP II, Dr.M.Alamelu-AP II. IEEE Foundation program, USA, funded a sum of Rs. 12 lakhs for this project.

A project on ‘Elephant Intrusion Detection, Alert and Repulsive System to Avoid Human Elephant Conflict in Maruthamalai- Thanikandy zone was completed by Dr. N.Suganthi - Associate Professor, Dr. J.Cynthia-ASP, Dr. M. Alagumeenaakshi. A funding of Rs. 1.13 lakhs was granted by the management of KCT for this project.

A project on Design and Development of IoT based Smart Water Pumping System for Agricultural Applications by Dr. V.Vanitha, Professor & Head, IT, Dr. M. Nirmala, AP III, EEE and Mrs. V.P.Sumathi, AP (SRG), CSE is proposed to DST for funding of Rs. 12,86,000 on 30 March, 2018.

A project on Smart Kiosk for Pop Corn Vending by Dr. N.Suganthi, ASP, IT, Dr. J.Cynthia, Professor and Head, CSE, Dr. M. Saravana Mohan, AP III, Mechatronics is proposed to DST with a funding of Rs.15 lakhs on 30 March, 2018.

Research plan for the academic year 2018-2019

Minimum of 10 faculty publications in scopus indexed/impact factor journals.

Minimum of 10 students publications in scopus indexed/impact factor journals.

Organising International Conference (Computing cluster).

Applying Research project proposals to various funding agencies.

Milestones

Introduced M.Tech Data Science.

MoU

MoU with ITK Education Services Private Limited, Chennai – Authorised Training Partner Zoho to conduct One Credit Course.

Consultancy

Offered consultancy to Inventors of Zero, PSG College of Technology, Coimbatore for Object Detection on Indian Roads for Autonomous Driving – Providing the technical consultancy to employees of the industry for completion of the project by Mr. Sourabh Modi, AP II & Ms. S.Kavitha, AP II. A revenue of Rs 30,000 was generated.


Industry Partnerships

Partnership with Oracle Academy for Oracle software.

Partnership with Robert Bosch and conducted Faculty Development Programme on “Big Data Analytics”.

An elective course on ‘Introduction to ERP’ was conducted for CSE, IT and MCA students in association with ERP Logic, Salem. The course was fully handled by industry experts in ABAP server with real time examples and a field visit to the company was organized. 4 students went on an internship as part of this course.

Partnership with Yellow Tree Academy, Coimbatore, for Industrial Training.

Partnership for one credit course with UITOUX Solutions, Coimbatore.

Partnership with Pearson VUE for authorised test centre promotions.
Publications

Out of the 10 publications by the faculty and 07 publications by the students, a few are mentioned below.

Sample Publications

FACULTY


STUDENTS


Alumni

Mr.Vignesh (2016 batch) Accenture, Bangalore conducted a mock interview for final year students on 2 September, 2017.

Mr. Shadic Sherrif (1998 batch), One day seminar “Cloud Computing – Existing and Future Trends” on 1 September, 2017.

Mr. Aravind Babu, Architect, Robert Bosch (2013 batch) one of the resource person for the faculty Development programme on Big Data Analytics on 1 December, 2017.

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<thead>
<tr>
<th>Faculty Publication</th>
<th>10</th>
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<tbody>
<tr>
<td>Student Publication</td>
<td>07</td>
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<tr>
<td>Faculty Reviewer</td>
<td>03</td>
</tr>
</tbody>
</table>

Patent filed for Design and Development of Device for Ankle Foot Orthosis
Achievements

FACULTY
Dr. N. Rajathi, ASP, completed Ph.D.
Dr. M. Alamelu, AP II, received Dr. APJ Abdul Kalam award for Teaching Excellence - 2017.
Mr. S. Kanagaraj, AP II, received IEEE Student Branch Award - 2017.

STUDENTS
G. Gowthami III year is a part of Tamil Nadu Wushu team and won silver medal in National Level Wushu Championship held at Assam rifles Shillong on 15 October, 2017.
S. G. Shree Ram I year is a part of the team and won the second place in the Climathon for the project titled “Solid Waste Management” held on 26 and 27 October, 2017 at Kumaraguru College of Technology, Coimbatore.
Pugazharasan C of IV year was a part of Smart India Hackathon and the team won I prize in Delhi Ministry held on 31 March, 2018.
G. Gowthami III year is a part of Table tennis Winners Team in the Anna University Zonal Tournament for the year 2017-18, held at Anna university regional campus on 23 September 2017.
D. Keerthanalakshmi of III year won third place in the Third Tamil Nadu State Level Yoga Competition held at Karur on 29 July, 2017.

SabariRangan IV year is the winner of A.I Sandbox Hackathon conducted by Forge and selected for TAU Innovation conference in TEL Aviv at Israel.
SabariRangan IV year received the “Icon of the Batch 2018” award.
Sanjay Pradeep IV year received the “All Round Performer of the Batch 2018” award.
Prabakaran IV year IT received “Technical Star – Innovation” award.
Nirmal Raj P IV year received an award for “Dance Club”.
Ajith Kumar S IV year IT received the “iQube – Tesla” award.

Social Impact
• CODE INFO 2017 coding competition programme” in association with IEEE for school students, around 25 students participated in this competition on 7 October, 2017.
• Awareness programme on “Smart agri using mobile app and website programme in association with IEEE for farmers”, around 100 external participants held on 26 October, 2017.
• “Computer awareness programme” in association with IT Department, KCT for Government middle school students, Saravanampatti, around 60 students participated in this program on 22 February, 2018.

Goals & Plans for next year
To establish Centre of Excellence in Data Analytics.
To establish Centre of Excellence in association with sales force and Sakthi Finance.
To collaborate with industry to equip the students to become employable.
To enhance teaching learning methodologies at par with International University Standards.
To focus on International students and faculty exchange programme.
The Department of Computer Applications offers a three year master degree in Computer Applications. Since its inception the department has been striding great heights with a proactive vision and a strong commitment, with uncompromising standards of excellence to develop competent programmes and to groom the students with computational skills that will match with the present and futuristic necessities of IT industry.

An FDP on Android Application Development was conducted for 30 faculty members of KCT from 10 to 16 July, 2017. The sessions were handled by Manimaran, Android Developer, CQUBE Technologies, Coimbatore.

An FDP on Java Programming was organized for 18 faculty members of KCT from 17 to 23 July, 2017. The sessions were handled by Mr. Sourabh Modi, AP-II, SOC/KCT.

A department level coding contest Codie was conducted for I and II year students on 13 October, 2017.

A one credit course on Amazon Web Services was conducted for II year students from 06 to 08 April, 2018. The sessions were handled by Dr. Rajesh Devadass, CEO, B-Tree Labs, Bengaluru.

A workshop on Photoshop was conducted to II year students on 04 November, 2017. The sessions were handled by Logasundar Muthusamy, Service Info Developer, Hewlett Packard Enterprise (HPE), Chennai.

A workshop on Introduction to PHP and Code Ignitor Framework was conducted for I MCA students on 04 November, 2017. Karthikeyan Babu, Senior Software Developer, Social Hub Info Solution, Bangalore, facilitated the session.

A workshop on C# Programming was conducted for III year students on 18 November, 2017. The sessions were handled by R.Venkatesh, Associate Software Engineer, Accenture, Chennai.

A guest lecture on Introduction to Machine Learning and Deep Learning was conducted for the I & II year students on 22 November 2017. R.V. Prakash, Simple Labs, Chennai, was the resource person.
Partnership with Cisco Networking Academy to offer a course on ‘Cisco Certified Network Associate - Routing and Switching (CCNA - R&S) to the students of KCT. 97 students from various departments of KCT have completed this course.

Industry Partnership

The broad areas of research handled in the department are Software Engineering, Data Mining and Cyber Security.

Significant Researches

FACULTY

A research proposal was submitted to Indian Council of Medical Research (ICMR) for funding of the research entitled “A Cloud based Viral Hepatitis System for Early Detection and Prevention of Outbreaks” by Dr.P.Parameswari, AP (SRG) and Dr.M.Manikantan, HOD. The proposed amount of funding was Rs 12,66,900.

STUDENTS

A project on ‘Artificial Intelligence with Telepresence Robot’ was done by Joseph Britto B (15MCA017). The project was funded by Tentable Technologies, Malaysia, with a sum of Rs. 48,000 and the project was mentored by the faculty Dr.M.Manikantan, HOD.

Publications

Out of the 12 publications by the faculty a few are mentioned below.


Consultancy

Sivaguru and Sridaran III year offered consultancy to ADROIT Technologies, Coimbatore. They are a software training company. The students, through this consulting opportunity provided placement training to various institutions. A revenue of Rs.40,000 was generated. The students were mentored by Mr.C.Ramachandran, AP.

N. Jayakathan, AP (SRG) provided training to the administrative staff of Agni Vasthraa Private Limited, Pollachi. They are a textile company. A revenue of Rs.1,000 was generated.

Industry experts Sridharan.K, CEO, and the Board of Director of BFL-Mphasis Software and Board Advisor of University of Memphis, USA & Mr. Bastin Robin, Chief Data Scientist, Clever Insight & Hash Research (Data Science start-up) visited MCA’s School of Computing on 29 November 2017. They discussed the possible areas of Collaboration with the department. Dr. J. Senthil Jayavel, Director/SOC, HODs and faculty members from the School of Computing contributed to the meeting.
Achievements

FACULTY
Dhanabal L, AP (SRG) was recognized for his fifteen years of active participation and service in Cisco Network Academy.

Jayakanthan N, AP (SRG) was awarded as one of the KCT-Best Academician for the year 2016-2017.

Dr. M. Manikantan, HOD, Dr. V. Geetha, Professor, Dr. S. Hameed Ibrahim, AP (SRG), and Dr. P. Parameswari, AP (SRG), were awarded as ‘Crystal’ (for 15 years of service) as part of the KCT achievers awards during teachers day celebration.

Dr.C.Rajan krupa, AP (SRG) and M.C.S.Geetha, AP were awarded as ‘Decennial’ (for 10 years of service) as part of the KCT achievers awards during teachers day celebration.


STUDENTS
Ganesh Kumar.S (16MCA006) and Rahanth.A (16MCA023) II year completed ProtoSem (Hardware/ IOT Product design and Engineering) offered by FORGE Coimbatore in 2017.

Nivetha R(15MCA216) won Women’s Badminton Championship in Anna University Zonal Tournament held at Anna University Chennai on 24 September, 2017.

Joseph Britto B (15MCA007) and his team won first prize in project competition Rigathon (48 hours Hackathon) conducted by KCT from 19 to 21 September, 2017. Their project titled “Garage Assistant” is an artificial intelligence robot which assists owner of a car in mechanical issues.

Saicharan.R(16MCA026) II year is a member of Men’s Basket Ball Team. The team won the Anna University Zonal Tournaments for the year 2017-2018 held at SNS college of Technology, Coimbatore on 29 and 30 August 2017.

Alumni
Mr.Jagadesh (2014-2017 batch), Software Engineer, GoFrugal Technologies, Chennai, was the resource person for the Faculty Development Programme on Android Application Development from 10 to 16 July 2017.

Goals and Plans for next year
To establish a Centre of Excellence in Communication Measurements.

To establish a Center on LoRa Academy for IoT.

To establish collaborations with nationally reputed institutions for joint research proposals and publications.

To obtain research grants of over 50 lakhs from various government agencies.

Industry supported programmes and consultancy of over Rs. 3 lakhs.

97 students have undergone the course on Cisco Certified Network Associate - Routing and Switching
04 students have undergone Interconnecting Network Devices Certification
12 faculty publications in National and International Journals
04 faculties as peer reviewers in National and International Journals
Mr. C. Sasikumar Assistant Professor was selected to the Indo German Centre for Sustainability Winter School 2018 Smart Grids – Sustainable Integration of Renewables for Tomorrow’s Power Grids funded by DST, Government of India and German Academic Exchange Service (DAAD).

Organized 50 value added programmes (Recharge programmes) for the benefit of students and Faculty.

ELECTRICAL AND ELECTRONICS ENGINEERING

The Department of Electrical and Electronics Engineering has been an integral part of the institute from 1984 and has grown steadily over the years. The department has nurtured meaningful relationships with industry, academic and research institutions with their expertise in Renewable energy, Power Electronics and Drives, Embedded systems, Smart Grid, Energy Management, Electrical Machines, E-vehicle, Power Converter and Inverter Design are some of the current research studies in the department. With advanced laboratory and technically sound staff, the department continues to get accredited since 2000.

Imperative Advancements

Captain Kennath Howard Mischki, Commercial Pilot delivered a seminar on Installation of Electrical system in Aircraft to understand all the electrical systems and its applications used in aircraft.

Assistant Electrician course for ten participants from various industries was conducted under Pradhan Mantri Kaushal Vikas Yojana (PMKVY) Scheme from December 2017 to June 2018.

Mr. Parthasarathy K G, Mr. Ragavan T, Mr. Jayanthan G, Mr. Venugopal B, Mr. Sukihan M of III Year won second prize for Project presentation Techkriti Innovative Challenge at IIT Kanpur.

Modernization of Electrical Machines Lab funded by AICTE - Modernisation and Removal of Obsolescence (MODROBS) for the cost of Rs. 8.4 Lakhs.

Centre of Excellence for Student Projects and Research in Salzer Electronics.
The significant areas of research carried out in the department are Smart Grid, Micro Grid, Integration of Renewable Energy, E-Vehicle, Embedded Drives and Control, Electrical Machines, Power Converter and Inverter-Design. Total research projects carried out currently are 14. Total faculty registered for PhD this year is 4.

**Research**

**Significant Researches**

**FACULTY**

A project on “Modernization of Electrical Machines Lab - Online Monitoring and Electric Braking of Electrical Machine” was implemented by a team of the Department of Electrical and Electronics Engineering funded by AICTE for a sum of Rs. 8.4 Lakhs.

A project on Women Abusive Protective Garment using Electromagnetic Technique was carried out by Dr. Rani Thottungal, Professor, Mr. Suresh Kumar R, AP and submitted project proposal to Department of Science and Technology, Govt. of India.

A project on Monitoring, Control and Automation of Bio-gas Plant for Efficient Power Generation” carried out research project by Dr. Rani Thottungal, Professor, Dr. R. Kavitha ASP, Dr. N. Prakash, AP and Mrs. Maithili P, AP and submitted project proposal to Department of Science and Technology, Govt. of India.

A project on “Design and Development of Intelligent Controller for Active Power Conditioner” was completed by Ms. Raheni T, Research Scholar, EEE., Dr.P.Thirumoorthi, Professor.

**STUDENTS**

A project on Automatic Ravage Detection at Water Tubes in Boiler was done by Mr. Nandhakumar K. and team. It was funded by Tamil Nadu State Council for Science and Technology with a sum of Rs 10,000 and was mentored by Mr. T. Viswanathan, AP.

A project on Development of Smart Car Security System Using multisensors was done by Mr. Sukeerthi.S and Mr. Sasikumar.G. It was funded by KCT alumni of 1998 batch, EEE with a sum of Rs. 9,060 and was mentored by Mr. S. Arunkumar, AP.

A project on Monitoring, Control and Automation of Bio-gas Plant for Efficient Power Generation” carried out research project by Dr. Rani Thottungal, Professor, Dr. R. Kavitha ASP, Dr. N. Prakash, AP and Mrs. Maithili P, AP and submitted project proposal to Department of Science and Technology, Govt. of India.

A project on “Smart Socket for Eliminating Phantom Power” was done by Mr. Dharaneswaran B S, Mr. Balakumar A P and Mr. K. Jayaprakash. A fund of Rs. 5900 was provided by KCT alumni of 1998 Batch, EEE and was mentored by the faculty Mr. R. Rajesh, AP.

**Milestone Events**

AICTE Sponsored Faculty Development Programme on Internet Working Techniques and Frameworks for Next Generation Smart Environments was conducted to enhance recent technologies and methodologies for various smart city implementation.

International seminar on Trends in Vehicle Propulsion Technology” in association with Mr.R. Sendhil Kumar, Project Head, Volvo Truck Technology, Sweden.

Shri A. Velayutham, ME (Power System) of Central Power Engineering Services joined Central Electricity Authority in the year 1974 and worked in various divisions of Central Electricity Authority, Technical Committee of BIS, National Project Director of UNDP chaired and addressed the inaugural session of Faculty Recharge Programme.

One Credit Course on Embedded Systems ARM ® Cortex ® M3 MCUs handled by UTL Technologies, Bangalore.

54 faculty publications in National and International Journals.

23 student publications in National and International Journals

8 faculty members as peer reviewers in National and International Journals.

International seminar on Trends in vehicle propulsion technology.
Out of the 54 publications by the faculty and 23 publications by the students, a few are mentioned below.

**Sample Publications**

**FACULTY**

Dr. M. Nirmala, Dr. K. Baskaran published a paper on Intelligent Control Based FRT Capability of Nine Switches Grid Side Converter Fed DFIG System Journal of Electrical Engineering, ISSN 1582-4594.


Vinothkumar N, Dr. V. Kumar Chinnaiyan, Pradish.M and Mr. Prabhakar Karthikeyan, Recommend Cascade Structure Multilevel Inverter with Reduced Power Electronic Components Electric Power Components and Systems.


**STUDENTS**


**Industry Partnerships & MoU**

Salzer Innovation Center (SIC) in partnership with Salzer aims at developing the knowledge base to students in design of circuit breakers and relays. Salzer will invest around 3 to 4 Lakhs for the equipments in SIC. The Centre will have latest CBs and relay setups for enriching students’ knowledge in field of Switch gear components.

Photo Voltaic Innovation Center (PIC) in collaboration with Prosun Laboratories will contain latest technologies in the field of Solar Photo Voltaic for enhancing the students’ knowledge in the renewable energy based solar and wind energy domain. The laboratory will invest around Rs. 2 lakhs for the solar equipments.

Thick India Innovation Center (TIC) in partnership with Thick India will provide embedded and software development kits to enable the students for developing their own project ideas into real time kits. The Centre will focus on students’ knowledge building in the field of latest trends in embedded systems and IOT applications.

Partnership for Technical Training and Internship with Versa Drives Private Limited., Coimbatore.
Consultancy

Dr. D. Rajalakshmi, ASP, guided the Eco Green Unit project of the students of Tamil Nadu Agricultural University, Coimbatore.

Dr. D. Rajalakshmi, ASP, and Dr. R. Kavitha, ASP, offered consultancy to Accent steel (I) Pvt., Ltd., Coimbatore for testing of Harmonic Analysis.

Transformer Health Monitoring System tested at Electrical Machines Lab and the test was run by Dr. Mohanraj, ASP.

Achievements

Mr. Parthasarathy K G, Mr. Ragavan T, Mr. Jayanthan G, Mr. Venugopal B, Mr. Sukiharan M III year won second prize for Project presentation Techkriti Innovative Challenge at IIT Kanpur.

Dr. D. Rajalakshmi, ASP, Dr. R. Kavitha, ASP, Dr. C. Velmurugan, Professor, won the project on “Low Cost Solar Powered Refrigerator” funded by Rtag, IIT, Chennai. Rs. 30,000 was sanctioned on 18 December 2017.

Dr. N. Prakash won the Best AP Award from PEARL Foundation Educational Excellence Awards to Higher Education in India 2017.

Mr. J. Ramprabhu, AP, was awarded the Best Researcher Award from Allinov Research and Development Pvt Limited in March 2017.

A project on Solar Energy Street Lighting System carried out by Mr. R. Sureshkumar, AP, and Dr. B. Karunamoorthy, ASP, was funded with a sum of Rs. 25,000 by the management of KCT.

Alumni

Mr. A. Kingsley and Mr. Brithul Balaji (2013 batch), Project Associate, Robert Bosch Engineering Solutions trained the III year students on Hardware training on Arduino and Interface Pheripherals at the hardware laboratory, KCT.

Mr. G. R. Vivek, (2010 batch) Technical Manager, Electronics, Delhi delivered a lecture on Awareness Programme for Core Placement and Higher Studies to the II year students.

Social Impact

- A Social Awareness Programme and Demonstration of Generation of the Electricity from the solar panel was conducted for the students and faculty of Government High School, Thengumarada, Erode. Session was handled by Dr. B. Karunamoorthy, ASP, Mr. J. Ramprabhu, AP, Mr. K. Dhanaraj, Lab Instructor.

Goals and Plans for next year

To integrate technical incubation centre in the department for the benefit of students and researchers.

To establish a Centre of Excellence in Renewable Energy.

To set up a Government of India recognized centre on Meter Testing.
The Department of Electronics & Communication Engineering equips young minds with technical knowledge and professional skills needed to address the challenges in the rapidly growing field of Electronics and Communication Engineering. An eye for detail and innovations are instilled in the students to connect engineering and society. The department is also a Research Centre recognised by Anna University.

Imperative Advancements

A three day Certification programme on Intellectual Property Rights and Commercialization was conducted along with Department of Bio Technology from 02 to 04 November 2017. The objective of this training was to provide awareness on IPR and exposure to Patent search and Draft. As an outcome of this programme 3 innovative projects were patented.

IEEE sponsored 3 days FDP on Model based VLSI system design using MATLAB Simulink was conducted from 27 to 29 November 2017. This programme was supported by IEEE with $400.

IE(I) sponsored Workshop on Current Research Challenges in Speech Signal Processing and its applications was held on 09 and 10 April 2018. This programme was intended for faculty members, students and participants from industry working in the area of Speech Signal Processing. IE(I) has sponsored Rs. 20000 for conducting this workshop.


A 2 day National Skill Development Corporation certified programme on “PCB Design” was organised for I and II year students on 20 and 21 January 2018. 60 students were trained with necessary skills to work in Electronic industry.

Mr. Shabeer Rasheed, alumnus of 2002 batch, Director- Engineering, HMicro India Pvt.Ltd, Bangalore conducted a “Two days Hands-on Workshop on “VLSI Design: Inside an ASIC” for the III ECE students on 13 and 14 October, 2017. This workshop was supported by two of the Alumni working at H Micro.

IEEE XTREME 11.0, an international coding competition was conducted by Dr. Ramalatha Marimuthu and her team. It was a 24 hour worldwide programming hackathon. Twelve of II B.E ECE students participated along with International students.
Research

The Department of ECE is a recognized research centre under Anna University. Eleven faculty members are doctorates and 14 are actively pursuing Ph.D. 5 faculty members have registered for Ph.D. in the academic year 2017-18. The faculty are involved in various research areas like Smart Agriculture, Communication, signal Processing, VLSI, Networks and Assistive Technology. A research project worth 18,263 USD is currently being executed in the department. 18 proposals worth 350 Lakhs were submitted by the faculty to various funding agencies such as DST –SERB, United States - India Science and Technology Endowment Fund, IEI, RuTag, DST DDP and DST Waste to wealth out of which 3 are still under consideration.

Significant Researches

FACULTY

A project on ‘Smart Agriculture for Sustainable Food Production’ is currently carried out by Dr. Ramalatha Marimuthu, Professor, and team. The project was sanctioned in the year 2016-17. The worth of the project is 18,263 USD and is funded by IEEE Foundation.

STUDENTS

A project on ‘Food Waste Management – Waste Deducing Box’ is currently carried out by Pre final year students – S. Gayathri(15BEC166) and S. Karthikeyan(15BEC221) along with the students of CSE, E&I and MCA. This project secured first place with prize money of Rs 0.5 Lakhs in project contest “Smart India Hackathon 2018”, held at Welingkar Institute, Mumbai.

Research plan for the academic year 2018-2019

Apply for external Funding for a grant of over 1 crore and a running grants of over 30 lakhs.

| 17 Workshops, 23 guest lectures and seminars organized | 06 faculty members as peer reviewers in National and International Journals |
| 63 faculty publications in National and International Journals | 05 patents filed |

Industry Partnership

Lyle Technologies, Coimbatore, conducted a two day workshop, was offered internship for final year students (4 ECE +1 Mech student).

As part of Centre of Excellence with Texas Instruments, STEPS Knowledge Services Private Ltd., Coimbatore – offered 2 one credit courses for pre final years.

Caliber Embedded Technologies India (P) Ltd., Coimbatore offered one credit courses for pre final years.

Optima Life Science Private Limited, Coimbatore provided paid internship and employment to 3 students.

Altius Technology Solution, Coimbatore, accommodated students for paid Internship and offered employment to 1 student.

Thoughtbees Technologies Private Ltd, Coimbatore, offered internships to III Year & IV Year students.

The following patents were provisionally filed in 2017-18

“Function Control Device for Industrial Sewing Machine” by Dr. S. A. Pasupathy / HOD ECE

“Improved Ankle Foot Orthosis” by Dr. Ramalatha Marimuthu, Prof / ECE

“Apparatus and Method for Edge and Lane Reference Line Detection in Road from Vehicle” by Dr. K. Paramasivam, Prof / ECE

“System and Method for Designing a Hybrid Memristor-CMOS Nonvolatile Random Access Memory Cell And Architecture with Sneak Current Control” by Dr. K. Paramasivam, Prof / ECE & Mr. V. Saminathan

“Online sewing defects monitoring” by Dr. Rameshbabu V, Dr B Karunamoorthy, Dr K Paramasivam Prof /ECE
Consultancy

Consultancy on “MATLAB Code Modifications and Development for Aircraft Vibration Analysis” to Circor Flow Technologies Pvt Ltd, Coimbatore by Mr.V.P.Ajay, AP I / ECE, Dr.M. Bharathi, Prof / ECE, Mr.Navaneethakrishnan, AP I, Mr.Timothy, AP I, Mrs.S. Sasikala, ASP, generating a revenue of Rs. 0.56 Lakhs.

Consultancy on “Custom PCB Quality Control Tester Kit” to Bull Machines Pvt Ltd, Coimbatore by Mr.V.P.Ajay, AP I / ECE, Dr.A. Amsaveni, Prof / ECE, Mr. S. David, AP I / ECE, Mr.S. M. Chandru, AP I / ECE, generating a revenue of Rs. 0.58 Lakhs.

Publications

Out of the 63 publications by the faculty, a few are mentioned below.

Sample Publications

FACULTY


STUDENTS

Milestone Events

Texas Instruments Center of Excellence in Signal Processing was inaugurated on 29 July, 2017 and organised two workshops in collaboration with TI for faculty and students.

Smart Agriculture Website & Mobile App Launch on 19 November, 2017. The guest for this event were Dr. Arunchalam, Director ICAR, New Delhi / Mr. Siva Senapathy, Founder, Kangeyam Cattle Research Foundation/ Dr. Preethi Jain, IEEE Foundation, Chennai Region.

MoU

Signed an MoU with National Research Development Corporation, New Delhi, for commercialization and Patenting.

STEPS Knowledge Services, Coimbatore, for training and Internship.

Alumni


Goals & Plans for next year

To establish a Centre of Excellence in Communication Measurements.

To establish a Center on LoRa Academy for IoT.

To establish collaborations with nationally reputed institutions for joint research proposals and publications.

To receive research grants of over 50 lakhs from various government agencies.

Industry supported programs and consultancy with value over Rs. 3 lakhs.

Social Impact

- Awareness workshop for farmers on Smart Agriculture and Mobile applications was conducted for the farmers of Thondamuthur region, in Coimbatore on 24 August 2017. The programme was coordinated by Dr. Ramalatha Marimuthu and Dr. M. Alagu Meenakshi, to collect data from farmers regarding the issues to be solved using ICT.

- The IEEE WIE STAR OUTREACH programme, sponsored by IEEE Women in Engineering society, Madras Section was conducted on 05 February 2018 at VCMS Matriculation School, Coimbatore. The objective of the programme was to give an insight on STEM (Science, Technology, Engineering and Mathematics) concepts and to choose their career, especially towards the Engineering opportunities. The target audience were the students of Class 7, 8, and 9. Four faculty members: Dr. M. Alagumeenakshi, Dr. Ramalatha Marimuthu, Dr. S. N. Shivapriya, Ms. A. Kalaiselvi, Placement officer Mr. Subbaiah and 15 IEEE WIE student members of ECE were involved in organising this programme.

Electronics & Instrumentation Engineering

The Department of Electronics and Instrumentation Engineering, specialized in Electronics, Measurements and Automation aims in producing talented Electronics, Instrumentation and Automation specialists who cater to the needs of the modern society. Students experience an industrial milieu and enhance their knowledge and skills in the state-of-the-art instrumentation technologies and automation. With faculty who are experts in medical instrumentation, sensor designing process, analytical instrumentation, advanced process control, process automation systems: SCADA, PLC & DCS, the department ensures that students learn from the best. With a strong industry connect and best infrastructure built for maximum efficiency, excellent opportunities for all the students is ensured. The department is recognized as a nodal centre for Virtual Labs, an initiative of Ministry of Human Resource Development (MHRD) under the national mission on education through Information and Communication Technology (ICT). Memberships in internationally acclaimed bodies like Instrumentation Society Of India (ISOI) and International Society of Automation (ISA) help in augmenting student’s knowledge.

Imperative Advancements

A New FLUKE Centre of Excellence in Calibration was inaugurated with an investment of Rs. 45 Lakh in partnership with Fluke Corporation.

Sensors and Transducers lab was upgraded with a total investment of Rs 10 Lakh, enabling students to validate the specifications of various types of transducers with their applications.

The modernization of Electronics lab with a total investment of Rs 3.5 Lakh with advanced software tools and data acquisition systems facilitating students and faculty to make their projects in campus.

International Society for Automation (ISA) – KCT Student section was revived by Mr. Ramchandra Kerur, President, ISA Bangalore.

A 450 hours long skill development course on “Calibration Technician” approved by Pradhan Mantri Kaushal Vikas Yojana (PMKVY) was conducted.

Consultancy projects carried out for EZON through KC.IRI towards building cost effective device for data transfer for solar energy harvesting units with SCADA.

The number of students placed in core companies by the institution is 26 and 17 students were placed in IT companies. Furthermore, 9 students were placed in core companies by the department.

More than 15 events were organized in the Department: 3 FDP, 4 Workshops, 3 Orientation programs for students, 2 one credit courses and 2 seminars.
Research

Three funded research projects were carried in the year 2017 – 2018 by faculty members. Two research proposals were submitted amounting to Rs. 19.80 lakhs in DST-IDP and Rs. 31.85 Lakhs in DST – DDP. One patent was filed in October 2017 in the title of “Novel Skin Feature Based Jaundice Detection for Neonates Using Non- Invasive Technique” by Dr. Arulmozhi A, ASP, and Dr. Ezhilarasi M, Professor & Head. Dr. V. Dinesh Kumar, ASP, EIE, was awarded his doctorate for “Investigations on Intelligent Controller for Temperature and Flow Control of Distillation Column.” in October 2017.

Significant Researches

FACULTY

A DST sanctioned inter-departmental research activity worth Rs. 25.93 lakh is being carried out by Dr. Bhaarathi Dhurai, HoD Textile dept., Dr. M. Ezhilarasi HoD EIE, Dr. G. Ramakrishnan, TIFAC CORE, Dr. V. Rameshbabu, ASP on “Design and Fabrication of Computerized Dynamic Knittability Tester for Hosiery Yarns”.

Centralized Automated Water Supply system for KCT campus – A model for Coimbatore smart city is carried out by Dr. M. Ezhilarasi, Professor and Head – EIE and M. Saravana Balaji, AP-EIE. The management of KCT has funded an amount of Rs. 2.3 lakh for R&D.

Inter-departmental research activity worth Rs. 1.77 lakh is carried out by J D Andrew Pon Abraham, AP, Textile and V. Athappan, AP II, EIE on “Experimental Investigation of Performance Improvement in Automatic Air Conditioner.

Department Academic Committee formed with 5 internal EIE faculty members for enhancing the quality of syllabus and curriculum.

STUDENTS


Manikandan B and team won the 1st prize in Smart India Hackathon conducted by the Ministry of Consumer affairs, Food & Public Distribution.

Keerthana V, Tamilselvi S, Yashvandha M, Kaviya V, Vishnuvardini M and Hemamalini P, completed a KCT Ré project on Accident Alert for Hospital, May 2018.

Sharmila doing her final year won the 2nd runner up under Medical Devices in Smart India Hackathon Hardware Edition-2018. Rated top 30 out of 7000.

Sharmila has also won the Rigathon best development team for building human interface auto bot and 3rd place in Nullcon International Security Conference, Hardware. She has been among top 10 students selected for pursuing internship in the Think O Fest Hackathon conducted by Dover at VIT. She has also won CII-Yi National entrepreneurship startup challenge-Runner up held at IIM Bangalore.

Kaushik Balaji of Electronics and Instrumentation Engineering has presented his project at 2018 American Society of Engineering Education (ASEE) conference in Salt Lake City, Utah, USA, spear headed by Dr. J. Senthil, Principal, KCT.

The project presented at the ASEE conference was Smart De-huller – A smart machine to help the small and medium farmers process the millet they cultivate in a cost effective and efficient way to produce quality processed grains.

Research plan for the academic year 2018-2019

To receive external funded project worth of Rs. 50 lakhs and publish more than 20 papers in WebEx and Scopus indexed journals.
Industry Partnerships

Establishment of SIEMENS PLC Automation Lab to offer intense training in Industrial Automation is in progress. It will be of support in training, internship and projects.

Partnership with YOKOGAWA for establishment of Centre of Excellence in DCS for offering Training, Students’ Internship, Placement, Projects, Research and Consultancy.

Established Centre of Excellence in calibration with FLUKE Technologies, Bangalore. NABL certification of the Lab for Consultancy and student projects are in progress.

Intense training in “Embedded and Microcontrollers” for faculty and students by Authorized training partner for TEXAS INSTRUMENTS, Steps Knowledge Pvt. Ltd.

Scientec Technologies supports in building friction sensor for the DST project “Design and Fabrication of Computerized Dynamic Knittability Tester for Hosiery Yarns”.

Milestones

A 7-day Faculty development programme (FDP) by MATHWORKS on “MATLAB for Research and Computing” conducted from 04 to 10 October 2017 with around 30 participants in campus. Field experts, Alka Nair, Application Engineer, Mr. Vivek Raju accompanied by Mr. Yasar, Senior Application Engineer from Design Tech Systems, Pune facilitated the learning experience.

A Training program on SIEMENS PLC - Basic Automation S71200 and 1500 PLC, Win CC+ LOGO PLC training conducted from 30 October 2017 to 10 November 2017 with over 12 participants. Mr. Aswin Raja T. C., PLC Trainer, SIEMENS, handled the training session.

Inauguration of “ISA (International Society of Automation) student section” for student scholarship and Industry Connect was held on 30 October 2017.

Mr. Ramachandra Kerur, President, ISA Bangalore and Ms. Renuka Prasad, Former ISA President visited the department.
The significant faculty publications are mentioned below.

### Significant Publications

**FACULTY**


**STUDENTS**


Rishikesh U III year won First place in Dhanak 2017 organized by Indian Institute of Space science and Technology, Kerala in October 2017.

Sathyaparakash A III year got Overall Second place in YuSTART organised by CII YI - National level event at Bangalore on January 2018.

Sharan S III year won Gold medal in the State level event of Tamil Nadu state Silambam championship 2018 in February.

Senthil N and Syed Sulaiman P III year won Silver Medal in the State level event of Tamil Nadu state silambam championship 2018 in February.

Dinesh Shvaradan P II year Winner in Volley ball and S Ragul of II year Winner in Ball badminton in Inter Collegiate Tournament – SilCAA on February 2018.

Deepak Sai S II year got Cash Prize of Rs. 10,000 in Recognition Awards 2017 organized by KCT.
Balamurugan R (13BEI009), Balasharvesh A G (13BEI010) and Santhosh Kumar S (13BEI051) won Best Project award and Govarthini S (13BEI017) won KCT Gold Medal award in KCT Academic Excellence Award function – March 2018.

Alumni Venkatesan Balakrishnan (2007 batch) Assistant Professor, Kongu Engineering College, Perundurai - alumni expert for EIE Board of Studies meeting.

Mohammed Khalid M, (2012 batch) Research Assistant, KCT IRI motivated students by explaining the scope of KCT IRI and its projects.

Pradeep Raj D, (2012 batch) Software Engineer, Accenture, facilitated students on placement and career to get placed in IT industry.

Prabhu Deva A (2013 batch), attended a three day training Programme on Calibration of measuring Instruments organized by EIE Department.

Centres of Excellence

**FLUKE Centre of Excellence in Calibration**

KCT-FLUKE Center of Excellence in Calibration Lab in association with Fluke Corporation was inaugurated on 19 January 2018. FLUKE has sponsored Rs. 13.92 Lakh.

Conducted Pradhan Mantri Kaushal Vikas Yojana (PMKVY) – Calibration Technician Course sponsored by the Govt. of India, Ministry of Skill Development & Entrepreneurship (MSDE).

Training program in Calibration of measuring Instruments conducted on 20 to 22 February 2018 for faculty members by FLUKE experts.

Workshop on FLUKE Calibration uncertainty conducted on 11 and 12 May 2018 for faculty members.

**Yokogawa Centre of Excellence in DCS**

Designing Engineering - DCS system sponsored by Yokogawa India Rs. 8.31 Lakh. The team has done management funded projects in DCS.

DCS workshops were conducted. Students utilised it for project work and 4 students got Internship worth Rs.40,000 each.

One credit course was offered on DCS Fundamental and Industrial Communication protocol by Yokogawa to enrich the students’ knowledge in the field of DCS and communication protocol on 3 and 5 May, 2018.

Social Impact

- A skill development course on "Calibration Technician" is being run by the department to improve the skill set of drop out students.

Alumni

Venkatesan Balakrishnan (2007 batch) Assistant Professor, Kongu Engineering College, Perundurai - alumni expert for EIE Board of Studies meeting.

Mohammed Khalid M, (2012 batch) Research Assistant, KCT IRI motivated students by explaining the scope of KCT IRI and its projects.

Pradeep Raj D, (2012 batch) Software Engineer, Accenture, facilitated students on placement and career to get placed in IT industry.

Prabhu Deva A (2013 batch), attended a three day training Programme on Calibration of measuring Instruments organized by EIE Department.

Goals & Plans for next year

To attain NBA Accreditation to ascertain quality improvement of the department.

To establish full-fledged Siemens PLC Training Centre.

To organize ISA iACT and International Seminar.

To establish PG Diploma in Industrial Automation System Design jointly with NIELIT - an autonomous body of Ministry of Electronics and Information Technology of the Government of India.

To pursue collaborative research with reputed institutions and increase the submission of Project proposals to funding agencies.
04 faculty publication in National and International Journals
03 faculty members as peer reviewers in National and International Journals
FLUKE Centre of Excellence in calibration
Yokogawa Centre of Excellence in DCS
Establishment of SIEMENS PLC Automation Lab
The Department of Automobile Engineering of KCT was established in the year 2011 with an aim to create a pool of graduates who turn out to be the trendsetters in the automotive field. The department's laboratories and testing centres which are 9 in number are known for its high-end automotive equipments and research work. Students with able guidance of the faculty and hands-on training in the labs make their way to internships and industry projects in leading companies. Major areas of current research interests are the Green Vehicle Technologies, Alternative fuel technology, Vehicle design & performance optimization, Safety Standards in Automotive Engineering, and Advanced Automotive Systems.


A 2 day workshop on ‘Textile Resist Dyeing Crafts - Tie & Dye & Batik’ by Dr. R. Shanthi, ASP for Textile Arts & Crafts Open Elective on 19 & 26 April 2017.

Eleven Faculty members from Fashion Technology were participated in the Faculty Development Programme on “Textile Composites for Various Aspects” organised by KCT – TiFAC CORE on 30 May 2017.

One day workshop on ‘Fashion Photography’ on 31 August 2017 and 09 October 2017 and Painting workshop in 09 October 2017.

A guest lecture was conducted on ‘Fashion Forecasting’ on 21 November 2017 by S. Chandrakumar, Assistant Professor (Srg.), Fashion Technology.

The Department of Fashion Technology has been accredited by the National Board of Accreditation (NBA), New Delhi on Tier I Scheme of the Washington Accord for five years from the year 2014 which facilitates transnational recognition of degrees and mobility of graduates and professionals. Some significant areas of study in the department are fashion designing and portfolio, apparel manufacturing technology, apparel management, retail management and functional clothing. The department is also involved in research projects that are funded by Government of India and other agencies.

Imperative Advancements


A 2 day workshop on ‘Textile Resist Dyeing Crafts - Tie & Dye & Batik’ by Dr. R. Shanthi, ASP for Textile Arts & Crafts Open Elective on 19 & 26 April 2017.

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Head of the Department

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A two day workshop on ‘Digital Fashion Design’ was conducted on 27 and 28 February, 2018.

Field visit to Shivanjali Creative Arts & Crafts at Shivanjali, Vadavalli and Khadhi Kraft, K.G. Bhavan Vadavalli for Textile Arts & Crafts Open Elective by 35 students of III year on 06 March 2018.
Research

The department currently has four ongoing projects worth Rs.45.22 lakhs from the UGC, Department of Science and Technology (DST), Government of India and KCT Management funded projects.

Significant Researches

**FACULTY**

DST SEED Project titled ‘Enhancing the Livelihood of Handloom Weavers through Technology Upgradation and Training in Samathur Block, Pollachi, Tamil Nadu’ is being carried out by Dr G Ramakrishnan, Professor, Fashion Technology & Co-ordinator KCT TIFAC-CORE, Co-PI, Dr.C.Velmurugan, HOD, Mechanical Engineering & Dr.B. Poongodi, AP, KCT Business School with an amount of Rs. 15.6 lakhs funded by DST.

A project on 'Fabrication of Electronic Nose for Evaluation of Performance of Perfumed Textiles' is being carried out by Ms. S. Kavitha, AP III, with an amount of Rs. 2.60 lakhs funded by UGC Minor Research Project Funding.

A project on Natural Fibres by Research is being carried out by Dr.J.Srinivasan, HOD, Textile Technology & Co-PI, Dr.G. Ramakrishnan, Professor, Fashion Technology & Co-ordinator KCT TIFAC-CORE.

A project on 'Greener Approach of Natural Dyeing Towards Sustainable Development of Handloom Weavers Society' by Dr. K. Kalapriya, AP I, Ms. S.Nithya, AP I, Department of Science and Humanities, Dr. G. Ramakrishnan, Professor, Fashion Technology & Co-ordinator KCT TIFAC-CORE.

TNSCST project on Reuse of Cotton Fabric Cut Waste For Development of Recycled Wovens is submitted to TNSCST on 28 April, 2018 by Dr.R.Shanthi, Associate Professor, and IV year students, R.S. Amritha, K. Abhinaya and A. Indhumathi.

**STUDENTS**

Received a grant of Rs. 1.03 lakhs from the Management of KCT towards ‘Fabrication of Areca fibre extraction Machine and Areca Fibre Based Product as an Alternative to Plastics.’


A project on ‘Natural-Fibre-Composites for Aerospace Industry’ is being carried out by D. Sruthi, Fashion Technology and Radha Lakshmi, Aeronautical Engineering guided by Dr.R.Priyadarshini, AP II, Fashion Technology, Dr.Aravind, Professor and Dr.Jayalakshmi, Professor Science and Humanities.

A project on ‘Nanorod Coated Fabrics For Medical Use’ is being carried out by D.Sruthi, Fashion Technology, guided by Dr. R. Priyadarshini, AP II, Fashion Technology, and Dr.Aranganayagam, HOD (i/c) Department of Chemistry.

Industry Partnerships

Partnered with Gokaldas Exports, Bangalore, for placements and internship.

Partnered with Bhagyalakshmi Processing Unit, Gokila Garments, Gokul Knit fabs, Valliammai Fabrics (Tirupur) for students industrial visits and project.

Partnered with JUKI India Pvt Ltd, Mehala Machines, for conducting workshop and 1 credit courses, Pidilite Industry, and Premier Fashions for conducting Design and painting related Workshops.

Lectra Technologies for support in training in CAD.

Placement support and industrial internship with JJ mills, Reliance Trends, Advanced Clothing Concepts, Decathlon Sports India Ltd, Jockey India.
Out of the 17 publications by the faculty, a few are mentioned below.

**Sample Publications**

**FACULTY**


**INTERNATIONAL JOURNAL PUBLICATIONS WITH IMPACT FACTOR**


Milestones

Organised a faculty development programme on Medical and Health Care Textiles- Products, Manufacturing, Testing and Applications, sponsored by AICTE with Rs-6,70,775, from 04 to 17 December 2017 by Departments of Textile Technology, Fashion Technology & Bio-Technology.

Organised the Sewing Machine Operator Training Programme under PMKVY from 07 December 2017 to 24 April 2018. 15 Women trainees from outside participated in the programme.

The garment construction laboratory is added with new advanced computerized button sewing and button hole machine along with single needle lock stitch machines worth Rs. 6.67 lakhs during the year.

Achievements


Dr.V.Krishnaveni, Associate Professor, Fashion Technology, developed a course material on Medical And Health Care Textiles- Products, Manufacturing, Testing And Applications, for the Faculty Development Programme, sponsored by AICTE, on 4 to 17 December, 2017, ISBN- 978-93-85604-04-1, published by Sivasalapathy Printers, Coimbatore, Copy Right 2017.

Alumni

Mr. Manoj Kumar(2006 batch), General Manager, Operations, MSK Creations, Tirupur, contributed to the Department Advisory Board in the meeting held on 03 March 2017.

Mr. T.Vimal (2017 batch), Production and Quality Leader, Decathlon, Coimbatore, Tirupur, contributed to the Department Advisory Board in the meeting held on 03 March 2017.

Mrs. Shyama Ridhuvarnan (2010 batch), Proprietor, Shivaani Designers, Coimbatore, contributed to the Department Advisory Board in the meeting held on 03 March 2017.

Goals & Plans for next year

To facilitate Memorandum of Understanding with renowned industries.

To establish an industry sponsored laboratory for ERP / Industrial Engineering.

To enhance employability skills of the students through value added courses by industry personnel.

To acquire externally sponsored projects from government/ private agencies in the technical fields of textiles and apparel.

To offer value added consultancy services and skill development programmes for the need based industry and institutes.

To develop design oriented short term training programmes organised by the student trainers.

Social Impact

- Conducted a programme on “Sewing Machine Operators” under Apparel sector for home maker women candidates for a period of 330 hours from December 2017- April 2018.

  Mr.K. Prabu, Co-ordinator & Dr.V.Krishnaveni, Co–Co-ordinator of PMKVY facilitated the programme.
A three day International Conference on ‘Waste Water Management ICWW 2017, was jointly organized by Technical University Liberec, Czech Republic, and Tel Aviv University of Israel, on 16, 17 and 19 August 2017.

A two week Faculty Development Programme on ‘Entrepreneurship’ sponsored by Department of Science and Technology, Government of India, and implemented by EDI, Gujarat, was conducted from 13 to 24 November 2017.

Two week Faculty Development Programme on ‘Medical and Healthcare Textiles, Products, Manufacturing, Testing and Applications’ sponsored by AICTE, New Delhi, Government of India, was conducted from 04 to 17 December, 2017.

A three day National Seminar on ‘Industrial Engineering in Textile and Apparel Industry’ sponsored by AICTE New Delhi, was conducted from 28 to 30 December, 2017.

TEXTILE TECHNOLOGY

The Department of Textile Technology has been accredited by National Board of Accreditation (NBA), New Delhi under Tier II Scheme for five years. The department is involved in continuous updation about modern yarn production technology, fabric manufacturing technology, textile chemical processing and apparel manufacturing. They also research on technical, industrial and medical textiles. Technology Information, Forecasting and Assessment Council (TIFAC), Department of Science and Technology (DST) and Government of India has established a Centre of Relevance & Excellence (CORE) in Textile technology and Machinery in KCT. KCT-TIFAC CORE is the first centre dedicated to the textile sector in India. Under this programme, laboratories have been set-up to meet the requirements of textile training, testing and research.

Imperative Advancements

A two day National Level Project Contest was organised from 23 to 24 March 2017. Around 50 students participated from various institutions to display their projects and presented the papers.

For the year 2017 – 2018, nine guest lectures and three workshops were conducted.
Research

The areas of research handled in the department are Medical Textile, Knitting and Composites and the following research is proposed for funding under DST_SERB.

Significant Researches

FACULTY

A project on ‘Development of Eco friendly, Cost Effective Sanitary Napkins and Other Value Added Products From Kenaf Fibers for Improving the Hygiene and Livelihood of People of Chilamathur Mandal, Ananthapur District, Andhra Pradesh’ is submitted by Dr J Srinivasan, Prof.& Head, for DST SERB funding for Rs.61.80 Lakhs.

A project on ‘Design and Fabrication of Computerized Dynamic Knittability Tester for Hosiery Yarns’ is undertaken by Dr.Bhaarathi Dhurai, Professor, and her team, with DST funding of Rs.21.75 Lakhs.

A project on ‘Development of Flame Retardant Home Textiles with Antibacterial and Self-Cleaning Property ’ is undertaken by Dr.Bhaarathi Dhurai, Professor, and Mr.M.Saravanan, AP , with the funding by Ministry of Textiles, Govt. of India, for a sum of Rs. 23.5 Lakhs.

A project on ‘Polymerisation of Epsilon-Caprolactone using Biocatalystis’ is being conducted by R.Sukanya Devi, Vaishnavi Muralidharan, C.Kavya and C.Bhuvanesh. A sum of Rs. 56,000 is funded by Re, the research cell of KCT.

A project on ‘Innovative Home products and Idol Making from Cellulosic Materials’ is being undertaken conducted by S.Sabarrish and N. Tharun. A sum of Rs 56,000/- is funded by Re, the research cell of KCT.

Research plan for the academic year 2018-2019

A total of 4 researches are planned to initiate in the upcoming academic year. 15 papers are planned for publishing in Scopus Indexed journals. For the purpose of research, equipments and instruments worth Rs. 5 Lakhs will be acquired.

STUDENTS

A project on ‘Polymers of Flame Retardant Home Textiles with Antibacterial and Self-Cleaning Property’ is being conducted by R.Sukanya Devi, Vaishnavi Muralidharan, C.Kavya and C.Bhuvanesh. A sum of Rs. 56,000 is funded by Re, the research cell of KCT.

Industry Partnerships

Workshop conducted by Mr.A.T.Kumar, Head of Operations, Saurer Premier Technologies Pvt. Ltd., Coimbatore for the under graduate Textile Technology students.

Single Head Auto winding machine purchased from Saurer Premier Textile Solutions Pvt. Ltd. Coimbatore for the Weaving Laboratory.

MoU

MOU was signed with KG Mills, Annur, for PMKVY – TI to train the candidates for “OE Spinning Tenter.”

A draft MOU has been prepared in consultation with Prof.Militky and Dr. Rajesh Mishra of Technical University of Liberec, Czech Republic, to offer M.Tech.programme in Textile Engineering for the professionals who are working in industry.

Consultancy

Testing consultancy was offered to Ph.D Scholars and college students throughout Tamil Nadu in Tensile and Flexural using UTM machine and compression moulding machine by Mr.Vijayamoorthy, Lab Technician, under the guidance of Dr.K.Thangamani, Professor. Revenue of Rs.48,000 was generated.

Consultancy using electro spinning was offered to 48 students from various colleges such as Bharathiar university, Coimbatore, Mechanical Engg. Students of KPR Institute of Engineering and Technology, PSG Tech, CARE Group of Institutions, AIT, Coimbatore, Saraswathi College of Arts & Science, by Mr.Vijayamoorthy, Lab technician, under the guidance of Ms. Sukanyadevi, AP.
Publications

Out of the 40 publications by the faculty and 05 publications by the students, a few are mentioned below

Sample Publications

**FACULTY**


Ramamurthy P, Chellamani KP, Bhaarathi Dhurai, Subramaniam V published a paper on Study on Frictional Characteristics of Medical Wipes in Contact with Mechanical Skin Equivalents FIBRES & TEXTILES in Eastern Europe 2017; 25, 2(122): 120-127. DOI: 10.5604/12303666.1232874 (Scopus)

Sundareshan S, Pasupathi S A, Sasikala L, published a paper on Drape meter for Angular measurement of Drape, Melliand International, March 2018 (Scopus)


**STUDENTS**


Alumni

Ms. S. Kavitha, (2005 batch) AP, Department of Fashion Technology, KCT, contributed to the Department Advisory Board Meeting (DAB) before 14th Board of Studies (BOS) on 31 March 2017.

Ms.Dharsini (2016 batch), Programme Associate, Accenture Pvt. Ltd., Bangalore, delivered a motivational talk to the students before their Accenture Placement drive on 05 September 2017.

Mr. DU. Hariharan (2005 batch), Executive Director, Sterling Marketing, contributed to the 14th Board of Studies (BoS) Meeting on 05 July 2017.

Mr. Ajith (2009 batch), Senior Programmer, Cognizant Technology Solutions, conducted mock interview sessions for the students on 09 September 2017.


Mr.K.T.Munikumar (2007 batch), Dy. Manager Sales & Marketing, Olam Agro India Pvt Ltd, Coimbatore, and Mr.Vignesh Dhanabal (2011 batch) Scientific Officer, The South India Textile Research Association (SITRA), Coimbatore, contributed in the 15th Board of Studies (BoS) Supplementary meeting on 03 April 2018.
To acquire externally sponsored projects from government and private agencies in the technical fields of textiles and apparel.

To follow up with DST to get sanction for the already applied projects under technology development and transfer (SHRI).

To establish an industry sponsored research lab.

Next Year Goals & Plans

40 faculty publications in National and International Journals

05 student publications in National and International Journals

04 faculty members as peer reviewers in National and International Journals

International Conference on Waste Water Management ICWW 2017

National Seminar on Industrial Engineering in Textile and Apparel Industry
The Department of Mechanical Engineering of KCT is one of the oldest departments, functioning since the inception of the institution. This research driven department specialises in Engineering design, Thermal engineering, Manufacturing engineering, Industrial engineering and Fluid mechanics and machinery. The department is a recognized research centre by Anna University that signifies its extensive research interest.

Head of the Department

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Organised a training programme for Roots Engineers on Fluid Power System on 23 and 24 February 2018.

Organised training programmes for the industry and consultancy projects and generated a total revenue of Rs. 2,05,000.

A two day faculty training programme on “Advanced features in Solid works 2017” was conducted on 30 and 31 October 2017.

Organised a Certification Training on Digital Prototyping using Autodesk Inventor. Training was given by the Trainers from AUTODESK on 16 February 2018.

Faculty were involved in the technical discussions on Research Collaboration, at the Department of Aerospace Engineering, Indian Institute of Science (IISc), Bangalore from 19 to 21 February 2018. During the visit, discussed with IISc Professors on the project, “Shock Waves interaction with Light

Imperative Advancements

Organised a one day workshop on “Latest Research and Developments in Composite Materials” on 22 September 2017. Around 250 participants from various engineering colleges in and around Coimbatore participated in the workshop.

Organised a Certification Training programme on ASNT L-II Non-Destructive Engineering, ASNT Level-III Trainers from BIS on 19 February 2018.

Materials” and conducted initial experiments on Aluminium/Magnesium alloys.

Organised a one day workshop to enhance English communication skills for lab technicians of the department on 19 February 2018.

A two day faculty training programme on “Advanced features in Solid works 2017” was conducted on 30 and 31 October 2017.

Organised a Certification Training programme on Digital Prototyping using Autodesk Inventor. Training was given by the Trainers from AUTODESK on 16 February 2018.
Research

The areas of research interest of the department are Engineering Materials and Manufacturing and Thermal Engineering. One faculty of the department has registered for PhD this academic year.

Significant Researches

FACULTY

A project on “Performance Investigation of Automobile Radiator with Graphene Based Nano Fluid” is in progress by Dr. R. Manivel, Professor. University Grants Commission Project funded a sum of 4.6 lakhs for this project.

A project on “Enhancing Livelihood of Handloom Weavers Through Technology Upgradation and Training in Samathur Block, Pollachi, in Tamil Nadu” is in progress by Dr. C. Velmurugan as Co-PI Professor. Government of India, Ministry of Science and Technology funded a sum of Rs. 15.65 lakhs.

STUDENTS

A project on “Fabrication of a Semi-Automated Machine for ground chakkers in fireworks industry” was done by the student team Ponraj K (14BME096) & Nava Praveen S (14BME090) The project was funded with Rs.19,500 by Re, KCT.

A project on “Piezo Electric Traffic Detection” was done by the student team Srivathsan R (15BME028) & Vedha Viyas G (14BME162). The project was funded Rs. 28,000 by Re, KCT.

A project on “Scavenger BOT” was done by the student team Herish S (14BME060), Ilango Rajagopalan (14BME061), Ramnath S (14BME109), Hari Prashath (14BME057), Anto Praveen (14BME090), Prabhu Dhayalan (14BME212). The project received a fund of Rs.23,000 from Re, KCT.

A project on “Anti Sweating and Super Shock Absorbent Cricket Gloves” is in progress by ABILASH C (15BME070). The project received a fund of Rs.25,000 from Re, KCT.

A project on “Automatic Assistive Rover” is in progress by the student Harirajan M (15BME022). The project received a fund of Rs.1 Lakhs from Re, KCT.

A project on “Design & Optimization of Eccentric Shaft in Vibratory Compactors” was done by the student team Srinivas (14BME148) & Udaya Prasath M (14BME158) at L&T, Coimbatore. The project was mentored by the faculty Mr. S. Suresh, AP.

Research plan for the academic year 2018-2019

To acquire two Government funded projects, five industry consultancy work and five research consultancy.

Industry Partnerships


Partnership for student internships with ELGI Equipment.

Partnership for student Internship with TNPL/ Kagithapuram / Karur, Southern Railway, Trivandrum, Festo India Bangalore, Wendt (India), Hosur, Ashok Leyland, Hosur, Flow Link Systems, Coimbatore.

Partnership for Student visit and Faculty training towards the step of MoU with Ammarun Foundries, Coimbatore, and KSB Pumps, Coimbatore.

Partnership established by arranging training for Industry persons with L R Fabricators, Coimbatore, and Gowrish CNC, Coimbatore.

Partnership with LMW –MTD for student and faculty visit.

Partnership for student Industrial visits with SPB alloys, Telungupalayam, and HMT Machine Tools, Bangalore.
Out of the 65 publications by the faculty and 15 publications by the students, a few are mentioned below.

**Significant Publications**

**FACULTY**


S. Balasubramanian, V. Muthukumaran and P. Sathyabalan published a paper on “A STUDY ON THE EFFECT OF PROCESS PARAMETERS OF LASER HARDENING IN CARBON STEELS” in the International Journal of Civil Engineering and Technology (IJCIET), Volume 8, Issue 9, September 2017, pp. 201–207.

M. Balaji, K. ManikandaPrasath published a paper on “AN APPLICATION OF INTERPRETIVE STRUCTURAL MODELING TO ASSESS AGILITY INDEX” in the International Journal of Civil Engineering and Technology (IJCIET), Volume 8, Issue 9, September 2017, pp. 219–228.


**STUDENTS**


**BOOK CHAPTERS**

ArvindSingh(2018) authored Lithographic Fabrication of Polymer Structures for MEMS Tribology (Collaboration with IIT Delhi and Ulsan National Institute, South Korea), World Scientific and Imperial College Press, London, UK.


Achievements

FACULTY
Dr. S. Balasubramanian, ASP, was recognized as ZED ASSESSOR, for consultancy to MSMEs and also delivered a seminar on ‘ZED certification and development of MSME’ at LOGHU UDYOG BHARATHI (CO-INDIA).

Dr. S. Bhaskar, ASP, Dr. S. Sivakumar, AP— III, Dr. B. Senthilkumar, ASP, Dr. K. K. Arun, AP – III, and Dr. S. Thirumurugaveerakumar, AP– III were awarded PhD.

Mr. B. N. Sreeharan, AP - II was listed as one of the topper (All India Level) – Elite grade with Gold Medal in the NPTEL Exam on “Product Design and Development” conducted during the month of April 2018.

STUDENTS
Mr. Ponraj IV year received the Technical star of the year 2018 in design category at Founder’s Day of KCT.

Mr. Siva Subramani, Mr. Santosh Kumar P, Mr. Vedha Vijas G, Mr. Vishnu Priyan B, Mr. Brathikan, Mr. Cibi M, and Mr. Yokendhar G S IV year received the Special recognition award in 2018.

Mr. Gurusedhvarasath. S II year won silver medal in 110 meter hurdles conducted by Anna University in Nehru Stadium, Coimbatore.

QBDC is a National Level event conducted by FMAE (FRATERNITY OF MECHANICAL AND AUTOMOBILE ENGINEERS). Legion team of KCT secured the first prize in the “KILL THE HILL” followed by Acceleration and Traction test and 2nd prize in Suspension test and also awarded for Best Aesthetics.

In RiGathon, Mr. Ponraj and team and Mr. Ilango and Mr. Hari Rajan team IV year won QUIKR award and best mechanical design award respectively.

Ms. P. Archana, II year, attended the Wushu National Championship conducted by Assam Rifles and got placed 6th. She also attended the Yoga Nationals in Hosur and got 3rd place and was placed 2nd in the State level.

Mr. Ramakrishnan. D, II year, won the Interzonals held on 4 and 5 October 2017 in Paavai Engineering College, Namakkal. He was also selected in Anna University Handball team, Went to South Zone Inter University competition held from 21 to 25 October and won the silver medal held at, Telengana.

Mr. M. Thazöotheen, 15BME062, received a Gold medal in 14th Senior state Wushu Championships held on 10 June 2017.

Consultancy

Dr. V. Muthukumaran, Professor, provided a Short Term Training Course on Extraction Process Design Isolation and Applications of Polyphenol and Value Added Biomaterials for DBT, Govt. of India, Ministry of Science and Technology. A revenue of Rs 2,95,000 was generated.

Dr. V. Muthukumaran, Professor, Dr. C. Velmurugan, Professor, and R. S. Mohan Kumar, Professor, provided a two day Training Programme for Engineers in ROOTS Industries on Fluid Power Systems. A revenue of Rs 20,000 was generated.

Dr. R. Manivel, Professor, Dr. B. Senthilkumar, Professor and Mr. K. Vijayanand, Professor, provided training to the employees of BullAgro, Coimbatore. A revenue of Rs 17,902 was generated.

Dr. R. Manivel, Professor, offered consultancy to LEDL, Coimbatore, on Design and Performance analysis of Pneumafil casing in a centrifugal blower used in Textile mills using CFD Simulation. A revenue of Rs. 10,000 was generated.

FACULTY

Alumni

MoU

MoU was signed with Bright Inspection Services Laboratory for Non-Destructive Engineering.

STUDENTS

Computers

MoU was signed with Bright Inspection Services Laboratory for Non-Destructive Engineering.
Milestones

International Workshop on “Advancements in Composite Material and its Applications” was conducted from 13 to 16 October 2017. Prof. Milky, Czech., Dr. Rajesh Mishra, TUL., Dr. Subramaniyam, PSG Tech, were the distinguished chief guests among the other guests who delivered the lectures.

A DBT sponsored STTC on “Extraction Process Design, Isolation, and Applications of Polyphenols and Value Added Biomaterials” was conducted from 23 October 2017 to 05 November 2017. Dr. R. Subramanian, PSG College of Technology, Dr. R. Saravanan, Dr. Mahalingam College of Engineering, Dr. A. Srinivasan, CSIR, Govt of INDIA, Dr. K. L. SenthilKumar, Bannari Amman Institute of Technology, were the distinguished chief guests among the other guests who delivered the lectures.

Organised a Quad Bike Design Challenge Workshop - Season 3 in association with FMAE in the presence of Mr. Karan Bhardiya, Senior Technical Officer, General Motors Technical centre, Bangalore & Technical officials from FMA on 03.02.2018.

KCT-CPC STUDENT FORUM was inaugurated by Dr. M. Bhavaneswaran, Coimbatore Productivity Council, Governing Body Member and Mr. N. Nagarethnem, Governing Body Member and Chairman Programme Committee of the Coimbatore Productivity Council on 26 February 2018.

Guest Lecture for the final year students on “IC Engine Testing and Simulation” was conducted on 09 October 2017. Mr. Grame Harris, Senior Lecturer, Ara Institute, NZ, delivered the lecture.

KCT Space week celebration 2017 was celebrated on 04 October 2017 and 05 October 2017. Shri R Venkatraman, Deputy Director, VALF and Shri. S Ramesh Subramaniam, Scientist/Engineer -SE, MAFS, were the chief guests.

A training programme was conducted for the technicians of Lakshmi Electrical Drives Ltd, Coimbatore on “Thermal image camera” for motor load testing on 06 November 2017.

A 4 day training program on “CMM for faculty in KCT” was organized from 17.01.2018 to 20.01.2018. Mr. Rahul Chavan & Mr. Ravichandran, trained the faculty members on a new software called “MARK IV” which is updated, which has several additional features comparing to “MARK III”.

Goals and Plans for next year

To setup Industry sponsored laboratory.

To establish Centre of Excellence in Materials and Testing.

To acquire consultancy work from industries.

To acquire externally sponsored projects from government agencies and Industries in the fields of Materials and Manufacturing.
MECHATRONICS ENGINEERING

The Department of Mechatronics Engineering - Significant areas of Mechatronic studies that the department engages in, are Industrial Automation, Industrial Robotics, Mobile Robotics, Machine Vision Systems, Sensors and Instrumentation. The academicians here research extensively on the automation processes for artificial intelligence. The department has well developed laboratory infrastructure that bridges the gap between industry and academia. It also provides consultancy services to industries. Industrial automation, Robotics, Automotive Electronics, Mechanical Design, Noise and Vibration are the thrust areas of research. On a regular basis experts from industry are invited for interaction on the field scenarios.

Imperative Advancements

Students were trained in machine vision, UAV fabrication and testing, automation done in packaging industries, signal processing concepts, software training in LABVIEW with National Instruments Certification.

Faculty organised seven events in automation, industrial application, and robotic advancements in industries and gave hands on training in software and hardware integration. They attended various training, workshops and FDP in various industries and reputed engineering colleges.

08 Patents filed
23 faculty publications in National and International Journals
03 faculty members as peer reviewers in National and International Journals
04 book chapters published by the faculty

Industry Partnerships

Partnered for consultancy and internship with Fine Automation, Ganapathy.

Partnered for consultancy and internship with Arm Technologies, Ganapathy, Coimbatore.

Partnered for student and faculty research projects and internship with Innovative Invaders, Coimbatore.

Partnered for consultancy and internship with B&K, Chennai.

Head of the Department
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Research

The areas of researches carried out in the department are Robotics and automation. With hands on training imparted by the faculty, students engage in projects bringing out their conceptual strength. Most of such projects are carried out in industries, earning the appreciation of the industry and opening up of opportunities for internship, collaborative research and placements. Two faculty have registered for PhD in the year 2017 - 18

Significant Researches

FACULTY

A research on ‘Renewable Energy’ is being carried out by Dr.A.Vasuki, Professor, Dr.K.Akila, AP & Ms.B. Sabitha, AP (SRG) anda nd team. A financial grant of Rs 12 Lakh is sanctioned by EZON Energy Solutions, Coimbatore, for this project and it is expected to be completed in 2019.

A research on ‘Methane Detection by Redundant Robotic System’ is being carried out by Dr.M.Saravana Mohan, PI. This research is proposed to DST – DDP for the financial grant of Rs. 20.03 Lakhs. The project is expected to be completed in 2019.

A research on ‘Smart Kiosk for Pop Corn Vending’ is being carried out by Dr.M.Saravana Mohan, PI. This research is proposed to DST – DDP for the financial grant of Rs.17 lakhs. The project is expected to be completed in 2019.

A project on ‘Engineering of Gimbal System for Seeker’ is being carried out by Dr.M.Saravanamohan, Co –PI and team. A financial grant of Rs 9.44 Lakh is sanctioned by DRDL, Hyderabad, for this project and it is expected to be completed in 2020.

Consultancy

Dr.R.Venkatesan, HOD offered consultancy to Fine Automation, Coimbatore on ‘Carton Box plotting work station’. A sum of Rs. 5000 was the revenue generated.

Mr.P .Anush, AP offered consultancy to ARM Technologies Ganapathy, Coimbatore on ‘Circuit design for LED driver’. A sum of Rs. 7000 was the revenue generated.


MoU

MoU was signed with Synetics Automation Solutions Pvt, Ltd. Coimbatore.
Out of the 23 publications by the faculty members, a few are mentioned below.

## Sample Publications

### FACULTY


### BOOK CHAPTER


### JOURNALS REVIEWED


### Achievements

#### FACULTY

Dr. R. Venkatesan, HOD, MCE, attended “Meeting Industry Expectations & Creating a Truly Learning Environment, Effectiveness of programs and Knowledge (both information and content) dissemination” in PALS – Partner Institute Summit 2017 on 18 November 2017 at KSR College of Technology, Thiruchengode.

Dr. A. Vasuki, Professor, was a Chairperson for the Technical Paper Presentation Session at the National Conference on “Research Issues in Image and Signal Processing NCISP2017”, conducted by Department of Electronics and Communication Engineering, Sri Ramakrishna Engineering College, Coimbatore, on 23 November 2017.

Dr. K. Akila, AP, attended a 7 day FDP on “MATLAB for Research and Computing” from 04 to 10 October 2017 conducted by MathWorks.
Dr. K. Akila, AP & Ms. B. Sabitha, AP, SRG attended a two-day workshop on “Embedded Robotics” conducted by Robotics and Automation Engineering department at PSG college of technology on 22 and 23 September 2017.

Dr. M. Saravanan Mohan, ASP & Mr. A. Ramkumar, AP, were members of an inter disciplinary faculty team of TNIGC HACKATHON organized Forge Forward. The objective was to pitch a potential idea that evolve as a startup and hacked for 72 hours at a stretch to become a Faculty Entrepreneur.

Mr. R. Raffik, AP, attended AICTE sponsored two week FDP on “Emerging Trends and Advances in Mobile ROBOTS for Industrial Applications” at Kongu Engineering College.

**PATENTS**

Dr. S. A. Pasupathy, Professor, patented Induction based Coir Drier Machine (PN - 201641016425)

Mr. R. Raffik, AP, patented Egg-Yolk Albumin Separator (PN – 201641016426)

Mr. R. Raffik, AP, patented Electric Steam heated Lunch Carrier for Indian Food (Lunch Mate) (PN - 201641017423)

Dr. R. Venkatesan, HOD, patented Design and Development of Cosine Profiled Extrusion Die (PN - 4543/CHE/2014 A)

Mr. A. Ramkumar, AP, patented Apparatus and Method of Fluid Absorption and Wet Back Tester for Absorbent Pads (PT - TEMP/E-1/5955/2018-CHE)

Mr. Sakhikumar Arul Prakash patented Design of an Alpha-Beta Double Piston Hybrid Stirling Engines (PT - 3947/CHE/2015)

Mr. Sakhikumar Arul Prakash patented Multi-Purpose Bottle cum Snack Box (PT - 3948/CHE/2015)

Mr. Sathya Narayanan patented Robot Controlled Automated Supermarket (PT - 5070/CHE/2014)

**STUDENTS**

Mr. Kirubhakaran G, Mr. Mohankumar K, Mr. Ramesh Durai A, Mr. Ramkumar G, Mr. Mothi Raj S IV year designed and fabricated an E-bike in the project lab.

Mr. D. Harisaravanan, Mr. P. Dinesh, Mr. Harish, Mr. V. Baranidaran of III year attended ROBOWAR contest held at Johnson Engineering College, Coimbatore, and won 1 prize.

Mr. Sivaselvan of II year represented the Tamil Nadu, Pondicherry, and Andaman & Nicobar directorate in DG NCC Republic Day Camp held at New Delhi from 31 December 2017 to 31 January 2018.

Manoj Guha K II year won Young Entrepreneurship CII award at Bengaluru on 20 January 2018.

**Alumni**


**Social Impact**

- **Tree Plantation in Government High School at Kalapatti, Saravanampatty on 5th September 2018.**
- **On a visit to Universal Orphanage, Annur students lectured on “Education system in Tamilnadu” to the inmates. A group of 20 students participated in this program on 13 April 2018.**

**Goals & Plans for Next Year**

To establish a Centre of Excellence in Industrial Automation and LAB VIEW.

To insist research publications in Scopus indexed journals.

To obtain funded projects from various government agencies.
SCIENCE & HUMANITIES

The Department of Science and Humanities focuses on strengthening the fundamentals of the science in students to help them acquire advanced scientific knowledge in the forthcoming years of their education. Through this they bridge the gap between the student’s understanding and cognizance of the subjects.

Imperative Advancements

Organised five workshops, one seminar, one FDP and one National Conference for internal and external faculty members. Out of 61 faculty, 23 attended FDP, 21 attended workshops, 15 attended seminars and 35 attended Conferences in KCT and other institutions.

Sixty one research papers were published in reputed national and international journals this year. Out of 61 papers, 51 papers were published in SCOPUS indexed journals.

A workshop was conducted to train the academic supporting staff members of KCT to have a thorough knowledge on the basic applications of English language in academic routine and general usage.

A two day Interactive workshop on “Developing Productive and Receptive Skills in English Language” was conducted for the faculty members of KCT in association with Cambridge English on 29 and 30 June 2017. S. Sumitra of Cambridge English was the resource person.

Head of the Department
DEVAKI P
+91 80564 61871
hod.sci@kct.ac.in
Research

The faculty of Mathematics Division are pursuing their research work in the following fields: Topology, Nonlinear Dynamical Systems, Mathematical Biology and Cryptography. The broad field of research in Physics discipline are Acousto Optics and Materials Science. The following are the research topics taken up by the faculty in Chemistry division: Nano Semiconductor and Catalysis, Corrosion and Coating, Crystal Growth and Bio-organic Chemistry.

Six funded research projects worth Rs.9.34 lakhs was sanctioned by the management of KCT in the year 2017-2018.

Seven research proposals were sent to various funding agencies in the year 2017.

One faculty member of Physics and English registered for Ph.D in the academic year 2017-2018.

Steps have been taken to initiate the Centre for Research in Mathematics.

The English division is negotiating a consultancy programme with industry and has planned to have 11 publications.

The Chemistry division is preparing to initiate a consultancy programme. The division has planned to submit proposals to external funding agencies in-order to get grants for Conference and research. In addition it has planned to publish a minimum of 20 papers.

The Physics division has planned to publish two papers per faculty member during this academic year and start a consultancy service in the field of “Acousto-Optic” for the purpose of outsourcing. Based on the research output, a patent will be applied from the Physics division. The Physics division plans to submit a maximum of five research proposals for external funding during the academic year 2018-2019. As a part of FIST programme from KCT, Physics division will act as a key player in designing the proposal.

Significant Researches

FACULTY

A project on ’Multimodal Laser Optic Biosensor With Image Processing Technique’ is being carried out by Dr. R. Balamurugan, AP III. The management of KCT has funded a sum of Rs.1.99 lakhs for this project and is likely to be completed on 03 April 2019.

A project on ‘Development of High Performance Nano Structured Magnetic NiFeW Thin Films for MEMES and NEMS Applications ’ is being carried on Dr. R. Kannan, AP-I and Mrs. M. Selvambikai, AP-I. The management of KCT has funded a sum of Rs.2.08 lakhs for this project and is likely to be completed on 03 April 2019.

A project on ‘Image Segmentation using Neutrosophic Fuzzy C Mean Algorithm ’ is being carried out by J.Dhivya, AP I. The management of KCT has funded a sum of Rs.1.5 lakhs for this project and is likely to be completed in the year 2019.

A project on ‘Effect of Plasma treatment with natural dyes applied on handloom cotton fabrics’ is being done by the student team, Monikaashree.T (15BTT014), Logapreethi.C (15BTT042) and Kalaipriya .D (15BTT048). The project was funded by the management of KCT with a sum of Rs.67,700. The project is mentored by Dr.K.Kalapriya, AP I, and is likely to be completed in the year 2019.

STUDENTS

A project on ‘Acousto Optic’ for the purpose of outsourcing. Based on the research output, a patent will be applied from the Physics division. The Physics division plans to submit a maximum of five research proposals for external funding during the academic year 2018-2019. As a part of FIST programme from KCT, Physics division will act as a key player in designing the proposal.
Out of the 61 publications by the faculty and 03 publications by the students, a few are mentioned below.

**FACULTY**


**STUDENTS**


**Consultancy**

Dr. R. Kannan, AP I, provided a consultation to M. Kalaivani.S., AP, Sri Shakthi Institute of Engineering and Technology, Coimbatore for her electro deposition experiment and generated a revenue of Rs.2000.

Dr. R. Kannan, AP I, provided a consultation to M.D. Puhazhendhi, II M.E. Mechanical, KCT, for his electro deposition experiment on good will.

**Milestone Events**

Conducted a two day National Conference on “Chemistry of Advanced Materials and its Biomedical Applications” sponsored by Indian Council of Medical Research (ICMR) with a sum of Rs.50,000. ISBN : 9788193719848, April 2018.

AICTE approved Faculty Development Training Programme on Probability and Random Processes was conducted from 08 to 14 December 2017.
Dr. R. Ashokumar and Dr. R. Kannan conducted a Science Awareness Program on “Project Demo of School Students” on 29 November 2017 at ASC block in KCT. Around 150 students from Matric, State board, CBSE and ICSE schools participated in this event.

K. Maheswari and Dr. I. R. Sumathi organised a one day event on “MATH FEST-MATHEMATIZE” on 24 January 2018 in KCT for school and college students to provide a platform to showcase their presentation skills and also their understanding of the Mathematical concepts. 272 students participated in this event.

Social Impact

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Achievements

FACULTY

Dr. R. Kannan, AP-I and M. Selvambikai, AP-I, filed a provisional Indian patent at Chennai entitled “Aluminium Matrix Composite Reinforced with High Strength Tungsten Carbide and Flyash & Preparation Method” and the same was approved with the patent number 201841008026.

K. Maheswari, AP-I, was invited to deliver a lecture on a paper entitled “H∞ State Estimation of Discrete Time Delayed Neural Networks with Multiple Missing Measurements Using Second Order Reciprocal Convex Approach”, in the “Regenerative Medicine and Stem” organised by the World Hi Tech Society, Singapore, and had an opportunity to visit the labs and addressed the students in the School of computing at National University of Singapore (NUS).

In 2017, eight faculty members in Mathematics division got qualified in SET (State Eligibility Test) which is a mandatory criteria for an Assistant Professor as per UGC and AICTE norms.

Dr. H. Arul received a financial grant from DST-SERB under ITS scheme to attend 21st American conference on Crystal Growth and Epitaxy (AACGE-21).

Dr. H. Arul received the Best Thesis award from Indian Association for Crystal Growth, Chennai, during the academic year 2017-2018.

STUDENTS

Harsath. PT I-year Civil Engineering secured first prize in Chief Minister’s Trophy state level competition organized by SDAT, Thoothukudi.

Keerthiv Sanjay I year EIE secured first prize in Anna University Zonal level Athletics competition held in Sri Ramakrishna Engineering College, Coimbatore.

Preethi.K I-year Civil Engineering secured third prize in Zonal level Hockey competition held in KCT.

Aishwarya. R I-year ECE secured second prize in state level inter college competition Brainstrain -17 organized by Government College of Technology, Coimbatore, and conducted at Paavai Engineering College.


Next Year Goals & Plans

- To introduce MATLAB curriculum for all the B.E/B. Tech branches in the first year.
- To establish a MATLAB Laboratory dedicated only to the Department of Mathematics.
- To establish English Language Centre catering to KCT and KCLAS.
- To establish a centre for materials processing.
- To establish an advanced materials synthesis laboratory.
- To acquire externally sponsored projects from government/industry agencies in the fields of Science and Humanities.
Entrepreneurship Development and Innovation Institute (EDII), Chennai, has collaborated with KCT to conduct Lean Awareness Programs across the State with the help of Lean Consultants. In this regard, Dr. Jaisankar S, ASP, Centre of Operations, has been identified as a Lean Consultant and has conducted 2 Lean awareness programs for 15 industries in Coimbatore and Trichy clusters.

Organized 6 Management Development Programs for the Industry and 6 Consultancy / Market Research Projects and generated a revenue of Rs. 21,20,924 (Rupees Twenty one lakhs twenty thousand nine hundred and twenty four only). The programmes were either customized for specific organizations or open programs with a diverse participant pool.

A new initiative of KCT.BS - The Honours Track offered to High Flyers pursuing MBA at KCT. BS. Entry into the program is based on several criteria of high standards. 18 students filed their application for the Honours Track.

The third, fourth & fifth edition of NEEDS (New Entrepreneur & Enterprise Development Scheme) a EDI, India (Entrepreneurship Development Institute of India) sponsored program was organized and conducted in KCT Business School for 104 budding entrepreneurs.

Six Faculty Development Programs generating a revenue of Rs.3,77,658 (Three lakhs seventy seven thousand six hundred and fifty eight only) were organized. The programmes addressed varied topics pertaining to the current academic scenario to 257 participants from Tamil Nadu & Karnataka.

For the first time Angadi, the annual shopping fest of KCT Business school was held outside the campus and invited other colleges to participate and showcase their entrepreneurial & management skills. Angadi 2018 was a three day fun filled extravagant shopping experience from January 5-8, 2018 at Prozone Mall, Coimbatore. The student driven event from forecasting, planning, organizing, selling was a huge success both amongst the students and the people of Coimbatore.

Thirty Nine guest lectures and 12 workshops, 9 Certification programmes and 6 Industrial Visit were organized for MBA students.

### Imperative Advancements

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Research

KCT.BS areas of research primarily cover Lean Manufacturing, People Management & Competency Development and Marketing Research in the six areas of specialization (Finance, Marketing, HR, Operations, Analytics & Systems & Entrepreneurship).

Four funded research projects are underway in KCT Business School to the tune of Rs. 21,77,000 (Twenty one lakh and seventy seven thousand). Two funded research projects have been received from ICSSR major research & KCT Management respectively to the tune of Rs. 6,74,000 in 2017-18. Two ongoing research projects, funded by SEED & KCT Management respectively are progressing well at the cost of Rs 15,03,000 (Fifteen lakhs and three thousand only).

Five research proposals have been submitted by students, covering areas in HR, Marketing & Entrepreneurship. Three proposals to DOTE and two management related

Two faculty have received their Ph.D.

Two research scholars have received their Ph.D under the guidance of Dr. Nedunchezhian VR.

Eleven cases were developed and presented in various case conferences. Two cases were awarded first & second place at Christ University.

FACULTY

Dr. Nalini P, Assistant Professor, School of Marketing, has submitted a project proposal titled “An Empirical Investigation of Problems and Prospects of Textile Merchants to Invest in Texvalley(Special Textile Zone)” for their Business Growth and Development for the ICSSR Major Research, for the sum of Rs.5,16,000 on September 7, 2017.

The project titled Automatic Sanitary Napkin Providers and Hygiene Organic Sanitary Napkins has been selected in KCT Management funded research project for the academic year 2017-2018. KCT management and Re has approved for a financial support of Rs. 1,14,000 toward the above project. The student members are Ms. Muthuperiyaval and Harsavardhini of III BE- EIE department. The faculty mentor for the project is Dr.P.Nalini, Assistant Professor.

Milestones

KCT Business School and Paul & Aravind Chartered Accountants jointly organized a Management Development Program on Post Implementation Challenges in Goods and Services Tax on November 18, 2017. 120 industry executives from 47 companies in Tamil Nadu participated in the program. The program was presided the chief guest Dr. Periasamy IRS, Joint Commissioner, Central GST and Central Excise, Coimbatore.

Three faculty development programs on “Effective Engagement in Consulting” was organized.

Fourteen faculty members of Karunya University Business School attended and benefitted from the program that was delivered on a workshop mode.

A Faculty Development Program for 35 faculty members of St. Joseph’s College of Commerce, Bangalore, was organized at their premises.

A Faculty Development Program for 30 faculty members of St. Aloysius Institute of Management and Information Technology, Mangalore was organized.

Center of Finance organized a two day faculty development program on Publishing in Premier Journals on December 07 & 08, 2017. The FDP was organized with the objective to enhance participants to identify the right journals as well understand the important criteria in publishing papers and to provide hands on training on how to write papers ready for publication. 100 participants, comprising of 36 participants from Engineering domain, 28 from Science domain and 36 from Management domain were part of the program. There were 37 faculty members and 63 research scholars who attended the programme.

As part of the Global Business Culture course in Open Elective for Engineering students a study visit to Kathmandu, Nepal, was organized from November 8 – 13, 2017. 24 students went to Nepal for a study visit (13 engineering students,
Out of the 23 publications by the faculty and 14 publications by the students, a few are mentioned below.

**Publications**

Out of the 23 publications by the faculty and 14 publications by the students, a few are mentioned below.

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**Significant Publications**

**FACULTY**


**STUDENTS**


Asha, P, A., Bavithra, S, M., & Fazila, I,. (2017) published a paper titled “A study on Influence of Advertisement and Sales Promotion customer buying behavior towards western fast foods” in the International Journal of Marketing Research Review, ISSN : 2347-1670 with an impact factor of 4.311, volume 5, Issue 7, July 7, 2017. This publication was under the guidance of Dr. B. Poongodi, Assistant Professor, SoM.

Consultancy

AWARENESS PROGRAM ON LEAN MANUFACTURING
Entrepreneurship Development and Innovation Institute (EDII), Chennai, along with KCT has conducted Lean Awareness Programs in Coimbatore & Trichy. Dr. Jaisankar S, Associate Professor, Centre of Operations, has conducted 2 Lean awareness program for 15 industries in Coimbatore and Trichy clusters with a revenue of Rs. 40,000.

STUDY ON MARKET POTENTIAL FOR SAFETY LOCKER SERVICES FOR SAKTHIFINANCE FINANCIAL SERVICES LTD
Latha. A, Assistant Professor, Centre of Marketing, has executed a consultancy project for Assessing the Market Potential for Sakthi lockers (a service offered by Sakthifinance Financial Services Ltd) at Vadavalli, estimating the market and brand penetration for locker services and understanding the customer perception towards locker services. The study was conducted between December 2017 and May 2018 with a revenue of Rs. 20,650. 12 students of I MBA were involved in data collection process.

PRODUCT DESIGN SUPPORT FOR STUDENT PODIUM
The HR centre of KCT Business School was involved closely with Student Podium with a project to support the company in product design. Two focus group discussions were organized with two different stakeholders to present the product concept and elicit information regarding the same with revenue of Rs. 44,840. One focus group discussion with the HR Professionals styled “Hiring: Way Forward” was to understand the expectations from the HR when hiring fresher’s and the common problems that hamper their selection process.

Industry Partnerships

Partnered with ITC on Bespoke Finishing Program in Sales Training (STR) for 3 months.

Visioning on Strategic Planning for Jakson Limited, New Delhi.

Designing & Developing a Performance Budgeting System for Bakgiyam Engineering (P) Limited.

Product Design Support for Student Podium portal.

The second focus group discussion titled “Developing and Placing Students - Way Forward” was organized with all training and placement officers to identify the hiccups during placement season. Dr. Kirupa Priyadarsini, Associate Professor & Centre of HR, led the project with the support of Mr. Saravana Prasad, Lead Corporate Relations along with 2 student coordinators, Shankara Prabhu and Shivagurunathan.

DESIGNING & DEVELOPING A PERFORMANCE BUDGETING SYSTEM FOR M/S. BAKGIYAM ENGINEERING (P) LIMITED
A consulting assignment with M/s. Bakgiyam Engineering (P) Limited was taken up on Designing & Developing a Performance Budgeting System from January 2017 - March 2018 at the cost of Rs. 1,20,000. The deliverables of the consultancy assignment included designing, developing and installing a Microsoft excel-based financial budgeting system covering areas of Sales, Manufacturing, Expenses, Assets and Cash Flow. This consulting assignment was led by Dr. Senthil Kumar A, Assistant Professor (SRG), Centre of Finance and Anshul Saxena, Assistant Professor, Centre of Analytics.

FOCUS GROUP DISCUSSION ON PROJECT GEN NEXT HR FOR IMPIGER TECHNOLOGIES
A consulting assignment was carried out for Impiger Technologies Ltd between 2017 March to July 2018, involving a focus group discussion with their stakeholders on “Project Gen Next HR” as a part of designing the futuristic workplace systems. This project was led by Dr. Kirupa Priyadarsini, Associate Professor & Centre of HR, with a team of 5 students. The project generated revenue of Rs. 65,000.

In-house Training Program on “Lean Manufacturing Practices”, Kongu Engineers, Arasur, Coimbatore

Mou

MoU signed with IBM for collaborated Post Graduate Diploma Program in Business Analytics (PGDPBA).

MoU signed with Middle Earth HR Pvt Ltd, Hyderabad, for conducting a series of Management Development Programs (MDP)
Achievements

P. Ravi Shankar, I MBA(Batch 2017-19), participated in equipped and unequipped power lifting competition in the 7th Commonwealth Men and Women Power Lifting Championship 2017 held at Potchefstroom at South Africa on September 12, 2017. He has won a slew of awards
• Gold medal in Dead Lift
• Silver medal in Squat
• Silver Medal in Bench Press
• Overall silver medal - Equipped power lifting competition.
• Bronze medal in dead lift - Unequipped power lifting competition
• Overall 4th place

M Vignesh, II MBA (Batch 2016-18), won the Silver Medal in the Mr. Asia 60kg category at the Body Building Championship organized by Asian Body Building and Fitness Federation held at Bangkok, Thailand, from 17 to 19 December 2017.

Sowmiya R of II MBA (Batch 2016-18) won the second prize, representing Olippadi a photocopy shop started by students currently pursuing MBA and engineering - a students’ initiative in KCT campus- at the Global Student Entrepreneur Award for her achievement as a student Entrepreneur through the EO Global Entrepreneur Awards on 10 January 2018.

Dr. Kirupa Priyadarsini, Associate Professor, Centre of HR, was conferred the CMA GRD Best Young Management Faculty Award for the year 2017-18 by Coimbatore Management Association.

Dr. A. Senthil Kumar, Assistant Professor (SRG), Centre of Finance, received the “Best Management Ph.D Thesis Award for the year 2017-2018” from Coimbatore Management Association (CMA).

Dr. P. Nalini, Assistant Professor, Centre of Marketing, was awarded Vanitha Puraskar 2018 award by International Federation of Professional Trainers for her extensive contribution in teaching, training, and research.

Social Impact

• KCT Business School was a training partner for the International Practicum on Innovative Solutions of Child Poverty organized by Shanti Ashram and Arigatou International from November 1 – 6, 2017. The 13 participants from Nepal, Sri Lanka, Kenya and various parts of India were in KCT Business school on November 3, 2017 for a session on “Leadership for a Better World”, in which Dr. Vijila Kennedy, shared the 7Cs of Social Leadership at 3 levels - Self: Consciousness of Self, Congruence, Commitment ; Group: Collaboration, Common Purpose, Controversy with Civility; Society: Citizenship.

• An Entrepreneur Development Program for 11 women tailors was jointly organized by Shanti Ashram and KCT. BS on October 10, 2017. The capacity building program had 2 sessions- Confidence building and Business Plan. Dr. Sangeetha, Assistant Professor (SRG) coordinated the program

• Business School extended its service to Coimbatore International Airport through the Project – Delight Your Passenger. The training program would cover employees at all levels who are a part of the Airport Authorities of India, Coimbatore. 169 airport staffs (Housekeeping & Security) underwent sessions on Self Confidence & Stress management. The outreach was coordinated by Ms. Deepa Manickam, Assistant Professor, Centre of HR
Alumni

- Mr. Vishnu Prabhu, V, Sr. Sales Officer, Asian Paints (Alumni – 2014-2016)
- Mr. Vivek Kailash R, CEO, Art KG (Alumni 2013-2015)
- Mr. Kabilan Chakaravathy, HR Manager, Greeno Tech Solution (Alumni 2009-2011)
- Mr. Balaji, CEO, Zucroz Connect IT (Alumni 2015-2017)

gave valuable inputs and shared their experience in KCT BS in the Recharge Program

Mock Personal interview was conducted by the following Alumni in their specific domain area of work:

<table>
<thead>
<tr>
<th>S.no</th>
<th>Name of the alumni</th>
<th>Batch</th>
<th>Designation</th>
<th>Name of the company</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gayathri</td>
<td>2015</td>
<td>Credit Analyst-Senior</td>
<td>HDB</td>
</tr>
<tr>
<td>2</td>
<td>Humaaira Yusuf</td>
<td>2016</td>
<td>Credit Analyst</td>
<td>HDFC</td>
</tr>
<tr>
<td>3</td>
<td>Ashwini</td>
<td>2016</td>
<td>Analyst-Sales&amp; Credit</td>
<td>HDB</td>
</tr>
<tr>
<td>4</td>
<td>Divya</td>
<td>2015</td>
<td>Marketing Associate</td>
<td>Forge</td>
</tr>
<tr>
<td>5</td>
<td>N Sooriya Pragash</td>
<td>2009</td>
<td>Deputy Manager-HR</td>
<td>KCT</td>
</tr>
<tr>
<td>6</td>
<td>Vignesh Raja</td>
<td>2016</td>
<td>Analyst</td>
<td>VWR</td>
</tr>
<tr>
<td>7</td>
<td>M.S.Arvind</td>
<td>2015</td>
<td>Production Leader –Supply</td>
<td>Decathalon</td>
</tr>
<tr>
<td>8</td>
<td>Rishya Sunandika</td>
<td>2016</td>
<td>Research Analyst</td>
<td>Beroe Inc</td>
</tr>
</tbody>
</table>

Mr. Kabilan Chakaravathy, HR Manager, Greeno Tech Solution (Alumni 2009-2011) & Ashish S- Team leader, HCL shared their views and opinions in the Board of Studies and have also facilitated guest lectures

Eight Alumni have also been part of the Admission Selection Panel

Goals & Plans for next year

To launch & establish Centres of excellence – SME | To launch Post Graduate Diploma in Analytics | To launch Diploma in Operations | To launch Diploma in Agri Business | To launch Diploma in Sales Management.
Department of Academics
AA has introduced the Academic Consultative Committee (ACC) and Department Consultative Committee (DCC), refined student Leave Processes after meeting with various stake holders, collected their reviews and implemented the process efficiently for 1st years.

Inputs have been given to:

- ERP in their academic related processes and DOA continuously interacts and works with ERP to improve and monitor processes.
- COE to improve and streamline exam related processes.
- Academic calendar and have included Academic Administration & Audit related processes have been included.
- Inputs for curriculum and regulations at various stages for R15, 17 & 18 regulations.

AA has formulated strategic and policy directions for operating / managing the FCLF courses, review and scouting of new courses which are in line with current trends and technologies and scouting of faculties for the same, coordinating and conducting exam related activities, designing of feedback instruments, collecting feedback and action taken based on the feedback.

Courses are offered under the following 4 baskets:

- Science, Engineering and Technology
- Humanities, Social Sciences & Fine Arts
- Management & Leadership
- Career Enhancement & Skill Development.

FCLF has offered 102 Open Elective Courses in the last academic year under the above four baskets, out of which 15 courses had been handled by course specialists from external agencies like Vanavarayar Foundation, Wild Wing Trust, Kalakshetra, Sthaayi Theatre Foundation.

Any grievances of faculty and students related to academics were investigated, analysed and addressed through consultation, counseling, process and policies.

DOA is made up of 3 divisions – Academic Administration, Academic Planning and Innovation and Academic Audit.

**Academic Administration (AA)**

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- Academic calendar and have included Academic Administration & Audit related processes have been included.
- Inputs for curriculum and regulations at various stages for R15, 17 & 18 regulations.

AA has formulated strategic and policy directions for operating / managing the FCLF courses, review and scouting of new courses which are in line with current trends and technologies and scouting of faculties for the same, coordinating and conducting exam related activities, designing of feedback instruments, collecting feedback and action taken based on the feedback.

Courses are offered under the following 4 baskets:

- Science, Engineering and Technology
- Humanities, Social Sciences & Fine Arts
- Management & Leadership
- Career Enhancement & Skill Development.

FCLF has offered 102 Open Elective Courses in the last academic year under the above four baskets, out of which 15 courses had been handled by course specialists from external agencies like Vanavarayar Foundation, Wild Wing Trust, Kalakshetra, Sthaayi Theatre Foundation.

Any grievances of faculty and students related to academics were investigated, analysed and addressed through consultation, counseling, process and policies.

Class Committee meetings have been conducted twice in a semester and the grievance addressed by the students is analysed and escalated to the respective authorities and the grievance redressal report is collected from the departments.

AA also took up the mentoring process and activities to be done by the mentors were sent every week, audit processes put in place to ensure mentoring was done seriously.

**Academic Audit**

Academic Audit for the academic year 2017-18 even semester had been conducted between 13 March 2018 and 0 April, 2018 and the report has been submitted to the Head of the Institution to review and the same was discussed in HoDs meeting.

**Academic Planning and Innovation**

New Regulation (R17) has been framed which has many new modifications compared with R15. Following are the few areas where changes have been made:

- Supplementary Examinations
- Course Registration
- Introducing Summer / Winter Track
- Rescaling for Missed CAM
- Credit Transfer for Summer Schools, Internships.
- Attendance Requirements
- CAM Nullification
- Arrear Course Registration.
- Semester Structure
- Reappearance Criteria
- Passing Criteria
- Credit Range
- Employability Enhancement Courses.
- Fast Track

Class Committee meetings have been conducted twice in a semester and the grievance addressed by the students is analysed and escalated to the respective authorities and the grievance redressal report is collected from the departments.

AA also took up the mentoring process and activities to be done by the mentors were sent every week, audit processes put in place to ensure mentoring was done seriously.
Curriculum and Syllabus Framing for 3rd and 4th Semester (R17 Regulations) had been done through workshops with all departments.

Curriculum and Syllabus Framing for 1st and 2nd Semester (R18 Regulations) had been done through workshops & town hall meetings with all departments.

R18 regulations (Semester 1 to 8 for UG Courses) had been formulated and implemented through various process in all departments.

R18 regulations (Semester 1 to 4 for PG & MCA Courses) had been formulated and implemented through various process in all departments.

Revision of R17 regulations (Semester 3 to 8 for UG Courses) and revision of the curriculum had been done.

Revision of R17 regulations (Semester 3 to 4 for PG Courses & MCA Courses) and revision of the curriculum had been done.

Goals for 2018 - 2019

**Academic Administration**

To implement R17, R18 & the modified R15 through academic processes and audit mechanisms to ensure this system functions uniformly in all the departments throughout the institution.

To initiate training programs for faculties in pedagogy and assessments.

To initiate training programs for non-teaching staff members.

To initiate and implement the mentoring process for students & staff members.

To extend the Open electives for KCLAS students.

To introduce more new FCLF courses that are in line with current trend and technologies to ensure that students are updated with all the current trends.

To mitigate bottlenecks, issues, problems of faculty & students related to academics and set processes to ensure non-repetition of such occurrences.

Introducing Audit Processes for Open electives to ensure the quality of delivery of the subject.

**Academic Audit**

To introduce audit procedures for all academic processes of the institution.

To ensure timely, efficient and progressive performance of academic tasks.

**Academic Planning & Innovation**

Updating the Syllabus and Curriculum in line with the emerging trends.

To frame Syllabus for R17 - Semester 5 & 6 UG Courses, R18 - Semester 3 & 4 – UG Courses, R18 Semester- 3 & 4 – PG Courses to be done through various town hall meetings.

Framing and Planning the syllabus and curriculum for PG – Industry Collaborations programmes.

Introduction of Innovative Courses in line with the emerging trends and needs.

Coordination of Board of Studies and Academic Consultative Meeting.

Analyzing R17 and R18 curriculum and syllabi through feedback from various stakeholders.

To create a quality circle comprising of two or three Faculty members from each department in order to ensure the quality of Teaching and Evaluation methods in the institution.

To promote measures for institutional functioning towards quality enhancement in academics through internalization of quality culture and institutionalization of best practices.
Human Excellence
Human Excellence is the vision of the founder Arutchelvar Dr.N.Mahalingam and the department of Human Excellence was established in the year 2009 to impart Indian culture, ethics, values, and spiritual principles to the youth through scientific and rational approach. It helps the youth to unleash their hidden potential and achieve excellence in every field of life. The department has two centres namely, Mahatma Gandhi Study Centre and Swami Vivekananda Study Centre.

**Imperative Advancements**

From the academic year 2017-2018 onwards a new regulation, R17 is framed for value education. The aim of this regulation is being carried out through the Activity Based Learning workshop method which has the following special features.

- Outcome Based Education
- Workshop Mode
- Team of Faculty members to handle the class
- Activity Based Class
- Learning with Pleasure
- Student Centered
- Consultative Mechanism
- Purposeful Field visit
- Multiple Assessment
- Google Classroom

**Annual Events**

Every year the department organises events commemorating Mahatma Gandhi and Swami Vivekananda. In the year 2017-18 the following events were organised for the benefit of the students. At the events competitions like Essay writing, Elocution, PPT presentation and Quiz programmes were conducted and students were recognized with awards.

- International Yoga Day on 21 June 2017
- Gandhian Jayanthi on 02 October 2017
- Swami Vivekananda Jayanthi as National Youth Day on 12 January 2018
- Sarvodaya & Martyrs Day on 30 January 2018
- Founder’s Day on 21 March 2018
Training programme for Teaching and Non-teaching staff were conducted by the Department on the following topics.

- Stress Management
- Mental & Physical health
- Yoga practices
- RTI Act
- Motivation and Personality Development

Students visit to the Centres

During the year, as part of the R17 academic curriculum 1130 students of first year visited the Mahatma Gandhi Study Centre and Swami Vivekananda Study Centre on various dates to study the life messages of these Legends. Their visits were guided by several lectures and quiz programmes.
An overview of the research activities, achievements and progress of KCT’s student research centres namely iQube, Garage and Re and industry research centres namely KC IRI and KCT TIFAC CORE are mentioned in this section.
iQube is an innovation Centre for tech enthusiasts, aiming to bring out the explorer and the maker within. It further helps tech enthusiasts to convert their innovative ideas into commercial, viable and technically challenging prototypes. It also provides guidance and mentorship in finding a path to achieve what one always dreamt of.

This year the centre has mentored 600 students in various technologies and 12 SIP projects. It hosted Arduino day event with an impact of 102 students with KIC Team and 4 Tech review for the students of KCT. It conducted 6 specialised courses of 40 hours duration for each course for KCT students. 20+ Prototypes were successfully made and 4 patents are applied.

Technical Creations such as developing PC Games, defense BOT for KCT in RoboWar, mobile applications for KATCHUP KCT, KCT YUGAM, Blood Donation v.1.0 and No Food Waste App. Developed Token System for Admission Office, KCT, POS system for KCT.BS Angadi and Trackr v2.0. Students who are a part of iQube won the India Food Hackathon hosted by Government of India.

ACHIEVEMENTS

Winner of India Food Hackathon hosted by Government of India.

Winner and Runner-Up of Yu-Start Event hosted by CII and YI.

Winner of IoT-Next event hosted by India Electronics & Semiconductor Association (IESA), Bangalore.

Winner and Runner up for AI SandBox and won a trip to ISRAEL.

Well progressing students of iQube are placed in core companies.

Finalist for Global Cyber Challenge.
It is a student involved product development research centre for automotive developments. The motor sporting teams such as Sakthi Racing, Blitzkrieg Racing, Team Legion and Zeall Racing who engage in designing and construction of terrain vehicles, supra vehicles, quad bikes, dirt bikes, go-karts and solar karts compete and design in national and international contests for live automotive problems presented by the industries.

Achievements of the motor sporting teams in 2017 - 2018

Sakthi Racing
Participated in the SUPRA SAE INDIA event in June ‘17 at Buddh International Circuit, Greater Noida and Formula Bharath event in January ‘18 at Kari Motor Sports, Coimbatore.

Blitzkrieg Racing
Participated in the Virtual SAE BAJA event in July ‘17 at Chandigarh and Enduro student India event in January ‘18 at GEEDEE Track, Coimbatore.

Team Legion
Winner of Quad Bike Design Challenge season-2 held at Area 56 motorsports, Hyderabad, in July 2017.
Championship at QUAD-TORC 2017 held at Garage-1 Race Track, Chandpur, Uttar Pradesh, in September 2017

Zeall Racing
Won Best Design and Best Aesthetics awards in Formula Kart Design Challenge held at Meco Cartopia, Bangalore.
Won several awards in Indian Karting Championship held at Mohite Racing Academy, Kolhapur.
Won several awards in Gokart Design Challenge held at Kari track, Coimbatore.
Re is run by a student team that defines a step by step process to nurture the research culture among the fellow students on campus and ensure right guidance and support for their research ideas.

- 36 student projects were funded by Ré. A total of Rs. 21,47,167 was sanctioned to them for their research.
- 13 departments and 92 faculty were involved in student research project reviews for funding by Re.
- Inception of NFRC, National Fibre Research Centre.
- Advent of Coffee Table Talk. It is an event where personalities of inspiration are invited to address students. In 2017 – 2018 year 5 such talks were hosted.
Five Industry funded projects were carried out with a total funding of Rs. 30 Lakhs. Departments of Aeronautical, Automobile, Mechanical and Computer Science and Engineering of KCT were involved in these projects.

Three Industry consultancy and Training services were carried out and revenue of Rs 8.90 Lakhs was generated. Departments of Aeronautical, Automobile, Mechanical and Computer Science and Engineering, Information Technology, Electrical and Instrumentation engineering and Electrical and Electronics engineering were involved in providing services.

Five joint research projects were carried out with Rs. 3.30 lakhs of industry funding and Rs. 5.50 lakhs of funding by the management of KCT. Department of Aeronautical, Automobile, Civil, Electrical and Instrumentation and Electrical and Electronics and Mechatronics engineering were involved in these projects.

Seven student projects were carried out with Rs.1.50 Lakhs of industry funding and Rs. 3.20 Lakhs of funding from the management of KCT. Students of department of Mechanical, Computer Science and Engineering, Information Technology and Bio-Technology were involved.

KCT- Ezon Centre for Research in Renewable Energy was instituted with a funding of Rs. 12 Lakhs by EZON Energy Solutions and Rs. 6 Lakhs by the management of KCT.

Textile Technology and Machinery are the focused areas of research. A total of 4 research projects worth Rs. 47.33 Lakhs were carried out this academic year of which Rs. 5.75 Lakhs was funded by the management of KCT and 2 researches worth Rs. 94.21 Lakhs are proposed for funding to Department of Science and Technology, Govt. of India.

Natural Fibre Research Centre was initiated by Dr. G. Ramakrishnan, Dr. J. Srinivasan with a funding of Rs. 4.50 Lakhs by the management of KCT.

Partnerships were established with three industries last academic year.

Total revenue of Rs. 2,71,250 was generated through various technical services provided to different companies and industries.

A faculty development programme, 2 seminars, 3 Workshops, 1 Short term training programme, 1 Industry – Institute meet & 1 Project Expo were conducted in the last academic year.
Office of Student Affairs

Office of Student Affairs is responsible for the effective management of students’ co-curricular and extra-curricular activities. It also nurtures the mental wellbeing of students through various counselling programmes. The centre also addresses all student related requirements and spearheads institution’s significant events such as Graduation day, Founders day, Swagatham, Engineering Immersion Boot camp, Jananam, Yugam and Farewell. The vision of this students centre is to be a catalyst in making students explore their true potential.
Counselling for personal well-being is an active centre started in 2015 where student guidance process takes place in a one-to-one, and confidential environment. The counsellor, who is highly empathetic, assists the students in the areas of their need. Students find the discussions with the counsellor trustworthy and very useful as the sessions focus on their self-growth and motivate them accordingly. They are guided on different perspectives and with a non-judgemental attitude, thus leading them to find a solution on their own. This approach steered for an extension to mentorship services. Group sessions are conducted with the mentors to sensitise the need of psychological support and intervention for their mentees.

Outcomes of the counselling sessions this year can be categorised into three broad sections - Academics, Behavioural and Emotional. Students were counselled for self-growth, emotional balance, to meet academic challenges, to clear arrears, to enhance their communication skills, to resolve their conflicts, to work as a team, to become aware of their learning and working styles, to understand their strengths and limitations, for behavioural changes, to resolve family conflicts, to maintain healthy boundary with opposite gender and to deal with their fear and anger.

Students volunteered for help and were also guided by the Principal, HoDs, SWOs, Resident tutors, Class advisors and peers to seek help.

Total counselling sessions handled from April 2017 to June 2018 was 1497 of which number of sessions for academic guidance was 520, behavioural guidance was 393 and emotional support was 584.

A total of 828 students, 28 alumni, 64 administration staff and 32 faculty of KCT have taken the support of the counselling centre.

Counselling Services

Clubs and forums

OSA guides 30 student clubs and forums of which 6 clubs were started in the year 2017 – 2018. A total of Rs. 41,45,797 was sanctioned for the club activities organised and participated by the students. In the year 2017 – 2018 there were 2067 student volunteers taking part as members in various clubs. A total of 281 events were organised and students have taken part in 51 events organised by other colleges and institutions. Some significant events organised are:

**NCC Independence Day celebration** on 15 August, 2017 by NCC of KCT.

**State Level Yoga Competition** on 5 September 2017 at Coimbatore Public School, Chinna Mettupalayam, Saravanampatti, by the Agam Forum of KCT.

**State Level Training on Disaster Management** on 27 September 2017 in Ooty by Youth Red Cross of KCT.

**NCC Inter College Events** on 11 and 27 September 2017 at KCT campus by NCC of KCT.

**Kurichi Lake Cleaning** on 25 October 2017 by NSS of KCT.

**DRAHAA - Intra College Drama & Haasya Fest** on 14 October 2017 by the Drama Troupe of KCT.

**Tribal Village Adoption Camp** on 10 November 2017 by the Nature Club of KCT at Panapalli Village, Anaikatti.

**Hands Together**, an orphanage visit on 22 November 2017 by Youth Red Cross at Malai Saaral - Pollachi, Samathurpuram.

**Cycle Rally** as a part of NCC Day Celebration on 24 November 2017 by NCC of KCT.

**Tamil Arivu Thiruvizha** by 27 November 2017 by Tamil Mandram of KCT.

**NCC Republic Day celebration** on 26 January 2018 by NCC of KCT.

**Swagatham’ 18** on 28 January 2018 by Dance Club of KCT.

**NCC Corps Fest’18** on 03 March 2018 by NCC of KCT.

**Coimbatore Quiz** on 10 April 2018 by Qubate Club of KCT.

The members of Voluntary Blood Donor Club donated 465 Units of blood (285 Units + 180 Units during Camp).
Open elective course on Developmental Transactional Analysis is offered to the students who are interested in enhancing their communication and soft skills.

The reports are submitted with anonymity to Principal and management every month.

**Scholarship Support for Students**

The office of Student Affairs has been instrumental in fetching scholarships for 3554 deserving students in the year 2017 – 2018 out of which 2428 students received Government Scholarships and 1126 students received other types of scholarships.

**Engineering Immersion Boot Camp**

This camp facilitates a smooth environmental shift for the students from school to college. This forum helps them understand the scenarios and acclimatize themselves for a great life journey at KCT.

In the Immersion Boot Camp, Ignite, the student leaders of the Leadership Council guided the fresher students on the resources and specialisations in college and how efficiently they could utilise them. The student leaders introduced them to Re – Student Research Cell, iQube – Product Incubation Centre, Garage – The Student R&D Product Development Centre and various other clubs and forums of KCT. Ignite was organised and executed by the senior students and showcased them to be a very strong support system for the fresher students.
AWARDS
The management of Kumaraguru Institutions, every year recognises meritorious students with the Mahatma Gandhi Scholarship award, the KCT Achievers award and the Best Outgoing Student award.
Arutchelvar valued the pursuit of merit, perseverance and achievement greatly in students and was keen on nurturing these attributes in them. It was in this light that the idea of Mahatma Gandhi Scholarship Award was instituted during 2006-2007 by the Ramanandha Adigalar Foundation. Since then KCT has rewarded thousands of its students with a scholarship of Rs. 10,000 each, based on various aspects of a student’s performance in academics, sports and other special achievements. A total of 9000 students have received scholarships worth Rs. 9 crore from 2007 to the present.

Mahatma Gandhi Scholarship Award Ceremony took place on 23 March 2018, during the founders day celebrations. For the year 2017 - 2018, 1025 students who achieved in curricular activities were awarded scholarships. A sum of Rs. 1.02 crore was given to 1025 students. Dr. Sudha Seshayyan, Vice Principal, Madras Medical College, Chennai was the Chief Guest of Mahatma Gandhi Scholarship Award ceremony.
KCT Achievers Award

KCT recognises each year the best students in the outgoing batch for their achievements in academics, sports, research and innovation. Various endowment awards sponsored by industries, alumni and other patrons are also given to outstanding students. Best volunteers of various clubs, forums and organisations in KCT are also recognised.

KCT Achievers Award ceremony was held on 21 March 2018 and Dr. B.K. Krishnaraj Vanavarayar, the Chairman, KCT distributed the cash award to students. A sum of Rs. 5,30,000 was awarded to 71 students this year under various categories such as Best Volunteer Award to 48 students, Icon of the Batch 2018, Overall performers to 2 students, Technical Star of the Batch, Sports Star of the Batch, Library Patron of the Batch and Special Recognition Award to 14 students.

KCT Best Outgoing Student Award

A best performer from each of the 14 undergraduate and 14 postgraduate courses was recognised with the Best Outgoing Student Award for his/her excellence in curricular, co-curricular and extracurricular activities under various categories. A total of 28 students received their awards along with a cash prize of Rs.5000 during the farewell celebration of their batch in April 2018.
The signature events such as Swagatham, Graduation Day, Jananam, Yugam, Founders Day and Farewell mentioned in this section are laid down in the chronological order.
Swagatham 2017

Kumaraguru College of Technology on 07 August 2017 organised Swagatham to welcome and celebrate the initiation of the batch 2017-2021. Swagatham – which means ‘Welcome’ in the Dravidian languages, is a one day introduction session for the fresher students and their parents. They were oriented about the vision and mission of the college and were given an introduction to the general and educational resources available on campus. The event had over 1100 students and around 2000 parents. The sessions in Swagatham briefed them about the life at KCT, campus rules for hostellers and other rules and regulations. Dr.Raja, Pro – Vice Chairman of Vellore Institute of Technology, was the chief guest of the session. College Chairman Dr. B.K.Krishnaraj Vanavarayar, Principal Dr. R. S. Kumar, Joint Correspondent Shri. Shankar Vanavarayar also shared the stage to give students a heads up of their journey for the next four years.

Graduation Day 2017

KCT stands today as an institution of excellence in technical education with 33 years of illustrious service to the students, many of whom are shining as leaders and contributors to development, across the world. And Graduation Day is one of the hallmark events of KCT where students, parents, colleagues join together to celebrate the academic success of the graduands.

Graduation Day 2017 for the graduating students of 2016 happened on the 26 and 27 August 2017. 1659 students from 13 Undergraduate Engineering Departments and 14 Masters Departments graduated. 262 students secured first class with distinction and 1204 students secured first class. The graduation ceremony happened over three sessions. Chief Guests of the session were Mr. Masood Hussainy, Vice President & Head PMO Aerostructures, Tata Advanced Systems Ltd and Mr. Ramesh Datla, CEO, Elico Ltd.

Shri Shankar Vanavarayar, Joint Correspondent of KCT delivered the Welcome Address where he encouraged the graduates to remain open, aspirational, healthy and happy and most importantly, value based. Shri Balasubramaniam,
Correspondent, KCT, presided over the function. Dr. R.S. Kumar, Principal, KCT, in his presidential speech, spoke about the latest achievements of the institution, recent MoUs signed with leading industries and foreign universities and the future developments of KCT. Shri Masood Hussainy, in his chief guest address, motivated the students to believe in themselves and be unique, as everyone in this world has a distinguished purpose. He also shared some of his interesting life lessons and his own words, “One should start pursuing their dream with the available ‘good’ rather than waiting for the ‘perfect’, as sometimes perfect can be an enemy of ‘good’”. Chief Guest Mr. Ramesh Datla addressed the graduands for the second session.

Graduates of 2016 - Branch wise

UNDER GRADUATE PROGRAMMES

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POST GRADUATE PROGRAMMES

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Jananam 2018

Jananam is a yearly intra-collegiate cultural fest. This year it took place on 10 January 2018 with all the undergraduate and postgraduate departments of Kumaraguru College of Technology and Kumaraguru Business School being active participants. The teams of Dance club, Music Club and Hassya performed dance, music and stand-up comedy shows. There were 10 dance shows, one hour of music show and half an hour of stand-up comedy show followed by dinner. Students of all years participated in the performances.

Jananam in Tamil language signifies giving life. As the name indicates it is a cultural evening for a cause. A registration fee of Rs 100 was collected from the audience of the evening. A revenue of Rs 1,02,000 was generated and was donated to the Transpride Food truck. Transpride food truck represents the social campaign called TransStrength signifying the Circle of Opportunity. This campaign was organised by a team of students to mark the transgender inclusion. The transgenders run their food truck end to end and they visited 5 colleges in and around Coimbatore raising funds for their livelihood.
Yugam 2018

Yugam is a National techno, cultural and sports festival of KCT and Yugam’18 happened from 8 to 10 February. A series of technical workshops on Entrepreneurship, Machine Learning, Ardubotics, Digital Marketing, Brain-controlled Robotics, Design Thinking, Oil and Gas Industry, took place from the 5 to 7 of February as a part of Yugam’18. Participants of these events showcased their sound engineering skills, showing that they are the pillars of the Nation, beyond doubt.

Sequentially, the sports events happened. Sports competitions this time also turned out to be the events of significance. Paavai Engineering College, Jain University under the Men’s category and Bishop Heber College, Trichy, under the Women’s category bagged the First position in handball and basketball tournaments, respectively. PSNA College of Engineering, Sathyabama University, Chennai, under the Men’s category and Karunya University, Coimbatore, under the Women’s category secured the Second position.

As a part of this mega event, Dr. Mahalingam Chess Academy of KCT organized an IM Chess Coaching camp to sky rocket the skills of the chess players of KCT. IM Mithrakanth, the Commonwealth Champion and the reputed International Master trained the players.

The sizzling cultural competitions and events started on the 8 and ended on 10 February. Events of special mention are the host performances – Swagatham, the Illusionist, Suhani Shah’s magic show, the Stand-up comedian Alexander Babu’s, stand-up comedy show, the Playback singer Chinmayi Sripradha’s musical concert and a musical show by the Band, Non-Violinist Project. The Director of the Tamil movie, Aruvi, honored the Short Film screening show with this presence. Pete Draper, the Head VFX of the grand movie Baahubali, Indushree R, Magician & Ventriloquist, Dr Sruti Kapoor, United Nations Speaker, Team Indus, Aerospace Research Team, Arpana Choudry, Nazdeek Justice, Program Associate, were the speakers of the event Y-Talk. They enlightened students with their pearls of wisdom. Other notable events were Bike Stunt Show, Robo Soccer, Resurrection and Ignathon.

KCT’s heart always lies in giving back to the society. The social campaign, ‘Circle of Opportunity’ hosted a food truck called TransStrength, run by transgenders end to end, marking their inclusion. The campaign went live in the month of January, hosted the harvest festival called Pongal for the grandmothers and grandfathers of our community, marking the significance of their contribution to the younger generation.

Find your own destiny. You don’t have to compete with others. Compete with yourself, shared Raj Mohan Gandhi, The Founder, Put Chutney and Alexanber Babu, the Stand-up Comedian, along with their appreciations and wishes, when they addressed the 4000 odd students at KCT YUGAM’18. The team YUGAM’18 got testimonies from all over for their showmanship. The student organizers, indeed exhibited their caliber in every step of the way – from logistics to choosing the celebrities to honor various shows.
Founder’s Day 2018

Founder’s day is a hallmark event for Kumaraguru College of Technology, an occasion to come together to reflect upon the mission, the legacy and to celebrate the inspiring life of our founder, Dr. N. Mahalingam Ayya.

Arutchelvar Ayya envisioned creating educational institutions to act as enablers for society and develop young people to build an empowered and socially conscious humanity. Every year KCT takes forward his mission and this year ‘Founder’s Day’ was celebrated from 18 - 23 March, 2018, marking Ayya's 95th birth anniversary. The thought behind this celebration was to inspire students, staff, visitors and the general public to emulate the ideals and values of Arutchelvar.

Hon’ble Governor of Tamil Nadu Thiru. Banwarilal Purohit was the Chief Guest of the Founder’s Day ceremony on 20 March 2018. He conferred the Arutchelvar Dr. N. Mahalingam award on Thiru G.D. Gopal, Managing Director, Gedee Technical Training Institute and Managing Director, UMS Technologies Ltd and Dr. Avvai Natarajan, Tamil Scholar and Educationist. Also, he inaugurated the Mahatma Gandhi Central Library and Gnana Sabai.

Founder’s Day events

In commemoration of the Founder’s day, various competitions such as Thevarap Pannisai Potti organised by Nammadhu Pangu of Sakthi Excellence Academy, Chess Tournament by Dr.N.Mahalingam Chess Academy and டீர் கைக்கரை கதா by FORGE, KCT, were conducted for school and college students. Their achievements in the competitions were recognised at the Founder’s day celebrations. Programmes such as Agaval Parayanam and மன்மகினி were organised by the Department of Human Excellence as part of the celebrations. Kalaimamani Rajesh Vaidhya’s musical concert and Noyyal Azhaikiral, a dance drama portraying what the river Noyyal means by Karuna Sagari’s Bhakti Natya Niketan were organised by the team of Sakthi Excellence Academy.

Award Ceremonies

ARUTCHELVAR DR. N. MAHALINGAM AWARD

The award is instituted in the honour of Dr.N. Mahalingam to recognise the accomplishments of eminent individuals who have made a significant impact in the community and have fostered outstanding growth in the national, industrial, social, cultural and other aspects that were associated with Arutchelvar Ayya’s vision, work and life. The award honours personalities who have been instrumental in leading the change and in implementing a dynamic vision for building a greater and stronger India.

Awardees of 2018

Arutchelvar Dr. N. Mahalingam Award for 2018 was conferred on Shri G.D. Gopal by Hon’ble Governor of Tamil Nadu Thiru. Banwarilal Purohit for his nonpareil contribution to manufacturing, science & technical education and enriching international ties between Germany and India.

Arutchelvar Dr. N. Mahalingam Award for 2018 was conferred on Dr. Avvai Natarajan by Hon’ble Governor of Tamil Nadu Thiru. Banwarilal Purohit, for his distinguished contribution to Tamil language, literature and culture.

Student Recognition Awards

Meritorious students were awarded the Mahatma Gandhi Scholarship on 23 March 2018 instituted by Ramanandha Adigalar Foundation for their outstanding performance in the year 2017 - 2018. Dr. Sudha Seshayyan, Vice Principal, Madras Medical College, Chennai, was the Chief Guest of Mahatma Gandhi Scholarship Award ceremony. KCT Achievers Award was given to students for achievements in curricular, co-curricular and extracurricular activities under various categories on 21 March 2018. Dr. B.K. Krishnaraj Vanavarayar, the Chairman, KCT, distributed the awards to students.
Farewell 2018

When every academic year coming to an end, students feel emotional about departing from their college life, so does the college to bid farewell to the gems who made this a great place of fun and learning. As the 2014 - 2018 batch got ready to plunge into the world with determination and pride, KCT hosted farewell to all the passing out students, department wise from 02 April 2018 to 20 April 2018. At the farewell celebration, Best Outgoing Student Award was given away to one deserving student of each department from all 14 undergraduate and 14 post graduate departments.
ACTIVITIES
Leadership Council, Sports and National Cadet Corps (NCC) are the three significant student engagements in KCT that aims to build the leadership qualities in them. This section brings out the year round happenings and achievements in Leadership Council, Sports and NCC.
Leadership Council

The Leadership Council is a league of student leaders who work along with the management for the holistic development of the student community. The council consists of representatives from different bodies of KCT. The council is for the student’s well-being and for overall progress through continuous development.

DEVELOPMENT PROGRAMMES

KCT believes that effective communication and performance skills are life enhancing, know no boundaries and should be within reach of all. Leadership council exist to promote and foster the best possible communicative and performance skills through assessment, content and training that is innovative, personal and authentic.

POLICY AND INITIATIVES

LABORATORY

The Team has individually graded each of the laboratory in the institution and have divided them into various categories based on certain parameters which will help in upgrading the laboratories and plan accordingly.

INFRASTRUCTURE

Based on the categories divided in the laboratories there were steps taken to increase the standards of the laboratories and upgrading the infrastructure.

PLACEMENTS

Ideas from individual departments have been put together and the DA’s have worked on Technical training for the students. Students have also been trained on how to attend technical rounds by the DA’s.

SUBJECT RESEARCH

The DA’s have initiated survey amongst the students in their respective departments to define courses aligned with the industries. The team has also coordinated all departments with Project Banyan in framing the R18 regulation.

BRANDING AND MARKETING

The ideas of reaching out school students and to generate the curiosity in the field of engineering were initiated. There were alumni talks in the individual departments regarding the various opportunities available right after they graduate.

LIBRARY

A concept note was prepared by the literature representatives on the usage of books in Mahatma Gandhi Central Library. Also borrowing of both the technical and non-technical books have increased more than the yester years.

HOSTEL IN TIME EXTENSION

The curfew timing was increased for the girl students who were involved in sports and for those undergoing internships.

OTHERS INITIATIVES

- External study area for the students
- Sports facility enhancement
- Road safety awareness for students
- Mandatory seatbelt and helmet awareness program
- Emerge’17
- Fitness programme
- First aid training
- NALS outbound training
Sports

7 students participated in International tournaments

8 students participated in National tournaments and won 1 silver and 2 bronze medals

11 students participated in Inter University tournaments and won 2 silver medals

108 students participated in State Level tournaments and won 39 gold, 32 silver and 30 bronze medals.

253 students participated in Anna University Zone Tournaments and were champions in 12 games and runner up in 4 games.

172 students participated in Anna University Inter Zone tournaments and won 1 gold, 1 silver, 3 bronze medals and secured 3rd place in 2 games.

1384 students participated in 1384 in district tournaments and with 33 Champions, 32 runner ups and 16 third place.

Overall Championship in Anna University Zone XI Sports and Games consecutively 5th Year, COVAI TIES 2018 Sports and Games, 7th SIICAA Men Games, 7th SIICAA Women Games and 7th SIICAA Athletic Men & Women.

In 2017 – 2018 ten sports events were organised by the Department of Physical Education of which KICS ’17, Dr.N.Mahalingam Rolling Trophy was a significant one with 3159 students from 52 colleges.

National Cadet Corps (NCC)


Cadet J. Lakshmi (CSE) of 5 TN Girls Battalion represented Tamil Nadu, Pondicherry, and Andaman & Nicobar directorate in All India Thal Sainik Camp at New Delhi in September 2017.

A. Anish (Mechanical), R. Arul Priya (Aeronautical), V. Sibi (Mechanical) of 5 TN Air Air Squadron Technical NCC represented Tamil Nadu, Pondicherry, and Andaman & Nicobar directorate in All India Vayu Sainik Camp in October 2017.
1108 of final year students of B.E, B.Tech and MCA registered for placements in 2018 out of which 876 students were placed.

222 companies visited KCT for student recruitment out of which 49% was core companies, 33% was software-product development companies, 10% was IT service companies and 9% was management companies. Total number of offers received from 222 companies were 1107.

3 students were placed in Amazon with an annual salary package of Rs. 28 L. This year Amazon was the recruiter with the highest pay.

9 students were placed in overseas government aided companies at Dubai, UAE.

3 III year students were selected by Robert Bosch for internship in their R&D project.
In 2017 - 2018, Placement Cell introduced few elective and professional courses that are integrated with the curriculum. Professional Elective Course on Data Analytics by UGAM solutions, three credit elective course for all students on Employment enhancement skills and a four credit elective course on Problem Solving for CS, IT & MCA students of 2019 batch.
For the last three decades KCT is heralding a decisive impact on the society. This is achieved through technical cum value-based education that is imparted to over 23,000 dynamic engineers over the years. KCT Alumni Relations Office is a vital arm of KCT. The office serves as an interface between KCT and the alumni. It organises alumni reunions. Notable alumni reunions are Global Alumni meet, Silver Jubilee meet and Annual Alumni anniversary events to ensure their interaction with the college.
KCT Alumni Association

The office has formed the KCT Alumni Association with alumni chapters in important cities in India to connect the Alumni with their alma mater. Alumni who are now field experts take interest in the development of the college through knowledge sharing, guiding and showing pathway of opportunities to fellow alumni and current students. They engage in technical sessions, guest lectures and student mentoring. They also financially aid the education of deserving students. With the support of Alumni Relations Office, the alumni who work in foreign countries guide the students for global internships and projects. They are instrumental in establishing the Centres of Excellence in KCT.

Significant alumni events in 2017 – 2018

GLOBAL ALUMNI MEET

Global Alumni Meet (GAM) was a defining moment for the institution to host, engage and network with the alumni, and it goes without saying that great institutions across the globe have progressed and grown from strength to strength by active involvement, support and engagement of alumni. It brought together around 1000 alumni from around the world. They gathered with their families on 29 July ‘17 and engaged in various events such as, business networking, the awarding ceremony, cultural, sports, and social events. The distinguished alumni were also recognized and honoured with awards. A series of events were hosted that are as follows;

KCT DISTINGUISHED ALUMNI AWARD CEREMONY

Unique achievements and services of the alumni are recognised each year and this year four were honoured with the Distinguished Alumni Award. Ms. Padma Iyenghar, Senior Researcher, University of Osnabrueck, batch 2003, Mr. D.K Venkatesh, Global Delivery Head, VirtusaPolaris, batch 1989 and Ms. G. Poonguzhali for serving Indian nation as Assistant Superintendent of Police, batch 2004. Mr. Ashok Babu K in recognition of exemplary service to KCT, batch 1997. Mr. Rathnakumar G in recognition of exemplary service to KCT, batch 1994.

SILVER JUBILEE MEET

The Silver Jubilee Reunion of the batch 1988-1992 was celebrated on the day of Global Alumni Meet. The alumni inaugurated the M gateway, the hostel entry complex, the student facility centre and 5’s Football ground, the full green grass pitch that evening. Pattimandram fame Thiru Raja was the chief-guest of the occasion.

COFFEE TABLE BOOK ’17

Coffee Table Book named Luminaries – Exemplars of KCT was launched on this occasion, a novel initiative taken to celebrate and showcase stupendous success stories of our alumni, who are performing exceedingly well and who have brought laurels to the institution by their impeccable character and phenomenal talent. The book was launched at Le Méridien, Coimbatore, on 28 July ’17 with the alumni and their family.

KCT ALUMNI YATRA

As a part of Global Alumni meet five strongly associated recent alumni went on an Alumni Yatra from 1 to 24 July 2017 covering 2500 kilometres across 27 cities and 4 states engaging 800 alumni all over the cities. This journey was for a cause too. They planted 500 saplings on their way to engage with alumni around the states.

CAREER ENHANCEMENT DRIVE FOR ALUMNI

KCT alumni relations organised a career enhancement drive for the alumni. About 10 companies partnered for this activity and about 200 alumni registered to be interviewed by the companies to explore different and better career options. This was an effort by the alumnus to remain connected and responsible forever.

CHENNAI ALUMNI CHAPTER LAUNCH

KCT alumni relations organised a career enhancement drive for the alumni. About 10 companies partnered for this activity and about 200 alumni registered to be interviewed by the companies to explore different and better career options. This was an effort to remain connected and responsible forever.
Academic involvement by Alumni

A seminar on Cloud computing for the students of CSE, IT and MCA by Mr. Shadic Sheriff of 1998 batch, Mechanical department.

A technical lecture on Full Stack Programming for the students of MCA by Mr. Ramesh Kumar V, Augmen.Tech, of 2005 batch, MCA.

A guest lecture on Wearable Systems and Pervasive Applications for the students of ECE by Dr. Vigneshwaran, ASTAR Singapore, Research fellow, of 2002 batch, ECE.

A workshop on Develops & Agile for School of Computing students by Mr. Jacob Deraviyam, Delivery Head, TCS, Chennai, of 1999 batch, ECE.

A technical lecture on Basis of Switching & Routing for the students of ECE by Mr. Manoharan Sundaramoorthy, Senior Staff Software Engineer, Vyatta, a Brocade Company, Bangalore, of 2006 batch.

A technical lecture on RF Engineering in Mobile communication for the students of ECE by Mr. N. Senthil Kumar, Bharat Sanchar Nigam Limited as Sub Divisional Engineer (RF) of 2000 batch, EEE.

A guest lecture on Jet Engines of the Aircraft and Military Drones for the students of Aeronautical and ECE departments by Mr. Jayakrishnan N Nair, Commander - Indian Navy (Retd) of 1991 batch.

As a part of National Conference on Communication, Information Technology and Electronics, a keynote session was delivered by G. Vinoth, B.E, M.S, Ph.D. (USA), Startup Evangelist & Mentor, Technology Management Consultant, Pongu Ventures, Tirunelveli, of 1996 batch.

A guest lecture on Overview on VoIP and IMS for the students of ECE by Ms. S. Sujatha Architect, Wipro Technologies, Chennai, of 1993 batch, ECE.

A technical lecture on recent trends in IoT, Cloud and AI for ECE by Mr. Ravi Shankar Nielsen, USA.

A workshop on VLSI Design: Inside an ASIC by Mr. Shabeer Rashad Hmirco, Bangalore, of 2002 batch.

Technical lecture on Customer Care for Automobile Engineering students by Mr. Sridhar R, Head Customer support B&P Process Customer vehicle Business Unit, Tata Motors, Pune, of 1993 batch.

A workshop on Fundamental digital design with Verilog HDL by Mr. Nambi, Lyle Tech, Coimbatore.

A technical lecture on Strategies and Challenges in current business Environment by Mr. Naresh Boopathi, Dermott Internationals, Dubai.

Mr. Shabeer Rasheed, (2002 ECE batch) Director, HMicro Inc, Bangalore, inaugurated “Texas Instruments - Centre of Excellence on Signal Processing and Embedded Systems” at Dept. of ECE, KCT, Coimbatore, on 29.07. 2017
In the year 2017 - 2018 two significant structures were built in the premises of KCT to enhance the living and learning experience of students, faculty and others - the inauguration of Gnana Sabhai, the meditation centre and the refurbished Mahatma Gandhi Central Library. Hon'ble Governor of Tamil Nadu Thiru. Banwarilal Purohit who was the Chief Guest of the Founder’s Day ceremony on 20 March 2018 inaugurated the Gnana Sabai and the central library.
Arutchelvar Ayya is an ardent follower of Vallalar Perunthagai and believed in oneness of God in the form of a Jyoti. A new space has been created in the administrative building of KCT to function as a meditation center, named as “Gnana Sabhai”. With a serene atmosphere, the space will remain open for anyone who wants to practice mental stillness and relaxation through meditation. The centre is designed to offer an ambience for one to indulge in mindfulness and connect with the inner self. An eternal Jyoti will light the meditation centre which symbolises that God is one.

Gnana Sabai is built in a total area of 2260 sq.ft by Architect & Builder D.Annamalai - Diarchy Associates.
The refurbished Mahatma Gandhi Central Library is specially crafted to inspire an introspective learning experience. With large, open spaces, niches for collaborative work, creatively designed work platforms and an infusion of natural and architectural aesthetics, the centre will unfold new learning paths for everyone—student, scholar, researcher, teacher, visitor or just a curious mind. It is housed in the first floor of Dr. Mahalingam Vigyan Bhavan and covers an area of 16,945 sq.ft. The compilation in the library is extensive owning 67,598 titles and 1,07,534 volumes and has a subscription to 186 print journals, 8829 online international journals and 59 magazines for scholarly communication. Central library also provides access to printing and e-resources. Open access system is being followed to access the books and journals.

MGCL is built in a total area 18,000 sq.ft by Builder JCR creators and Interior Designs by Space weaves.
Kumaraguru College of Liberal Arts & Science is an institution that is born out of a rich legacy in 2018, with a strong vision and great commitment of Sakthi Group of Companies www.sakthigroup.com. The magnificent campus and the edifice, enormous reputation, robust departments and more emerged from the Founding Fathers and the dynamic vision of the Founder Chairman, Dr.N.Mahalingam, a visionary educationist.

KCLAS is part of the Kumaraguru Institutions - Kumaraguru College of Technology www.kct.ac.in and the KCT Business School www.kctbs.ac.in have exemplified the interdisciplinary approach. As an institution dedicated to learning, we invest in intellectual vitality and engage with stakeholders to make a difference locally and nationally. Our contribution to this shared effort is the unique knowledge, transformative approach and skills generated by our core activities of education and research.

Programmes offered

- B.A English Literature
- B.Sc Visual Communication (Electronic Media)
- Bachelor of Business Administration
- Bachelor of Commerce (Professional Accounting)

KCLAS is affiliated to Bharathiar University and approved by UGC
FORGE is the incubation enterprise launched by the Coimbatore Innovation & Business Incubator (CIBI), founded with the vision to create & catalyse innovation powered enterprises that harness the power at the intersection of hardware, software, and computing technologies to solve real-world problems, creating economic gains and delivering social impact.

FORGE offers holistic incubation services covering innovation labs, incubation grant, acceleration, and seed capital investment to transform innovative ideas into successful enterprises with potential for growth, impacts and profits. FORGE has achieved steady and significant progress in our vision to become a 360D Incubation Enterprise, built on the 3 pillars of our strategy and operations - value creation & delivery, revenue generation, and self-sustainable growth.

Founded on this principle is our strategy to build a portfolio of programs to offer a comprehensive suite of services throughout the startup lifecycle from ideas to enterprises. We have adopted a 3-stage process for accelerating innovative ideas into enterprises, FORGE.FELLOWS - a pre-incubation program modelled in the form of an innovation/startup fellowship, followed by FORGE.FIRST - an incubation program aimed at fast-tracking product launch in the market and enterprise creation, and culminating in FORGE.FAST - a seed investment and business accelerator program.
HWjunction is the integrated innovation lab for rapid hardware prototyping housed inside FORGE FACTORY, the 20,000 sq.ft. incubation centre established in Coimbatore, created to catalyse the hardware/tech innovation pursuits of the innovators, makers, creators, tinkerers, startups, and entrepreneurs. A comprehensive suite of equipment, resources, and tech expertise are offered to support up to 25 hardware startups concurrently in the areas of IoT, Electronics design, test & measurement, AI/ML/DL, 3D Digital fabrication, PCB design and assembly, IT computing, drones, robotics, and AR-VR.

A brief overview of our work in capacity building for innovation and entrepreneurship

Innovation capacity within India’s large base of students in higher technical education remains the most untapped of our nation’s potential. Unless significant outcomes in innovation are achieved prior to graduation, graduates shall find it a difficult and a risky proposition to startup right after education.

To do so we have launched FORGE.FELLOWS, a fellowship model for championing the deep integration of student innovation activities into the mainstream curriculum of higher technical education in the UG programs currently and hoping to do so in the future in PG & Ph.D programs too.

We have done 2 batches of one-semester long models called ProtoSem, each graduating 12 teams of innovators with deployment-ready solutions for solving problems ailing our farms, cities, environment, seniors, factories, differently abled etc. The portfolio of innovations can be reviewed at your convenience.

FORGE has hosted programs of state & national significance including

+ the Hardware edition of Smart India Hackathon 2018 organised by Ministry of Human Resource Development [MHRD], GoI in association with AICTE.

+ Tamil Nadu Student Innovator 2017 & Tamil Nadu Innovation Grand Challenge in partnership with Entrepreneurship Development & Innovation Institute (EDII), Tamil Nadu.

The recognition of our efforts for fostering student innovations and startups couldn’t have been any better than the opportunity from Department of Defence Production (DoDP), Ministry of Defence, GoI to nominate FORGE as one among the 5 Partner Incubators for the iDEX Program launched with a vision to promote indigenization and achieve self-reliance in the defence and aerospace sectors.