



Jyothi Engineering College

NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETIKATTIRI P.O., CHERUTHURUTHY, THRISSUR. PIN-679531 PH: +91- 4884-259000, 274423 FAX: 04884-274777



NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

Tech Talk Series

Tech Talk Series I – Poverty in India – Trends, Methodology and Policy Challenges

VENUE: PRESS CLUB HALL, THRISSUR

17
NOV
2019

JYOTHI TECH-TALK SERIES 1

POVERTY IN INDIA

Trends, Methodology & Policy challenges

A Panel Discussion
Join us for an informative evening

Jyothi
Engineering College

CREATING TECHNOLOGY LEADERS OF TOMORROW
ESTD 2002

Jyothi Engineering College is a Center of Excellence in Science & Technology, founded by the Catholic Archdiocese of Trichur situated in Cheruthuruthy, Thrissur. The college is accredited by NAAC & NBA and affiliated to All India Council for Technical Education (AICTE) New Delhi, APJ Abdul Kalam Kerala Technological University (KTU), and the University of Calicut and offers six B.Tech, Five M.Tech, B.Tech, Honours and Ph.D programs. Jyothi Engineering College started functioning at Cheruthuruthy in the year 2002. Within a decade it has achieved an enviable position as the fourth best Engineering College in the state and stands third among the Engineering Colleges affiliated to APJ Abdul Kalam Technological University.

Are educational institutions just a place to collect a degree and move out? And venues to return to, fondly for reunions.

We believe that educational institutions have a much greater role to play in society. That they have a role in making society more aware of the changes we are going through. It is to address the change around us, that we came up with the idea of the TECH-TALK Series.

Poverty is a world wide phenomenon. It is enormous in size, complex in nature and not amenable for easy analysis. Millions of people are under constant threat of abject poverty and living less than 1 dollar per day. Under these conditions, it becomes imperative on the Government, non Governmental agencies and private organizations to launch a multipronged and pluralistic approaches on war footing to mitigate the devastating effects of poverty.

A simple calculation indicate that 58% of India's population is currently engaged in agriculture and earned just 471 dollars per head last year. 61.5% of the total Indian population is rural and dependent on agriculture. At this juncture a discussion about poverty is very important.

PANEL

Dr. Mani K P
(Director & Professor of School Of Management, De Paul Institute of Science & Technology, Angamaly, Former Professor & Head, Department of Economics, Dr. Johnmathai Centre, Thrissur)

Dr. Chacko Jose P
(Associate Professor & Head, Department of Economics, Sacred Heart College, Chalakudy)

Dr. Peter M Raj
(Associate Professor, Kerala Institute of Local Administration (KILA))

AUSPICIOUS PRESENCE

Msgr. Thomas Kakkassery (Manager, Jyothi Engineering College)
Fr. Roy Joseph Vadakkan (Executive Director, Jyothi Engineering College)
Fr. Dr. Jose Kannampuzha (Director of Academics, Jyothi Engineering College)
Fr. Dr. Jaison Paul Mulerikkal CMJ (Principal, Jyothi Engineering College)
Sr. Dr. Rose Anitha (Director of Research, Jyothi Engineering College)

Department of Basic Science & Humanities, Jyothi Engineering College

DR. SUNNY JOSEPH KALAYATHANKAL
M.Tech, MCA, M.Sc, M.Phil, B.Ed
Ph.D (Computer Science), Ph.D (Maths)

Copy Attested



Jyothi Engineering College

NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O, CHERUTHURUTHY, THRISSUR, PIN-679531 PH : +91-4884-259000, 274423 FAX : 04884-274777



NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

Jyothi Engineering College
NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University
A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O, CHERUTHURUTHY, THRISSUR, PIN-679531 PH : +91-4884-259000, 274423 FAX : 04884-274777

NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

WEBINAR ON

SOCIAL EFFECTS AFTER COVID - 19

Organised by
BSH Department

SPEAKER



Dr. Peter M Raj
Associate Professor, KILA.



24 JUNE 2020
AT 02:00PM

*E- certificate will be provided to the active participants.



Google Meet

For Registration



SCAN THE QR CODE
OR
REGISTER NOW IN

shorturl.at/bnHKQ

FOR MORE DETAILS CONTACT

MS. SUGANTHI T	MR. TONY C J
ASSISTANT PROFESSOR	ASSISTANT PROFESSOR
9846827737	9847580698

www.jecc.ac.in

[/jecc.ac.in](https://www.facebook.com/jecc.ac.in)

[/jecctr](https://www.youtube.com/channel/UCjccctr)

Dr. ~~SUNNY~~ JOSEPH KALAYATHANKAL
M.Tech, MCA, M.Sc, M.Phil, B.Ed
Ph.D (Computer Science), Ph.D (Maths)
PRINCIPAL



Jyothi Engineering College

NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O., CHERUTHURUTHY, THRISSUR. PIN-679531 PH: +91- 4884-259000, 274423 FAX: 04884-274777



NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

Report – Tech Talk Series I – Poverty in India – Trends, Methodology and Policy Challenges

Jyothi Tech Talk Series started on 17th November 2019 at Press Club Hall Thrissur. Series I was arranged by BSH Department of Jyothi Engineering College. The topic of panel discussion was Poverty in India – Trends methodology and Policy challenges.

The programme was started by praising the god at 3. 00 pm. Fr. Roy Joseph Vadakkan (Secretary & Campus Head JECC) welcomed the gathering. Introductory speech was done by Fr. Dr. Jose Kannampuzha, Director Academics JECC, which was followed by an inaugural address by Msgr. Thomas Kakkassery, Manager JECC. Fr. Dr. Jaison Paul Mulerikkal CMI, Principal JECC and Ms. Vineetha, Press Club Secretary felicitated the function.

The three panellists were Dr. K.P Mani (Director & Professor of School of Management, De Paul Institute of Science & Technology, Angamaly), Dr. Chacko P Jose (Associate Professor and Head Department of Economics, Sacred Heart College, Chalakkudy) and Dr. Peter M Raj (Associate Professor, Kerala Institute of Local Administration)

Prof. Dr. K.P Mani, in his key note address explained about the trends and methodology of poverty in India. He was the opinion that poverty is an un acceptable and intolerable condition for human survival. It is a multidimensional and global phenomenon. Poverty is a condition in which an individual or a community is deprived of or lacks essential goods and services for a minimum standard of living. Lack of essentials may imply material resource like food clothing and shelter or may imply social resources like access to education, health care and information, social status and political power or opportunity to develop meaningful connections with other people in society.

According to Dr. Chacko Jose P, poverty estimates in India is basically done by planning commission. After Niti Aayog (National Institution for Transforming India) was setup on 1st January 2015, now estimate of [poverty has been attempted by them. Rangarajan committee set up by planning commission in 2014 under C Rangarajn added almost 100 million more people to the list of poor, the new poverty line should be Rs. 32 in rural areas and Rs. 47 in urban areas. The earlier poverty line figure was Rs. 27 for rural India and Rs. 33 for urban India. The estimation was based on an independent large survey of household by centre for monitoring Indian economy (CMIE). The committee also used different methodology where in a house hold is considered poor if it is unable to save. He added that the incidence of poverty in Kerala was 59.74 percent in 1973-74 which reduced to 11.3percent 2011-12. In India he rate of poverty was 54.88% in 1973-74 (which was lower compared to Kerala) and it reduced to 29.5 percent in 2011-12. Kerala has made and extensive improvement in reducing the incidence of both rural and urban poverty.

True Copy Attested

DR. JOHNNY JOSEPH KALAYATHANKAL
M.Tech, MCA, M.Sc., M.Phil., B.Ed
Ph.D (Computer Science), Ph.D (Maths)
PRINCIPAL

Dr. Peter M Raj narrated the policy challenges to alleviate poverty from India. He started with



Jyothi Engineering College

NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETIKATTIRI P.O, CHERUTHURUTHY, THRISSUR. PIN-679531 PH: +91-4884-259000, 274423 FAX: 04884-274777




NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

rehabilitation of destitute in every LSG- requirement based and demand based. The programme ensured basic necessities such as food health care, clothing housing, drinking water, sanitation education and skill development . Besides the above mention programme additional deprivation criteria were 1. Person living in edges of roads cannels etc, a person regularly stay at night in roads or public places, unwed mothers / abandoned women with child leading miserable life, younger widows/ chronically unmarried women living in penury, irrecoverably affected ill persons /mentally challenged , family without any earning person below the age of 60, person resorting begging as lively food, women who are victims of grave violence. A destitute identified with 9 point criteria again having one of the additional deprivation shall be considered for asharaya rehabilitation.

After keynote address the gathering had several doubts about poverty in India especially in Kerala. They ARE ASKING question s about the real reason for poverty in Kerala instead on several programmes by the state govt. People still live in poverty especially the agriculturalists (vegetable cultivators) in Kerala without getting proper prices for their product. They were of the opinion that the intermediaries are exploiting the vegetable cultivators. As per statistics of the government of Kerala 9.7percent in rural areas and 4.94 percent in urban areas. But this is really unbelievable.

After discussion memento was handed over by Fr. Roy Joseph Vadakkan to the panellists All were satisfied with the discussion. The programme concluded at 6.15 pm after national anthem.

True Copy Attested


Dr. SUNNY JOSEPH KALAYATHANKAL
M.Tech, MCA, M.Sc, M.Phil, B.Ed
Ph.D (Computer Science), Ph.D (Maths)
PRINCIPAL
Jyothi Engineering College
Cheruthuruthy P.O.- 679 531



Jyothi Engineering College

NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O, CHERUTHURUTHY, THRISSUR. PIN-679531 PH: +91- 4884-259000, 274423 FAX: 04884-274777



CREATING TECHNOLOGY LEADERS OF TOMORROW
ESTD-2002

NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

Tech Talk Series II Topic: Domestic Pollution & Remedial Measures

Jyothi Engineering College
NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University
A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR
JYOTHI HILLS, VETTIKATTIRI P.O, CHERUTHURUTHY, THRISSUR. PIN-679531 PH: +91- 4884-259000, 274423 FAX: 04884-274777
NBA Accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.
www.jecc.ac.in || info@jecc.ac.in

TECH TALK / CSN / 2020 / 004

Domestic Pollution & Remedial Measures

A Panel Discussion

16 FEB 2020 @ 03:00 PM
Venue: Press Club Hall, Thrissur

Join us for an Informative Evening

Organized by
Department of Civil Engineering, Jyothi Engineering College

A CSR INITIATIVE

Jyothi Engineering College is a Centre of Excellence in Science & Technology. It was founded by the Catholic Archdiocese of Thrissur situated in Cheruthuruthy, Thrissur. This NAAC accredited college with NBA accredited programmes, is affiliated to the All India Council for Technical Education (AICTE), New Delhi. It is also affiliated to APJ Abdul Kalam Technological University (APIKTU). We offer six courses in B.Tech, five in M.Tech and B.Tech (Honours). We also have PhD programmes. Jyothi Engineering College started functioning at Cheruthuruthy in 2002 and within a decade it has achieved an enviable position as the fourth best engineering college in the state and stands third among the engineering colleges affiliated to APJ Abdul Kalam Technological University. We believe that educational institutions have a much greater role to play in society. They are centres of excellence filled with commitment to the common causes of society and they have a role in making society more aware of the changes we are going through. In order to address the changes around us we have come up with this great idea of TECH TALK Series.

Domestic Pollution and Remedial Measures

Sustainable waste management has always been a global concern, in terms of environmental contamination, public health, safety and economic stability. Ever rising urbanization and the subsequent waste generation, has called in for integrated assessments and holistic approaches for solutions concerning the matter. Environmental awareness and community participation in segregation and treatment of domestic waste at source itself has become the need of the hour. Kerala is one of the few Indian states that took effective measures to address the waste menace by launching the Clean Kerala Mission in 2002. However the issue needs continued efforts and greater participation to address it effectively. The objective of the seminar is to create awareness on the management of domestic waste through appropriate measures and ensure community participation in solving the problem.

PANEL

1. Dr. Ajaykumar Varma (Former Executive Director Suchitwa Mission-Local Self Government Department Kerala)
2. Dr. Girija D (Registrar-Kerala Agricultural University)
3. Prof. S Rathish (Head of Civil Engineering Department, Jyothi Engineering College)

AUSPICIOUS PRESENCE

- Msr. Thomas Kakkassery (Manager, JECC)
Fr. Roy Joseph Vadakkan (Secretary and Campus Head, JECC)
Rev. Dr. Jose Kannampuzha (Director of Academic, JECC)
Rev. Dr. Jaison Paul Mulerikkal CMI (Principal, JECC)
Sr. Dr. Rose Anitha (Director of Research, JECC)
Dr. U. Lazar John (Director of Industry & Human Relations, JECC)
- PROF. DR. ROSE ANITHA**
M.Tech, MCA, M.Sc, M.Phil, B.Ed
Ph.D (Science), Ph.D (Maths)
PRINCIPAL



Jyothi Engineering College

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University



Jyothi Engineering College

NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O., CHERUTHURUTHY, THRISSUR, PIN-679531 PH : +91- 4884-259000, 274423 FAX : 04884-274777



NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

JYOTHI TECH TALK SERIES IV



Jyothi Engineering College

NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O., CHERUTHURUTHY, THRISSUR, PIN-679531 PH : +91- 4884-259000, 274423 FAX : 04884-274777

NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

www.jecc.ac.in | info@jecc.ac.in

TechTalk/CSR/2020/004

DOMESTIC POLLUTION & REMEDIAL MEASURES

16 FEB 2020

03:00 PM

VENUE: Press Club Hall, Thrissur

PANEL

Dr. Ajaykumar Varma
(Former Executive Director Sushrta Mission-Local Self Government Department Kerala)

Dr. Girija D
(Registrar, Kerala Agricultural University)

Prof. S Rathish
(Head of Civil Engineering Department, Jyothi Engineering College)

ORGANIZED BY DEPARTMENT OF CIVIL ENGINEERING

f/jecc.ac.in | /jyothiengineeringcollege | /jyothiengineeringcollege | /company/jyothi-engineering-college | /jeccotr

Report on Tech Talk Series IV

Topic: Domestic Pollution & Remedial Measures



True Copy Attested

AMND
Dr. SUNNY JOSEPH KALAYATHANKAL
M.Tech, MCA, M.Sc, M.Phil, B.Ed
Ph.D (Computer Science), Ph.D (Maths)
PRINCIPAL

Topic: Domestic Pollution & Remedial Measures



Jyothi Engineering College

NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O, CHERUTHURUTHY, THRISSUR. PIN-679531 PH : +91- 4884-259000, 274423 FAX : 04884-274777



NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

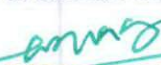
Venue : Press Club Hall, Thrissur

The 4th Tech Talk Series was organized by the department of civil engineering on 16/02/2020 at Press Club Hall Thrissur on the topic "Domestic Pollution & Remedial Measures". The panel members were Dr. Ajayakumar Varma, Former Executive Director, Suchitwa Mission- Local Self Government Department Kerala, Dr. Girija D, Registrar- Kerala Agricultural University and Prof. S. Rathish, Professor and HOD, Department of CE, JECC.

The official function started at 3 pm with a prayer. Er. Thomas Mathew, Administrator, JECC delivered the welcome address. On this occasion, he congratulated Rev. Fr. Roy Joseph Vadakkan, Campus Head, JECC, on being awarded the Karmashreshta Award by The Deepika Daily. Rev. Fr. Dr. Jose Kannampuzha, Director (Academics), JECC was the president of the function. In the presidential address, he raised the concern on the increase in the pollution globally and stressed on the need for awareness on its remedial measures. Fr. Roy Joseph Vadakkan, inaugurated the tech talk series and delivered the inaugural speech. He pointed that each person should leave their selfish attitude and do the needful to protect the environment. He also stressed on making the God's own country a clean state. The session was led by Dr. Ajayakumar Varma, where he brought the attention on general solid waste produced and its management. The session was followed by Dr. Girija D, and which mainly dealt with the household waste production and the available disposal methods. The concluding session was by Prof. S. Rathish, on the water pollution and its treatment processes.

There was an active discussion on the queries raised by the audience on the session taken by the speakers. There were around 70 participants from different sectors to attend the panel discussion. Fr. Roy Joseph Vadakkan, Fr. Dr. Jose Kannampuzha and Er. Thomas Mathew handed over the mementos to the speakers. Ms. Carol Varghese, Assistant Professor, Department of CE delivered vote of thanks and this was followed by national anthem. The session was concluded with a photo session with panel members at around 5.30 pm.

True Copy Attested


Dr. SUNNY JOSEPH KALAYATHANKAL
M.Tech, MCA, M.Sc, M.Phil, B.Ed
Ph.D (Computer Science), Ph.D (Maths)
PRINCIPAL

Jyothi Engineering College
Cheruthuruthy P.O, Thrissur



Jyothi Engineering College

NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O., CHERUTHURUTHY, THRISSUR. PIN-679531 PH: +91- 4884-259000, 274423 FAX: 04884-274777



NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

Tech Talk Series III Topic: Solar Power Green Renewable & Cost-effective source of energy.



Jyothi Engineering College

NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O., CHERUTHURUTHY, THRISSUR. PIN-679531 PH: +91- 4884-259000, 274423 FAX: 04884-274777

NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

15TH DEC 2019

@ 3:00PM

JYOTHI TECH TALK SERIES 2

Solar Power

Green, Renewable & Cost effective source of Energy

PANELLISTS

Mr. Vinod.N

Mr. Manoj.V.A

Dr. Jose P Therattil

DEPT. OF ELECTRONICS & COMMUNICATION ENGINEERING,
JYOTHI ENGINEERING COLLEGE.

Venue: PRESS CLUB HALL, THRISSUR

True Copy Attested



Jyothi Engineering College is a Centre of Excellence in Science & Technology. It was founded by the Catholic Archdiocese of Thrissur situated in Cheruthuruthy, Thrissur. This NAAC accredited college, with NBA accredited programmes, is affiliated to the All India Council for Technical Education (AICTE), New Delhi. It is also affiliated to APJ Abdul Kalam Kerala Technological University (KTU) and the University of Calicut. We offer six courses in BTech, five in MTech and BTech Honours. We also have PhD programs. Jyothi Engineering College started functioning at Cheruthuruthy in 2002 and within a decade it has achieved an envious position as the fourth best engineering college in the state and stands third among the engineering colleges affiliated to APJ Abdul Kalam Technological University.

We believe that educational institutions have a much greater role to play in the society. They have a role in making the society more aware of the changes we are going through. It is to address the change around us that we came up with the idea of TECHTALK-Series.

Solar power is the key to a clean energy future. Every day, the sun gives off far more energy than we need to power everything on earth. The sun provides more than enough energy to meet the whole world's energy needs, and unlike fossil fuels, it will not get depleted. As a renewable energy source, the only limitation of solar power is our ability to turn it into electricity in an efficient and cost-effective way.

No greenhouse gas emissions are released into the atmosphere when we use solar panels to create electricity. Electricity from solar power is a very important energy source in the move to clean energy production. After solar panels have been installed, operational costs are quite low compared to other forms of power generation.

PANEL

Mr. Vinod N

(District Engineer, ANERT, Thrissur)

Mr. Manoj V A

(Assistant Executive Engineer, KSEB)

Dr. Jose P Therattil

(HOD, Dept. of Electronics & Communication Engineering, JECC)

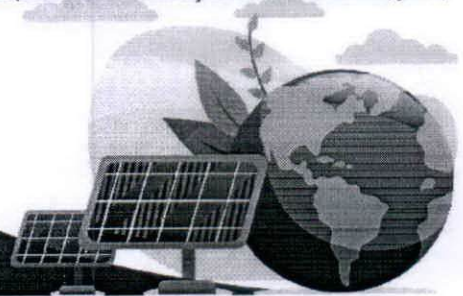
Ph.D (Computer Science), Ph.D (Maths)

PRINCIPAL

AUSPICIOUS PRESENCE

Jyothi Engineering College
Cheruthuruthy P.O. - 679 531

- Msgr. Thomas Kakkassery (Manager, JECC)
- Fr. Roy Joseph Vadakkan (Secretary and Campus Head, JECC)
- Fr. Dr. Jose Kannampuzha (Director of Academics, JECC)
- Fr. Dr. Jaison Paul Mulerikkal CMI (Principal, JECC)
- Sr. Dr. Rose Anitha (Director of Research, JECC)
- Dr. Lazar John (Director of Industry & Human Relations, JECC)



December 15th 2019 Tech-Talk 3 series was held at Thrissur Press club 3pm.



Jyothi Engineering College

NA & C Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O., CHERUTHURUTHY, THRISSUR. PIN-679531 Ph : +91- 4884-259000, 274423 FAX : 04884-274777



NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

Topic: Solar Power Green Renewable & Cost-effective source of energy.



We were privileged to have three eminent speakers for this great day. **Mr. Vinod N.** (District Engineer ANERT, Thrissur) discussed about the technical aspects of the solar panel and **Mr. Manoj V A.** (Assistant Executive Engineer, KSEB, Thrissur) discussed about the procedure for Government approval for setting the solar panel. While, **Dr. Jose P. Therattil**, Head Department of ECE, Jyothi Engineering College, briefed about the disadvantages of setting solar panel in our society.

Mr. Vinod N started his session on promoting green energy under which he discussed about

- Energy security, energy availability, energy accessibility and energy affordability. Availability of energy from wind, solar, small hydropower and biopower which are installed renewable forms.

- RPO renewable purchase obligation is a mechanism by which state electricity regulatory commissions are obliged to purchase a certain percentage of power from renewable energy sources. It's being implemented throughout the country to create demand for renewable energy.

True Copy Attested

Signature
Dr. SUNNY JOSEPH KALAYATHANKAL
M.Tech, MCA, MBA, M.Phil, Ph.D
Ph.D (Computer Science), Ph.D (Maths)
Jyothi Engineering College
Cheruthuruthy P.O. - 679 531



Jyothi Engineering College

NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O, CHERUTHURUTHY, THRISSUR, PIN-679531 Ph: +91- 4884-259000, 274423 FAX: 04884-274777



NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

- Sourav roof top scheme and its utilization along with the status of consumer registration.
- The different Sourav scheme models for the consumers were discussed.
Model 1: includes 100% energy free of cost.
Model 2: energy sold to costumer at fixed rate for 2.5 years.
Model 3: costumer invests and KSEB installs the solar panel.

Mr. Manoj V A, briefly explained about the consumption of electricity in all sectors.


- He stressed on the importance of solar energy and its importance so as to replace electricity.
- Briefed about different power plants and its implementations along with the cost.
- A detailed explanation along with advantage and disadvantage about off-grid power plants.
- An awareness about the tariff of the same was explained.
- Different Photovoltaic modules were explained.
- Procedures for sanctioning of solar plant from government was explained.

Dr. Jose P. Therattil focused on the disadvantages of solar energy under the following heads.

- Reliability
- Generation of electricity in the absence of sun like night and climatic variations.
- Problem of efficiency where emphasized that most solar panels are able to convert only 14-22% of their available energy to power.
- Requirement of large installation area.
- High initial cost.

Discussion with panel & audience was held for an hour after the talk the program me concluded with a vote of thanks and national anthem

True Copy Attached


Dr. SUNNY JOSEPH KALAYATHANKAL
M.Tech, MCA, M.Sc, M.Phil, B.Ed
Ph.D (Computer Science), Ph.D (Maths)
PRINCIPAL
Jyothi Engineering College



Jyothi Engineering College

NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O., CHERUTHURUTHY, THRISSUR. PIN-679531 PH : +91- 4884-259000, 274423 FAX : 04884-274777



NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

Tech Talk Series IV: Topic: Electric Vehicles – Technology, Opportunities and Scope

**JYOTHI
TECH TALK
SERIES 3**

Jyothi Engineering College

NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O., CHERUTHURUTHY, THRISSUR. PIN-679531 PH : +91- 4884-259000, 274423 FAX : 04884-274777

NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

www.jecc.ac.in || info@jecc.ac.in

19 JAN
2020
3:00:00 PM

TechTalk/CSR/2020/003

ELECTRIC VEHICLES

TECHNOLOGY, OPPORTUNITIES AND SCOPE

VENUE: Press Club Hall, Thrissur

PANELISTS

Er. Vijayan Nandalin (Former Scientist, ISRO)

Dr. Ajay Babu (Assistant Professor, Department of EEE, NSS College of Engineering)

Dr. Jarin T. (Associate Professor & Head, Department of EEE, Jyothi Engineering College)

Organized by
Department of Electrical and Electronics Engineering

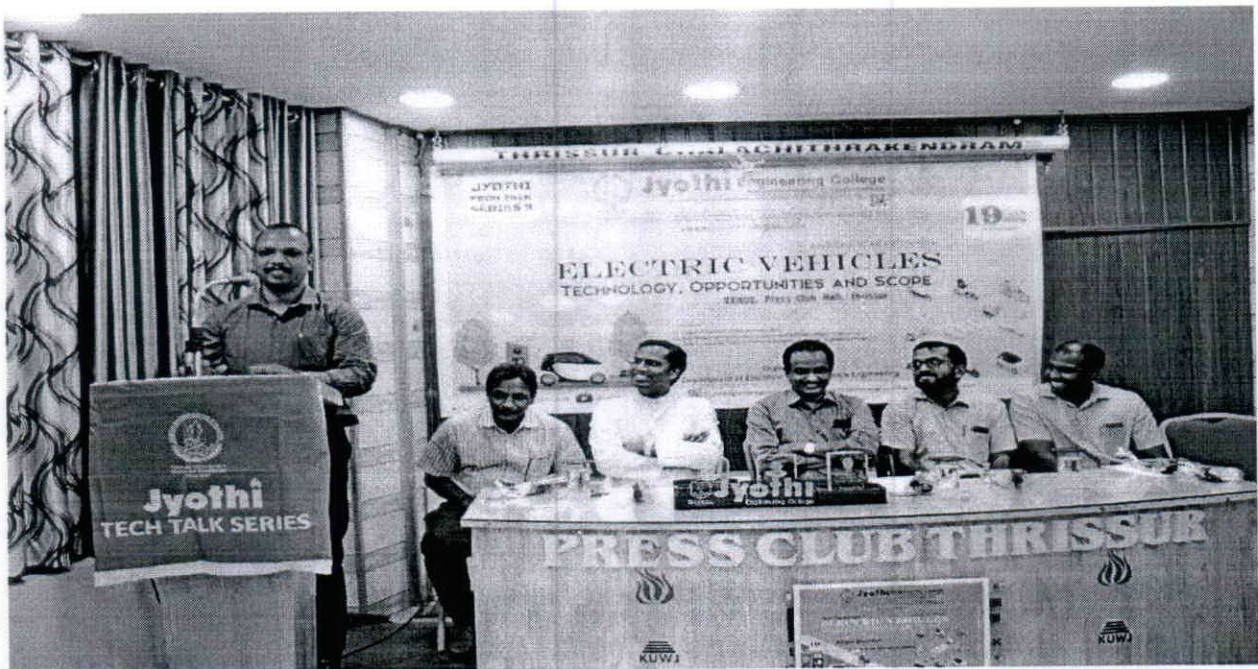
[f/jecc.ac.in](https://www.facebook.com/jecc.ac.in)

[/jyothiengineeringcollege](https://www.youtube.com/channel/UCjyothiengineeringcollege)

[/jyothiengineeringcollege](https://www.instagram.com/jyothiengineeringcollege)

[/company/jyothi-engineering-college](https://www.linkedin.com/company/jyothi-engineering-college)

[/jecceter](https://www.twitter.com/jecceter)



True Copy Attested

Topic: Electric Vehicles – Technology, Opportunities and Scope

Date & Time: 19/01/2020, 3 m to 5 pm

Venue : Press Club Hall, Thrissur

Dr. SUNNY JOSEPH KALAYATHANKAL

B.A., M.Sc, M.Phil, B.Ed

Ph.D (Computer Science), Ph.D (Maths)

PRINCIPAL

Jyothi Engineering College
Cheruthuruthy P.O.- 679 531

AMK



Jyothi Engineering College

NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O, CHERUTHURUTHY, THRISSUR, PIN-679531 PH : +91- 4884-259000, 274423 FAX : 04884-274777



NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

The 3rd Tech Talk Series was organized by the department of EEE on 19/01/2020 at Press Club Hall Thrissur on the topic “Electric Vehicles – Technology, Opportunities and Scope”. The panel members were Er. Vijayan Nandalan, former scientist ISRO, Dr. Ajay Babu, Asst. Professor, NSSCE and Dr. Jarin T., Asso. Professor and HOD, Department of EEE, JECC.

The official function started at 3 pm with a prayer. Dr. Jose P. Therattil, HOD ECE department delivered the welcome speech. Dr. Shijoh V, PG Dean of JECC made the introductory speech. He made a brief description of the tech talk series organized by the college, the relevance and need for the same. Rev. Fr. Roy Joseph Vadakkan inaugurated the tech talk series and delivered the inaugural speech. He told that for institutions like us there is a social commitment towards the society and thus the tech talk series evolved. He wished all the best for the tech talk series. The session was led by Er. Vijayan Nandalan, taken up by Dr. Ajay Babu and concluded by Dr. Jarin T. The sessions handled by various persons are detailed below.

Session by Er. Vijayan Nandalan

Er. Vijayan Nandalan mainly concentrated on the technology involved in EVs. He told that both central and state governments are promoting EVs. He told that every technology should be given priority and there is no barrier for any technology. Future generation should not blame us for creating environmental imbalance and that is why we are discussing this topic. It was in 1884 petrol and diesel engine vehicles developed much. Even during that period EVs existed. But issue was with rechargeable battery and range provided by EVs. That time fuel cost was low and IC engines gained more focus and its technology flourished. Developed countries started thinking about environmental issues in a much earlier stage due to the hike in fuel cost and dependency on other countries. Norway adopted EVs 10 years ago. Develop of Lithium Ion battery was a revolution in this field and countries gained confidence in this technology. US and China promoted EVs. In India, it is supposed to switch over to 100% EVs in 2030. Government is adopting more policies in support of EVs and in some 8 to 9 states in India these policies are implemented. For an electric two wheeler the motor capacity is 1.5 kW and speed is 45 km/hr whereas for a car it is 30 to 50 kW, 150-170km/hr and for a bus it is 200 MW.

DR. SUNNY JOSEPH KALAYATHANKAL
M.Tech, MCA, M.Sc, M.Phil, B.Ed
Ph.D (Computer Science), Ph.D (Maths)
PRINCIPAL

True Copy Attested



Jyothi Engineering College

NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETIKATTIRI P.O, CHERUTHURUTHY, THRISSUR, PIN-679531 PH: +91-4884-259000, 274423 FAX: 04884-274777



NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

The block diagram of an EV was explained by him which consisted of Gear system – single gear system, battery, inverter, to convert DC from battery to AC, battery management unit, DC –DC converter for auxiliary application, charging ports. Communication network etc. in a petrol engine there are 1600 components approximately where as in an EV it is less than 50 which means less maintenance for electric vehicle. But the main challenge involved is that since this is an emerging technology, people should use it and face problems and rectify it. Also reliability issues are there. He told that in future countries like India should go for Switched Reluctance motor free from rare earth materials so that dependency on China can be avoided. In SRM only steel and copper is required and can achieve efficiency greater than 95% but technology is to be developed regarding the control scheme of motor. Also Hydrogen fuel cell and Aluminium Air batteries will flourish in future.

Session by Dr. Ajay Babu

Dr. Ajay Babu focussed on the topic “Hybrid Electric Vehicles, Challenges and opportunities. He started with evolution of electric vehicles and concluded that the same happened due to conventional fuel shortage, emissions and environmental issues and the resultant pollution. But the main drawback of electric vehicles is the battery and less range when compared with IC engines. However since battery technology is advancing scope is there in this regard. When it comes to Hybrid Electric Vehicles two sources are there, for example IC engine and battery. Plug in vehicles are another category in which the battery size is large and there is bidirectional power flow between vehicle and grid. In pure EVs power flow is unidirectional. The plug-in electric vehicles was not that popular however recently the sales has increased and is more popular in countries such as Unites States, Canada, Japan and Europe.

He further explained the electric vehicle topology ie; Battery EVs and Fuel cell EVs. Hybrid electric vehicle falls under three categories namely series hybrid, parallel hybrid and series-parallel hybrid. This classification is based on the interconnection between mechanical and electrical section in the vehicle. When a comparison of these three categories was done it was seen that in cities series hybrid EVs were suitable and in highways parallel hybrid EVs.

Meanwhile series-parallel hybrid is flexible in both cities and highways. In cities frequent brakes is to be applied and less acceleration and vice versa in highways. Basically there are two modes of operation of Hybrid EVs, the first being charge depleting mode where charge

Dr. SUNNY JOSEPH KALAYATHANKAL

M.Tech, MCA, M.Sc, Ph.D (Computer Science), Ph.D (Maths)

Jyothi Engineering College



Jyothi Engineering College

NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O. CHERUTHURUTHY, THRISSUR. PIN-679531 PH : +91- 4884-259000, 274423 FAX : 04884-274777



NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

decreases as the vehicle runs and the second being charge sustaining mode where charge remains as a constant. The second mode is achieved when engine takes the load torque and motor run as a generator. When the vehicle is started it works under first mode and later on switched to second mode. Dr. Ajay Babu briefed about smart grid where conventional and renewable resources together form the generation part and a two way communication is achieved. Also he told that Plug in vehicles different modes of operation

- a) Convenience charging – here at the moment switch is turned on battery charges.
- b) Time of use charging – In this case even if switch is turned on battery is charged only at the preset time.
- c) Smart charging – In this scheme controllers are there so that only during off peak hours battery charges and during peak time charging does not occurs.
- d) V2B/ V2H- Vehicle to building or house
- e) V2G – Vehicle to Grid, here vehicle to grid the power flows and that too during peak load hours.
- f) V2NG –Vehicle to next generation utility in which 100% renewable based generation occurs.

Dr. Ajay Babu pointed more challenge is there in the case of V2G, since a variety of vehicles are being charged during different time slots and hence the performance cannot be predicted. Ancillary services provided by this scheme are active power control reserve, voltage support, compensation for active power losses black start and island operating capability & operational measurement. He also discussed the Electric machines used in EVs namely PMSM – Permanent Magnet synchronous motor, it is benefitted by countries like China where Permanent magnets are available. And due to this reason the induction motors gained popularity. Also SRM (Switched Reluctance motor) is gaining popularity. The different Power electronic converters used in EVs were also pointed by him. Later on Dr. Ajay Babu discussed the issues in Plug-in EV which are mentioned here. The first one is design related issues such as optimization issues (e.g.: engine, motor battery sizes and limited cost without compromising performance), efficiency issues, modification issue, battery engine compatibility, smart meters design and bidirectional communication issue. The second one is operation related such as optimization issues (e.g.: how many vehicles to be charged at what time), access to charging stations, test and evaluation and safety issues. The final one being Policy related issues in which

Dr. SUNNY JOSEPH KALAYATHANKAL

M.Tech, MCA, M.Sc, M.Phil, B.Ed

Ph.D (Computer Science), Ph.D (Maths)

PRINCIPAL

Cheruthuruthy P.O. - 679 531.



Jyothi Engineering College

NAAC Accredited College with NIR Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O, CHERUTHURUTHY, THRISSUR, PIN-679531 Ph: +91-4884-259000, 274423 FAX: 04884-274777



NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.


government should frame policies or schemes for the benefit of stake holders of EVs. By discussing the above mentioned topics Dr. Ajay Babu concluded.

Session by Dr. Jarin T.

The presentation was primarily focused on the necessity of hybrid & electric vehicles. The statistics of oil resources, global greenhouse gas emissions, temperature rise, ICE melting, & climatic change were discussed. Global level Political & Technical Regulations on E-Mobility was presented in which European Union policies like EU climate action, Climate strategies & targets, 2030 climate & energy framework were discussed. UNFCCC - United Nations Framework, Kyoto protocol, 2015 adoption of the Paris Agreement, were discussed in detail. Indian Policies like National Electric Mobility Mission Plan (NEMMP) 2020 its formulation starting from National Council for Electric Mobility (NCEM) & National Board for Electric Mobility (NBEM) and NATRiP Implementation Society (NATIS) where discussed. Green Urban Transport Scheme (GUTS) and Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Phase one Phase two policies where discussed. Finally, state policies and Kerala State Road Transport Corporation (KSRTC) first launching of Battery Electric Vehicles (BEVs) was discussed. Various policies of EVs of our state have been discussed and its prime importance was justified.

The panel discussion was concluded with a question answer session in which audience asked many relevant doubts such as the future of atomic batteries, BLDC machines, Chinese interventions and trap in EV technology, advantages of Vehicle to Grid power flow and concern regarding Carbon emissions. The speakers answered to the audience and cleared the doubts which really made the discussion fruitful. There were around 90 numbers of participants from various streams to attend the panel discussion. Fr. Roy Joseph Vadakkan handed over the mementos and certificates to the speakers. Ms. Della David, tech talk series 3 coordinator delivered vote of thanks followed by national anthem. The program came to an end at 5.30 pm.

True Copy Attested


Dr. SUNNY JOSEPH KALAYATHANKAL
M.Tech, MCA, M.Sc, M.Phil, B.Ed
Ph.D (Computer Science), Ph.D (Maths)
PRINCIPAL
Jyothi Engineering College



Jyothi Engineering College

N A A C Accredited College with NBR Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O, CHERUTHURUTHY, THRISSUR. PIN-679531 PH : +91-4884-259000, 274423 FAX : 04884-274777



NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

Sunny Joseph

True Copy Attested

Dr. SUNNY JOSEPH KALAYATHANKAL
M.Tech, MCA, M.Sc, M.Phil, B.Ed
Ph.D (Computer Science), Ph.D (Maths)
PRINCIPAL
Jyothi Engineering College
Cheruthuruthy P.O.- 679 531



CREATING TECHNOLOGY
LEADERS OF TOMORROW
ESTD 2002

Jyothi Engineering College

NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATIRI P.O, CHERUTHURUTHY, THRISSUR, PIN-679531 PH : +91- 4884-259000, 274423 FAX : 04884-274777



NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.