



JUNE 2021 VOLUME-2 ISSUE-6

### *From the Chairman*



Dear friends,

❖ The Covid 19 pandemic continues to disrupt the normal life. With new variants and faster spreading nothing can be taken for granted. Even though there was some hope of the pandemic being contained, subsequent events show that a second wave is becoming more deadly. The vaccination process has started, and the vaccination centres have become another cause for spreading because of the chaotic conditions in not following social distancing. The media scare that vaccines are getting exhausted added to the chaos. News of non-availability of hospital beds,

oxygen etc are scary.

On the basis of the good progress being made we did switch over to physical MC meeting in January, February, and March. But later in April we had to revert to online mode as the number of cases increased. We continued our monthly webinars on interesting topics and also conducted the AGM 2020 in hybrid mode delayed by 8 months.

The first instalment of Rs 1.15 lakhs was handed over to 4 students of CET under the CARE (Continuous Assistance for Rising Engineers) scheme of CETAA. Shri PK Nair & Smt P Sreekumari Nair endowment award ceremony was also conducted in virtual mode. (more details in secretary's report)

It is a matter of pride that CETAAT Ragatharangam troupe participated in the first ever CETA Galaxy Digital Global meet hosted by UAE chapter and the performance was well appreciated. It was indeed a virtual global meet with different chapters performing cultural programs from their own places. Even in a world disrupted by Covid pandemic, it is really a creditable achievement that such an effort could be well coordinated. Hats off to UAE chapter for coordinating so well.

Good progress is made in forming the CETAAT Consultancy Group with enrolment of more than 20 consultants already registered. The Covid situation is the only thing that is deterring us from formally launching the Group.

Stay Home Stay safe

**S. Gopakumar, Chairman**

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**Editorial Board** MGK Nair, KG Chandrasekharan, SKK Nair, M Pradeep Kumar, Jaya G Nair



## Report of Secretary - October 2020 to January 2021



Dear CETAAT members,

We are still going through an unprecedented second wave of the Covid 19 Pandemic with potent variants. We could effectively tackle the first phase through strict monitoring and control, curbing the exponential spread, thus gaining precious time for our medical & other

fraternities to cope with men, materials & infrastructure. Let us not take the second phase of Covid casually. Be cautious and Stay safe & healthy.

The 18th, 19th, 20th and 21st Management Committee (MC) meetings of CETAAT were conducted on 6th October '20, 3rd November '20, 1st December '20 and 5th January '21 respectively in the online mode and the last two meetings at Hotel Prasanth, Trivandrum.

▶▶ The Management Committee Meeting held on 6.10.2020 condoled the sad demise of Prof. B Somanathan Nair. A resolution was adopted expressing CETAAT's deep condolences to the family members on his unbearable loss. Prof. (Dr) B Somanathan Nair was one of the top engineering text book authors with more than thirty text books in different fields of electronics engineering like Digital Electronics & Logic Design, Linear Integrated Circuits, Basics Communication & Information Engineering. He was the Principal of Govt. Rajeev Gandhi Institute of Technology, Kottayam & was Joint Director of Technical Education, Govt. of Kerala. He also had a stint as visiting faculty at the Department of Electronics Engineering, University of Idaho, USA

▶▶ As decided by the Management Committee, the Annual General body Meeting which was due on September 2020 was postponed due to the pandemic situation. The revised schedule will be informed to all members in due course subject to improvement of the situation.

▶▶ We had conducted the following three Webinars on technical topics during this quarter successfully with active participation from members.

1.The third CETAAT webinar conducted on 20.10.20 with Er APM Mohammed Hanish IAS, Secretary to GoK – Industries & (CET 1990 – Civil) as the speaker was well attended with about eighty participants. The Management Committee appreciated and thanked Er APM Mohammed Hanish, IAS for the splendid talk on

the subject "Industrial Scenario in Kerala during Post COVID Era".

2.The fourth Webinar dated 15th December 2020 was by Er Unni Bhaskar, Managing Director of UNO Technology Pvt. Ltd., who made a very interesting presentation on the topic of "Modern trends in Design & Construction of Air Traffic control Towers & high Vision VCR Cabins".

3.The fifth Webinar conducted on 19th January 2021 had Er Ajith Kumar, VP Technology - Innovation, Wabtec, formerly GE Transportation (CET - 1972 Electrical) as the Speaker. He talked on the subject "Propulsion System for Heavy Haul Freight (Locomotives & Off Highway Vehicle) - My Experience". As CETians we are all proud that he holds 351 US patents and around 1000 international patents.

▶▶ Shri PK Nair & Smt. P Sreekumari Nair endowment award ceremony for the best project work by the outgoing batch of B Tech. Mechanical Engineering of CET was conducted on virtual platform on 21st November 2020. The award winners of 2020 -S8 Mechanical – batch are **M/s Akhilraj P R, Anujith B N, Akshay B Menon and Vaisakh N**. The virtual function was graced by Dr Ravi Kumar (Patron), Shri KG Chandrasekharan (Past Chair), Shri T Raveendran (Past Chair), Prof. Achamma Cherian (MC Member), Prof. Anil –HOD, Mechanical Engineering Department-CET, Smt Jayasree PK, Secretary CETAA in addition to CETAAT office bearers, our members and guests.

▶▶ Under the Charity programme of CETAAT, It was decided that under the Continuous Assistance for Rising Engineers, the CARE programme of CETAT, we would be distributing Rs. 25,000/- each to three day scholars of CET and Rs. 40,000/- to one hostelier throughout their B Tech period, based on the evaluation by CET academic team. The contribution for this academic year has been transferred to CETAA. The student recipients are (i) Jija G.S. (S3 Civil), (ii) Archith V.S. (S3EEE), (iii) Jyothika Biju (S3 Arc) and (iv) Abhisekh R. Krishnan (S3 EEE).

▶▶ The 20th Managing Committee approved the nominations of the following new MC Members and inducted them as MC members in place of four members who relinquished their membership due to personal reasons. We heartily welcome the new members to our fold for the betterment of our association and thank the outgoing members for their services. The new members are (i) Er. Rachel SKD, 1984, Civil, (ii) Er. Sureshkumar S,



1984, Civil, (iii) Er. Gopakumar CB, 1985, Mechanical & (iv) Ar. SanthoshRavindran, 1986, Architecture.

- ▶▶ It was decided to schedule the 8th Annual General Body Meeting (AGM) on the 6th of March 2021 in hybrid mode at the auditorium of Hotel Prasanth, PMG, Trivandrum, strictly following Covid protocols, alongwith connection through online platform for those who wish to join virtually. Formal invitation for the AGM has already been sent to all members, as per bye-law.
- ▶▶ CETAAT was well appreciated for their participation in the very first virtual CETAA Galaxy Digital Global meet coordinated by CETAA Dubai on 16.1.2021. CETAAT presented a group song by members of our 'Ragatharangam' Music Group. The program was very well

choreographed by Mr. Harikrishnan & his son Master Ramgopal. Committee appreciated the efforts taken by Master Ramgopal & members of Ragatharagam team especially Mr. Dilipkumar & Mr. Zeril and Vice Chair Mr. Nandakumar.who coordinated.

- ▶▶ The proposal for forming a consultancy group for CETAAT named – **CETAAT Consultancy Group** - for taking up various technical assignments is in an advanced stage with profile collection from interested members to know their willingness and their field of expertise.

Stay Safe & healthy!!

I thank you,

**Anil G.**  
*Secretary*

## 8th Annual General Body Meeting

The eighth Annual General Body Meeting (AGM) of CETAAT was conducted on sixth March 2021 at Hotel Prasanth, Trivandrum in hybrid mode – conducted at hall with limited participation and connected through online platform due to covid pandemic and protocol restrictions.

Er Gopakumar S, Chairman, CETAAT chaired the meeting and the AGM was called to order at 6.50 p.m. Thirty two Members were present at the venue and four members attended through online. Er Nandakumar K, Vice Chairman, CETAAT welcomed the members.

A resolution was mooted by Er Raveenran T Nair for ratification on conducting the AGM on 6.3.2021 in dual mode, both physical & connected through online platform, instead of conducting the same during June 2019 due to the current pandemic situation on account of covid. The resolution was seconded by Er MGK Nair and the same was unanimously approved by the members.

Er Gopakumar S, Chairman addressed the members and highlighted the objectives of CETAAT, the current programmes and expectations. Then, the Chairman touched upon the activities of CETAAT during the past one and a half years in five phases starting with the normal phase from June 2019 till the beginning of the lock down period in 2021 where the major activities completed were one bimonthly technical talk, two family meets, a two-day workshop on "Innovative trends in Building construction". The second phase was an inactive period for two months during

lockdown in which only one special meeting could be convened for the postponement of "Devaragasandhya" music programme scheduled for March 2020. The third phase was for charity activities like distribution of PPE kits to Medical College, distribution of 10 laptops to deserving students of CET under the laptop programme of CET and scholarship for four students for all the four years under CARE scheme of which the first instalment was released already. The fourth phase was the online phase in which CETAAT could complete nine Management Committee Meetings online, five webinars, participation in digital global meet and one endowment distribution ceremony online. Then the present fifth hybrid phase in which Management Committee & Annual General body meetings were conducted.

Further, Chairman highlighted the charity activities of CETAAT and expressed his gratitude towards the support offered by members & well-wishers for such activities.

The minutes of the meeting of the 7th AGM held on 15th June 2019 and the activity report of CETAAT from June 2019 to January 2021 were presented by Er Anil G, the Hon. Secretary of CETAAT including the proposal for the formation of a Consultancy Team for CETAAT.

Er Pradeep MS, Treasurer CETAAT presented the audited accounts of the year 2019-20 and Er Varghese Mathew, Vice chairman proposed the vote of thanks.



## **CETAAT ACTIVITY REPORT - VIII AGM 6th March 2021**

**Report presented by Hon. Secretary at the AGM for the period from June 2019 to January 2021**

I am very happy to present before you the report of activities of CETAAT for the period from June 2019 to January 2021.

### **June 2019 - September 2019**

1. The first Management Committee (MC) meeting of the New Office bearers of CETAAT 2019-21 & the Management Committee Members was held at the Institute of Engineers Hall, Trivandrum on 15.6.2019, on the day of the installation. Three more MC meetings were conducted on 2.7.19, 13.8.19 & 3.9.19 respectively.

2. As per by-law, the Finance Committee was constituted with (i) Shri Gopakumar (Chairman - CETAAT), (ii) Shri Nandakumar (Vice Chairman - CETAAT), (iii) Shri Anil G (Secretary - CETAAT), (iv) Shri Simon P Varghese (former Treasurer - CETAAT) and (vi) Shri KGP Namboodiri (Treasurer - CETAAT) as Convenor at the second Management Committee meeting on 2.7.19.

3. A technical talk by **Er Tony Thomas, a CETian & CIO of Nissan Motor Corporation** was conducted on 20.8.19 at the Chamber of Commerce & Industry Hall at Kowdiar. The speaker stressed the need for people

to come out with open and factual criticism which would contribute to the development of Kerala. He further stressed that Kerala had already missed the Industry boom in the seventies and eighties and this is the age of big data & analytics and we should not miss the same again due to unhealthy politics.

4. CETAAT has a pool of expertise in different facets. It was decided to form a consultancy wing for CETAAT for supporting Government initiatives and also as an income earning activity for CETAAT & invited details from interested members.

5. Mr. KGP Namboodiri relinquished the post of Treasurer - CETAAT on account of personal inconveniences and MC accepted the same.

6. Further the MC on 3.9.19 nominated Mr M S Pradeep as the new treasurer for the term 2019-21 as per cl. 9.6 of the bylaws of CETAAT.

7. Onam family meet was conducted on 29th September 2019 at Hotel Prasanth with cultural activities by family members.

### **October 2019 – January 2020**

8. The 5th, 6th and 7th Management Committee



(MC) meetings of CETAAT were conducted on 1.10.19, 5.11.19 & 3.12.19 respectively.

9.CETAAT appreciated the initiative of Mr KG Chandrasekharan, past Chair for collecting Rs. Five lakhs towards charity fund from **Er Abraham Oommen (1989 - Applied Electronics & Instrumentation)** in memory of his father late Er AK Oommen. Thank you, Er. Abraham.

10.CETAAT thanked all the MC members for donating an amount of Rupees One Lakh and Five thousand for initiating our charity programme and to encourage other members, unfortunately the response from member's side was not encouraging.

11.Two technical talks by CETians were conducted in the report period, viz. (i) **Er. Jaya M. S. IAS (Retd) - 1981 Civil-** on "Technology & Management" on 15.10.'19 and (ii) Er. Hareendralal BSc (Engg), 1968 Electrical & 1971 Power Systems (MSc Engg) on "Advanced Spreadsheet Technique Enable Effective Design of Electrical; Systems" -19.11.2019.

#### January to June 2020

12.The 8th, 9th, 10th (special), 11th, 12th (special), 13th and 14th Management Committee (MC) meetings of CETAAT were conducted on 7th Jan, 4th Feb, 28th Feb, 3rd Mar, 11th Mar, 12th May and 9th June 2020 respectively.

13.A two day workshop on 'Innovative trends in building construction' was successfully conducted by CETAAT on 3rd and 4th Jan 2020 which attracted 67 registrations and was well received by the participants. Architect N Mahesh inaugurated the workshop and conducted the opening session, which was very lively with lots of practical inputs. The certificates were awarded to the participants by our past Chair Shri Chandrasekharan KG.

14.The X'mas & New Year family meet was conducted on 19.1.2020 with variety entertainments like dance & music by our family members. **Mr. Balakrishnan Nair ('72 Mech)** who bagged the Dr M Visweswaraya award 2019 was the Guest of Honour. He was honoured by our Chief Patron Shri G Madhavan Nair, former Chairman ISRO. Shri Dilip Kumar H ('81 Elec) coordinated the event including a solo guitar programme.

15. "Devaragasandhya" music program by our own music troupe "Ragatharangam" in connection with the death anniversary of the great music legend Devarajan Master was decided to be conducted on 15th March 2020 at Tagore Theatre, Vazhuthacaud, Trivandrum. Received confirmation from our guests – Shri Kadakampally Surendran & Shri Jayakumar IAS (Rtd) including selection of a song written by Shri Jayakumar for the programme and made all arrangements. Due to restrictions on Covid

pandemic, it was decided to conduct the programme on 7th of June 2020 if situation permits. On assessing the situation as unpredictable, we had no other option than to postpone the event to a convenient date during March 2021 at the same venue of Tagore Theatre.

16.As part of our **charity activity**, donated PPE kit (150 nos.) and N95 mask (200 nos.) to Medical College, Trivandrum on 6th June '20.

17.Due to the restrictions suggested by the Government, we had conducted our last two Management Committee Meetings through web.

#### July to September 2020.

18.The 15th, 16th, 17th, and 18th Management Committee (MC) meetings of CETAAT were conducted on 9th July, 4th August, 8th September and 6th October 2020 respectively though the online platform with better participation.

19.As decided by the Management Committee, the Annual General body Meeting which was due on September 2020 was postponed due to the pandemic situation.

20.We had conducted two Webinars on technical topics during this quarter as regular meetings were not possible. The very first Webinar of CETAAT in association with Indian Plumbing Association, Trivandrum Chapter was conducted on 18th August 2020. **Er G Ramkumar(1978 Civil Engineering & former Executive Director (Automation) - Indian Oil Corporation Ltd.)** delivered a lecture on the topic "Meeting Water Challenges".

21.The second Webinar dated 22nd September 2020 was on "Modern Trends in Video Conferencing" by **Mr Joy Sebastian (CEO & Co Founder, Techgentia)**. Mr Joy is the winner of the "Grand innovation Challenge for Video Conferencing Software" conducted by the Ministry of Electronics & Information Technology (MEITY) under the Government of India's search for a Make in India Video conferencing Software named "Vconsol".

22.As part of **our charity activity**, CETAAT donated ten laptops to students of College of Engineering, Trivandrum (CET) on 28th September '20 at CET in the presence of Principal, few staff members including members from CETA. CETAAT profusely **thanks all the contributors** for their noble donations for gifting of laptops to the needy & deserving students of CET.

23.During this quarter, we had lost two of our illustrious CETians – **Prof. Dr. PJ George and Prof. Dr. TK Gopalakrishnan Nair** who had excelled in academic fields, our mentors and above all very practical engineers. The Management Committee meeting of the CETAAT held on 8.9.2020 condoned

and forwarded Condolence Resolution to both of their families.

### October 2020 to January 2021

24. The 18<sup>th</sup>, 19<sup>th</sup>, 20<sup>th</sup> and 21<sup>st</sup> Management Committee (MC) meetings of CETAAT were conducted on 6<sup>th</sup> October '20, 3<sup>rd</sup> November '20, 1<sup>st</sup> December '20 and 5<sup>th</sup> January '21 respectively in the online mode & the last two meetings at Hotel Prasanth, Trivandrum.

25. The Management Committee Meeting held on 6.10.2020 condoled the sad demise of **Prof. B Somanathan Nair**. A resolution was adopted expressing CETAAT's deep condolences to the family members on his unbearable loss.

26. The third CETAAT webinar conducted on 20.10.20 with **Er APM Mohammed Hanish IAS, Secretary to GoK – Industries & (CET 1990 – Civil)** as the speaker was well attended with about eighty participants. The Management Committee appreciated and thanked Er APM Mohammed Hanish, IAS for the splendid talk on the subject "Industrial Scenario in Kerala during Post COVID Era".

27. The fourth Webinar dated 15<sup>th</sup> December 2020 was by **Er Unni Bhaskar, Managing Director of UNO Technology Pvt Ltd.**, whomade a very interesting presentation on the topic of "Modern trends in design & Construction of Air Traffic control Towers & high Vision VCR Cabins".

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29. **Shri PK Nair & Smt. P Sreekumari Nair** endowment award ceremony for the best project work by the outgoing batch of B Tech., Mechanical Engineering of CET was conducted on virtual platform on 21<sup>st</sup> November 2020. The award winners of 2020 - S8 Mechanical – batch were **M/s Akhilraj P R, Anujith B N, Akshay B. Menon and Vaisakh N.** The

virtual function was graced by Dr Ravi Kumar (Patron), Shri KG Chandrasekharan (Past Chair), Shri T Raveendran (Past Chair), Prof. Achamma Cherian (MC Member), Prof. Anil –HOD, Mechanical Engineering Department - CET, Smt Jayasree PK, Secretary CETAA in addition to CETAAT office bearers, our members and guests.

30. Under the **Charity programme** of CETAAT, It was decided that under the **Continuous Assistance for Rising Engineers**, the CARE programme of CETAA, we would be distributing Rs.25,000/- each to three day scholars of CET and Rs 40,000/- to one hostelier throughout their B Tech period, based on the evaluation by CET academic team. The contribution for this academic year has been transferred to CETAA.

31. The 20<sup>th</sup> Managing Committee approved the nominations of the following new MC Members and inducted them as MC members in place of four members who relinquished their membership due to personal reasons. CETAAT welcomed the new members to our fold for the betterment of our association and thanked the outgoing members for their services. The new members are (i) Er. Rachel SKD, 1984, Civil, (ii) Er. Sureshkumar S, 1984, Civil, (iii) Er. Gopakumar CB, 1985, Mechanical & (iv) Ar. Santhosh Ravindran, 1986, Architecture.

32. CETAAT was well appreciated for their participation in the very first virtual **CETAA Galaxy Digital Global meet** coordinated by CETAA Dubai on 16.1.2021. CETAAT presented a group song by members of our 'Ragatharangam' Music Group. The program was very well choreographed by **Mr Harikrishnan** and his son Master **Ramgopal Harikrishnan**. Committee appreciated the efforts taken by Master Ramgopal Harikrishnan and members of Ragatharangam team especially Mr Dilipkumar and Mr. Zeril and Vice Chair Mr Nandakumar who coordinated.

Hoping and praying for all our members and families to stay healthy and looking forward to the vaccine to reach us soon so as to contain this pandemic by breaking the chain and keeping us safe.

I thank you all,

**Er Anil G,  
Secretary, CETAAT.**

**CETAAT**  
**News Letter**

We solicit literary contributions from CET alumni and their family members for the quarterly News Letter being published by CETAAT.

The articles in the form of short stories, poems, cartoons, travelogue etc. will be published in the forthcoming issues of CETAAT NEWS LETTER.

The articles can be mailed to the e-mail : [mgknair@gmail.com](mailto:mgknair@gmail.com)



## THE LEADERS ■

The College of Engineering Trivandrum (CET) started functioning in 1939, under the University of Travancore, which itself was established in 1937, by the then Maharaja of Travancore, Sree Chitra Thirunal Balarama Varma. The college started functioning on 3rd July 1939 at the premises of the present PMG office and the Kerala State Science and Technology Museum. The college was shifted to the present location at Kulathur in 1961. Students then doing their final years in 1961 -1962, had the privilege to be the first batch to graduate from the new premises.

In its nascent phase, CET offered degree courses only in three branches viz. Civil, Mechanical and Electrical Engineering. Diploma courses were also offered in the same engineering streams. In 1939, 21 students were admitted for the degree course and same numbers of students were enrolled for the diploma courses. Besides this, there was also a certificate course with 40 students. Though seven seats were allotted for each branch of Civil, Mechanical and Electrical engineering, some of the seats in the electrical branches were not filled in some of the academic years. Adjustments were made among the branches in order to maintain the total number of seats. Thus, the first batch to pass out in 1943 had 11 civil, 5 mechanical and 3 electrical graduates.

The name and fame of an educational institution is amplified by its illustrious Alumni and the College of Engineering Trivandrum (CET) is no exception. CET boasts of many multifaceted engineers, academicians and administrators among its alumni, who adorned or are adorning the top positions in institutions all over the globe. Among them are leaders who have guided and inspired the younger generation.

CETAAT News Letter will carry a series 'THE LEADERS' which will portray personal details and the professional achievements of senior CETians, with the aim of introducing them to the younger Alumni ■



### P.K.SUKUMARAN NAIR



Date of birth : 08-11-1932

We are very happy to introduce Er P K Sukumaran Nair a very senior alumnus of CET, former Chief Engineer, Kerala PWD and former Managing Director, Asian Tech Ltd, who has proved himself as a great Engineer and management expert through his contributions to the development of the State and the Nation as a whole in his professional life spanning about four decades.

Er Sukumaran Nair graduated in 1954 in Civil Engineering and took his post-graduation in Structural Engineering in 1964, also from CET. Started his career in State PWD as Junior Engineer immediately after passing out and worked as Demonstrator in College of Engineering, Trivandrum, on deputation for two years. Went back to PWD in 1957 and started working as Junior Engineer in the design wing of the Office of the Chief Engineer (Buildings and Roads). Later in 1965, he joined Kerala Health Research and Welfare Society on deputation for two years. His services were effectively utilized by Kerala State Construction Corporation in the capacity as Regional Manager and General Manager (Bridges), for about six years during 1975 to 1981. He considers himself fortunate to head a talented engineers in the construction of many bridges including Palluruthy, Nedumudi and Kidangara bridges in the Alappuzha Changanassery road. He had a short tenure abroad also. He was with Ministry of Communications, Govt. of Tanzania for three years from 1970 on Foreign Assignment Service by the Govt. of India.

Sukumaran Nair sir retired as Chief Engineer, PWD, in 1987. His contributions to the State and the Nation as a whole were marked by the numerous works executed under his leadership in various capacities. Prior to his retirement from Govt. service he joined M/s Asian Tech Private Ltd, Kochi, as Executive Director in the year 1981 and continued with them after superannuation. Later, he became the Managing

Director of the company. Asian Tech Ltd was a premier construction company in South India in those days. They had undertaken a large number of projects of different nature and of very big magnitude on contract in different parts of India and Bhutan. Most of the projects were in very hazardous terrains. These works were executed for Himachal Pradesh Electricity Board, Govt. of Bhutan, West Bengal Electricity Board, North Eastern Electric Power Corporation (Arunachal Pradesh), Municipal Corporations of Bombay and Delhi. Tunnel works for Narmada Project in Madhya Pradesh and tunnels and bridges for Konkan Railway Corporation in Ratnagiri, Maharashtra are some of the prestigious works executed by Asian Tech. Apart from the above, the company has also executed multi storeyed buildings and associated works for Kundremukh Iron Ore Project, Karnataka State, and Vizag Steel Plant. The company also undertook the construction of the superstructure of the first Aroor-Kumbalam bridge in NH 47 (now NH 66), for Kerala State Construction Corporation. This was the longest road bridge in the State at that time. One of the most prestigious projects done by the company was the underground parking facility in New Delhi. The sewage tunnel in Bombay was a very challenging work the company executed. The tunnel was six kilometres long in soft rock, thirty metres below ground level.

Bestowed with the qualities of a competent Engineer, Administrator and Project Manager, Er Sukumaran Nair was an athlete also during his college days. He was very active in Kerala Basketball Association during the early stages of its formation. A very talented Basketball player, he represented Travancore University in 1953, Travancore Cochin State in 1954 and 1955. He has also represented Kerala State team in 1956 to 1959, captained the first Kerala team in the National championships. Was also a member of the Indian All Star Teams in 1955 and 56.

Very polite, calm and composed Sukumaran Nair sir was a role model for his colleagues. His attitude towards the responsibilities he undertook won him appreciation from all quarters. His family consists of wife Smt. Ragini Devi and two daughters both products of CET. Blessed with four grand children and a great grandson, Nair sir lives happily at Kochi. ■

Compiled by : K.G. Chandrasekharan,  
Former Chairman, CETAAT



## WEBINAR Series

# MODERN TRENDS IN DESIGN AND CONSTRUCTION OF HIGH VISION AIR TRAFFIC CONTROL TOWERS AND CABINS PRESENTED TO CETAA, TRIVANDRUM CHAPTER ON 15.12.2020 BY UNNI BHASKAR (1988-CIVIL)/UNO TECHNOLOGY PVT LTD.

It is a vital requirement for Air Traffic Controllers to achieve obstruction free vision on the airside, while operating from a very demanding environment. Distortions in glazing could also induce fatigue to controllers during their operations inside the cabin. Hence it is important to have the following aspects considered at length while designing a tower and cabin.

- i. Ideal location for the tower to achieve maximum visibility of the air / land side
- ii. Suitable height of the tower which is optimal to get best view of runway and all other areas
- iii) Size / Geometry of the cabin based on number of controllers to be positioned based on the airport designs / traffic planning.
- iv) Selection of glazing

Tower is located based on visibility studies. Since ATC is one of the most strategic features of an airport, primary consideration is the security of the location, run-way location/orientation and accessibility. Once the location is identified, based on visibility studies, height of the tower is ascertained. Usually, military air bases have short towers as runway lengths in these cases are usually short. Civil Airports with multiple run-ways and handling wide bodied aircrafts usually have tall towers. This will enable controllers to have

better visibility of all run-ways/ taxi-ways and aprons. In some cases there could be multiple towers, or even remote air traffic control stations. In this scenario, airports are fitted with high-definition cameras, which can transmit real-time images to a central location, which could be far away from the airport. Such images from 4-5 airports are collected at one location, and air traffic is controlled remotely.

Size and Geometry are usually determined based on the classification of the airport. Standard Thumb-rule is to provide 8-12 M2 of working space per controller. Ideally, for better visibility, a polygonal VCR is recommended, with obtuse angled glazing joints. Glazing recommended is chemically toughened laminated glazing panels with PVB interlayer.

It is also recommended to have parsol green coloured outer glazing panel. Sinusoidal tungsten filaments invisible to naked eye are stitched with robots (density of 1 KM/ 1 SQM) which can heat up the glazing panels uniformly above the ambient temperature to keep off the humidity at all times. Hence the tendency of the panels to accumulate dirt and dust is minimised. This can also improve the visibility.

It is recommended to design the cabin with mullion free glazing system. This enhances un-obstructed arc-view on the airside for the controllers tremendously. This system has been deployed to achieve upto 320 degree un- obstructed vision.







# Bridging the infrastructure gap in Transport Sector



**Dr. B.G. Sreedevi is the former Director and Chief Scientist of National Transportation Planning & Research Centre (NATPAC), an R&D Centre of Govt. of Kerala. She is a Doctorate Holder from CUSAT and a Post Graduate from Indian Institute of Technology, Madras in Civil Engineering and also possess Post Graduation in Urban and Highway Engineering from Vinayaka Mission Deemed University (VMDU). She also has obtained a Post Graduate Diploma in Management from All India Management Association (AIMA). She Obtained BSc (Engg), in Civil Engg. from CET in the year 1982.**

The growth of urban areas in the state has been slightly haphazard, growing around a compact central core with industrialisation and migration, bringing about rapid change in the peripheral land use resulting in urban sprawl. One of the most daunting problems faced by the urban area is an increase in trip times and costs both for passenger and goods traffic. A transport plan cannot be sensibly conceived without a plan for land use. Planning of transport must go hand in hand with land use planning, and each city must involve itself utilising its resources for housing, sewerage, health, education and transport. The existing issues and concerns, the unfinished tasks, the congestion and constraints in the movement leading to higher transport costs will be some of the challenges to face as we look at transport requirements in the near future.

Future volumes of demand will be very high with an increase for railways, roadways, airways and water transport requiring not only massive investments but other actions, covering pricing policies, customer focus, terminal management, safety, transit times, organisational and other changes to provide

adequate and efficient services. The expectations of future transport in Kerala includes a holistic approach for improvement in the transport networks, Increase in productivity and economic efficiency in the field of transport, Improvement in quality, reliability and frequency of transport, Enhancement of comfort levels and provision of facilities for the disadvantaged persons, Increase in mobility – first and last mile connectivity for the commuter for their different journeys, Improved customer service, Reduction in transport transit times, Improvement of rural transport and providing accessibility and reduction in crashes and improved safety. The thrust areas of development by different stakeholder departments and agencies include Sustainability, efficient Inter-modal integration, enhanced patronage of public transportation, tie-ups with the private sector for development, Improvements in processes and systems, Adoption of technology innovations etc. As the Indian government’s premier think tank, NITI Aayog reports states that it will always strive to think ahead and support the federal and state government’s ability to develop, adopt and stay ahead of the curve in green mobility.

