

## SECTIONAL COMMITTEES: 2019/2020

### 01. Agricultural & Plantation Engineering Sectional Committee

#### 1. Election of the Committee

The Inaugural meeting of the section of Agricultural & Plantation Engineering/ Institution of Engineers was held on 30th December 2019 at room No 1 at Institution of Engineers Sri Lanka, Wijerama, Mawatha, Colombo 7.

The elected Chairman of the sectional committee for the session of 2019/20, Eng. H.C.J Thilakarathna warmly welcomed all the members who were present for the inaugural meeting. 07 members attended the Meeting. All committee members proposed to re-appoint Eng. (Ms). T.N Fernando as the secretary and she was appointed as the secretary for the session of 2019/2020. The other committee members were appointed as follows.

Designation	Name
Fellow(02)	Eng. Nalaka Gunashinghe Eng. N Kanesu
Member(04)	Eng. G.H.M. A Wijethunga, Eng. M.M.S Marasinghe Eng. Kumudulal Eng. D.D.L Pushpakumarawere
Associate Member(03)	Eng. M.A.P.S.K Kulasooriya, Eng. (Mrs) PM Yamuna S Pathiiraja Eng. K Sivasudhan
Affiliate members	No affiliate members
Companions & Associates	Still not attend the committee

#### Other members of the committee

Eng. C.L Rajapakse, Eng. M.H.J.J Hemachandra, Eng. A. Edirisinghe, Dr. Sarath Samaraweera, Eng. MHMA Bandara, Eng. H.M.A.P Ratnayake, Eng. Dishani, Eng. T. Manamperi and Eng. N Ayomi.

#### Meetings

The sectional committee conducted seven committee meetings during the session 2019/2020.

## 2. Activities followed in 2020

Following activities included in activity plan of the committee.

NO	Activity Description	Progress	Other Remarks
1	Introduce some Agricultural and Plantation Engineering related undergraduate projects and elective subjects to the existing degree programme in all engineering faculties in Sri Lanka.	Committee task was completed President IESL has sent a letter to the chairman UGC	UGC has not yet responded to the letter
2	To obtain online meeting facilities from IESL to hold committee meeting since most of the sectional committee members are from North Central and Central Province.	Already started this task in this year	Expect to continue for the year of 2021
3	To hold few committee meetings outstation in order to improve participation of members	Temporary stop this events until settle the covid pandemic situation	
4	Recognition of Training Institutions for the purpose of Professional Review	Committee decided to recommend the following three organizations to Professional Standard Management committee for checking the adequacy of available training facilities for registering as a training organization for Agricultural and Plantation Engineering for the PR review without any registration fee at least for next five years. 1. IPHT 2. FMRC 3. NERDC	Committee decided to request the above three organizations to register with IESL as a Training organization for train Agricultural and Plantation Engineers.
5	Techno 2020 exhibition – Active participation from Agricultural and Plantation Engineering sectional committee Expect to Sponsor JIY competition to Promote discipline of Agricultural and Plantation Engineering among school students in order to encourage, attract and making them aware and creating an interest on this discipline for their high studies	In progress	
6	Two guest lectures and industrial visits - that relevant to the area of Agricultural and Plantation Engineering	In progress	
7	Two industrial visits	This task was not carried out due to Covid 19 Pandemic	

## Event participate 2020



Committee members of Ag. & Pl. Eng. SE committee/ IESL sponsored from their own funds, the musical show that was organized by the union of the engineers at NERD Center

(Reported by Eng. H.C.J Thilakarathne, Chairman - Agricultural & Plantation Engineering Sectional Committee)

## 02. Building Services Engineering Sectional Committee

The inaugural meeting of the Building Services Engineering Sectional Committee (BSESC) was held on 26th November 2019 with a record-breaking participation of hundred and thirty-one (131) members.

The main committee members for the 2019/20 session were appointed by the house at the same meeting. This committee comprises both senior & junior building services engineers.

No	Name
<b>Fellow Members</b>	
1	Eng. Chula de Silva
2	Eng. Kirthi Sri Senanayake
3	Eng. Samantha Gunawardana
4	Eng. Kosala Kamburadeniya
<b>Corporate Members</b>	
5	Eng. Suran Fernando (Chairman)
6	Eng. Sanath Abeykoon
7	Eng. Prasanna Narangoda
8	Eng. D.U. Amarasinghe
9	Eng. Bandula Karunaratne
10	Eng. Koojana Weerasinghe
11	Eng. Samantha Indika
12	Eng. Asitha Bandaranayake
13	Eng. Thushara Pathirana
14	Eng. Dilan Thilanga
15	Eng. Asanka Karunanayake

No	Name
<b>Corporate Members</b>	
16	Eng. Kolitha Warnasiri
17	Eng. Supun Thilakawardana
18	Eng. Lakmal Isuru (Secretary)
19	Eng. Jayalath Amarawansa
20	Eng. Priyan Bellana
21	Eng. Damitha Jayarathne
22	Eng. Aruna Shantha
23	Eng. Ishan Ranganath
24	Eng. Aruna Krishantha
25	Eng. Kushan Jayasuriya
26	Eng. (Ms) Lakmini Abeysuriya
27	Eng. Thilina Saranga
28	Eng. Dhanushka Kodithuwakku
29	Eng. Kaushal Pathirana
30	Eng. J.S. Sathiyajith
31	Eng. D.S. Abeysundara
32	Eng. Mahesh Udayanga

BSESC has carried out the following activities during the session 2019/2020 with the contribution of its members.

### **BSESC Public Lecture Series**

BSESC organized nine (9) public lectures on both engineering and non-engineering topics during the session 2019/20 in which four (4) of those were online webinars.

<b>No.</b>	<b>Date</b>	<b>Topic of the Public Lecture/ Webinar</b>	<b>Resource Person</b>
01	12.12.19	Modern Design Practices in HVAC Systems Towards the Energy Efficiency	Eng. Suranga Lekamwasam
02	08.01.20	Best Practice Waste Management and Resources Recovery	Eng. Chani Lokuge
03	20.01.19	Sri Lanka and Free Trade Agreements at the Crossroads	Mrs. Sonali Wijeratne
04	22.01.19	Regulatory Requirements of Testing and Inspection of Lifts	Eng. D.U. Amarasinghe
05	01.07.20	Evolution of the Defined Terms in FIDIC Red Book across four decades	Eng. Priyanka Karunaratna
06	08.07.20	Engineered Facade Design for Modern High-Rise Buildings	Dr. Senaka Dharamatilleke
07	22.07.20	Introduction on Building Services Engineering & Its Importance in the Building Sector	Eng. Suranga Lekamwasam
08	26.08.20	Importance of Proper Selection of Centrifugal Pumps & their Applications in the Building Sector	Eng. Sajeewa Perera
09	15.09.20	Efficient & Effective Management of Facilities	Eng. Indradeva Mendis

### **CSR Project “Akurata Arunak” at Mihinthale Maha Vidyalaya, Anuradhapura**

The first Community Services Project (CSR) of the BSESC was successfully completed in February 2020 at A/ Mihintale Maha Vidyalaya, Mihintale. Under this project following task were completed and handed over to the school.

- 1) Renovation and Upgrading of the existed Electrical System (rewiring, installation of new ceiling fans, lights etc.) in Main Auditorium Building in compliance with the engineering standards
- 2) Donating a Public Address System with Multimedia Projector for the school

This project was handed over to School on 28th February 2020. There was a handing over ceremony together with a half a day workshop titled ‘**Akurata Arunak**’ for both A/L and O/L students. This programme comprised of several inspirational and educational speeches of senior engineers as well as few entertainment items by the students. The programme was well attended by over 500 students from A/ Mihintale Maha Vidyalaya. BSESC pays it gratitude to the YMS and Rajarata Chapter of IESL for the support extended to carry out this exercise.

### **BSESC Field Visit to Capital Twin Peak Tower**

BSESC Field Visit for the session 2019/20 was to the 50-story high riser in the heart of the Colombo city, 'Capitol Twin Peak Tower – Colombo 02' on 30th January 2020 with a total participation of 41 BSESC members.

### **BSESC Knowledge Sharing Presentations**

BSESC had four (04) knowledge sharing presentations as the last item of the BSESC monthly meeting. BSESC members who are specialized in different sub-disciplines conducted these sessions for the benefit of the rest of the members.

<b>No.</b>	<b>Month</b>	<b>Topic of the Knowledge Sharing Session</b>	<b>Resource Person</b>
01	Dec. '19	Common Fault of Electrical Panels and Diagnosing Methodologies	Eng. Milinda Gunawardana
02	Jan '20	AHU Controlling Strategies	Eng. Jagath Wickramasekara
03	Feb '20	Fire Pumps compliance to the NFPA20 Standard	Eng. Sajeewa Perera
04	Aug '20	Psychrometry	Eng. Indika Wijethunga

### **Preparation of the Guideline for the Directory of Building Services Engineers**

BSESC has prepared a comprehensive guideline to be used by the engineers who wish to register as Building Services Engineers listed in 'The Directory of Building Services Engineers'. This guideline prepared by the BSESC during the session 2019/20 was then approved by the Council and now it is available on the IESL website for reference of the BSE engineers.

### **Study on the Micro Level Water Management Systems in Ancient Sri Lanka**

BSESC project on the exploration of engineering technologies in the ancient micro water management systems in the ancient capital Anuradhapura is progressing with the contributions of the subcommittee members. The final draft of book on the study titled "**Revisiting Ran-masu Uyana at Anuradhapura – A Technical Perspective**" that is being compiled by the BSESC under the guidance of Eng. (Dr.) Chandana Jayawardena will soon be submitted to the L&P Committee to publish as an IESL publication.

### **BSESC Publication on Plumbing Vents**

BSESC intends to compile a **plumbing system installation guideline** for the use of local engineers and technicians. As the first publication in the series, a booklet titled "**Guideline on Vents**" is currently under preparation with the active contribution of experienced BS engineers.

### **National Level Contribution to Defeat Covid-19 Pandemic**

#### **(1) Renovation the MVAC system in IDH Intensive Care Unit**

The renovation work of the MVAC system of the ICU complex at the Infectious Diseases Hospital (IDH) in Angoda was carried out by the BSESC engineers together with the SL Navy on a request made by the Director of IDH, Dr. Hasitha Attanayake. This project was successfully completed & handed over to the hospital management on 28th April 2020 with a small ceremony organized by IDH in which Dr. Anil Jasinghe (Director General of Health Services) was the chief guest.

**(2) Contribution to the National Covid-19 Guideline ‘Towards a New Normal’**

BSESC volunteered in providing engineering inputs to the National Covid-19 Guideline titled ‘Instructions for Selected Public Activities/ Work Settings for the Prevention & Control of Covid-19’ which was published on 28th May 2020 jointly by WHO, MOH, GMOA & SJKMC. Forty-three (43) experts contributed for this exercise among which thirty-eight (38) were either from medical or health sector. Among the remaining five (5) non-medical/ non-health service experts, it is to be noted that four (4) of them were from IESL BSESC.

**BSESC Appearance in IESL Newsletter**

Three articles/ news items on BSESC activities and achievements were published in the IESL online newsletter, Digital SLEN during the session 2019/20.

No.	SLEN Issue	Title of the Article / News Item
1	Jan 2020	“Building Services Engineers’ Winning Saga Continues...”
2	April-May 2020	“Renovation of the MVAC System of the IDH ICU complex by IESL Building Services Engineers”
3	April-May 2020	“IESL BSESC Contributes to COVID-19 National Guideline”



BSESC Main Committee 2019/2020 group photograph



Field Visit to the ‘Capitol Twin Peak Tower’ - Colombo 02



Renovation of the MVAC system in IDH Intensive Care Unit (ICU) by BSESC Engineers



CSR Project “Akurata Arunak” at Mihinthale Maha Vidyalaya, Anuradhapura

(Reported by Eng. Suran Fernando (Chairman of BSESC) & Eng. Lakmal Isuru (Secretary of BSESC))

### **03. Chemical & Process Engineering Sectional Committee**

#### **1. EXECUTIVE SUMMARY**

The inaugural meeting of the Chemical and Process Engineering was held on the 4<sup>th</sup> of December, 2019 with the participation of fellow members, corporate members, and associate members. The committee for the years of 2019/20 was appointed by the members. Eng. Neil Wickramasinghe was appointed as the chairman of the sectional committee and Eng. Muhammed Aadhil was appointed as the secretary of the sectional committee. The following list of members were appointed for the sectional committee.

Fellow Members:	Prof. Eng. S.A.S. Perera (F-844) Eng. Nimal Ranaraja (F-1070)
Corporate Members:	Eng. E.M. Piyasena (M-1649) Eng. D. Welhenge (M-1871) Eng. K.G.H. Kodagoda (M6959) Dr. Eng. Indika De Silva (M-7587) Eng. Harsha Deraniyagala (M-6326)
Associate Members:	Eng. Manura Wickramasinghe (AM-6222) Eng. Nadeera Dissanayake (AM-18642) Eng. Hasitha Jayawardena (AM-21812) Eng. Heshan De Silva (AM-24827)
Committee Members:	Eng. Veditha De Silva (M-6162) Eng. Tissa Liyanage (M-4491) Eng. P. Sarathchandra (M-6173) Eng. Danushka Dassanayake (AM-15517) Eng. Chamila Wickramasinghe (AM-9924) Eng. Chanaka Wijesinghe (M-7717) Eng. Chathura Senanayake (AM-20514) Eng. Kasun Adikari (AM-22854)

The chairman set the vision and presented the activity plan for the year. The meeting concluded with members adding valuable suggestions to the activity plan. The sectional committee met 5 times during the year despite the country going in for a 3 month complete lock down. However, meetings were not continued between the months of March 2020 and September 2020 due to the risk associated with organising public gatherings.

The sectional committee developed digital channels of communication to keep discussions and activities alive despite not meeting physically. The sectional committee carried out several projects including, organizing a fellowship night to improve engagement of the sectional committee, organizing a field visit to the Norochcholai Coal Power Plant, an industrial revival programme,



## 2. PROJECT UPDATE

The Chemical and Process Engineering sectional committee of the IESL carried two projects for the purpose of professional development of the members

### 1. Field Visit to Norochcholai Power Plant

The Chemical and Process Engineering sectional committee organised a field visit to the Norochcholai Coal power plant with a clear objective of studying the environmental impacts exerted by a coal power plant and to understand the processes by which the impacts can be managed. The purpose of the visit was to provide a chemical engineering perspective to the ongoing dialog on which sources of power generation is to be deemed acceptable to Sri Lanka in order to build a prosperous, resilient and sustainable nation. The field visit was successfully concluded with the participation of 30 members of the IESL.



### 2. Training programme for members on potential chemical industries based in Sri Lanka

The sectional committee decided to appoint 2 groups to study the potential chemical industries that can be practically implemented in Sri Lanka. The teams conducted a knowledge sharing session to educate the members. The study was carried out based on the possibility of producing Caustic Soda and the Sodium Silicate in Sri Lanka.

### 3. First phase of the Industrial revival program – based on Paranthan Chemicals Company Limited.

The Chemical Engineering sectional committee along with Paranthan Chemicals Company Limited contributed to the development of an industrial revival programme. The phase one focussed on carrying out pre-feasibility studies on the following industries.

- a. Caustic Soda
- b. Chlorine
- c. Hydro Chloric Acid
- d. Sodium Hypo Chloride
- e. Sulphuric Acid
- f. Single Super Phosphate and Triple Super Phosphate including the use of other minerals available in Sri Lanka such as Eppawala rock phosphate
- g. Water purification chemicals
- h. Production of Calcium Carbonate, Calcium Carbide, Sodium Silicate, Calcium Chloride, and Precipitated Silica using minerals available in Sri Lanka

The project is set to continue through the next year as a phase 2.

#### 4. Digital Channel Development

The sectional committee established digital channels of communication to keep the discussions alive despite the covid 19 pandemic lockdown. Therefore, an active WhatsApp group along with collection with data collection to establish a member directory. The effort is ongoing and the members have had the opportunity to improve interactions within the professional network in a more effective manner.

#### 5. Fellowship Event

The sectional committee organized a fellowship event to rekindle the professional fraternity with the participation of members including, fellow members, corporate and associate members. The event was successful in the sense of reviving the sectional committee and to get the team on board with the vision for the future.

## **04. Civil Engineering Sectional Committee**

### **1. INTRODUCTION**

This report is prepared to describe the activities performed by the *Civil Engineering Sectional Committee (CESC)* during the session 2019-2020. Due to the COVID 19 epidemic situation in the Country, most of the planned activities had to be postponed to the next year before achieving a considerable result of the initial efforts made.

However, as a team CESC carried out as much as possible activities withing the limitations that had to be maintained under the guidelines issued by the Health sector.

### **2. COMMENCEMENT OF THE SESSION**

The session 2019-2020 was commenced on 25th November 2019 at the Meeting room No.01, IESL Secretariat. The Chairman Eng. (Prof). Ranjith Dissanayake welcomed all and briefly explained the expected activities during the new session 2019/2020.

## 2.1. Appointment of Office bearers and Main Committee members

Office bearers for the Main committee for the session of 2019/2020 were selected from the participants. The selected CESC team for the new session is as follows.

Position		Name	Membership No
Chairman	1	Eng.(Prof).Ranjith Dissanayake	F-975
Secretary	2	Eng. J M Pradeep Kumara	M 6283
Asst. Secretary	3	Eng. Himal Hikkaduwa	AM 16898
Treasurer	4	Eng. J.M.C.G.Jayasinghe	AM 13964
Fellow members	5	Eng. Sujeewa Samararatne	F 1086
	6	Eng. S H U De Silva	F 1057
	7	Eng. Gihan Jayathilaka	F 1080
Members	8	Eng. Anura Gamage	M 5680
	9	Eng. Nilan Herath	M 5048
	10	Eng. R. Sasitharan	M 7996
	11	Eng. Chaaminda Weerakoon	M 4951
Associate Members	12	Eng. A P Rathnayaka	AM 15466
	13	Eng. Danushi Ilayperuma	AM 22932
	14	Eng. K A B P Kuruppu	AM 21371
	15	Eng.(Ms).N.K.Wickramarathne	AM 14454
	16	Eng. G Prashanthan	AM 13583
Affiliate Members / Associates /Companions	17	Eng. Sajeewa Witaana	A117
	18	Eng. (Dr.). D. A. H. Gunaratne	A 19

## 2.2. Appointment of Sub-Committee Team Leaders

It was proposed to initiate new sub committees in addition to previous years to get more involvement from the participants and keep the CESC more active. Accordingly, 19 Nos. of Sub-committees were formed and Team leaders of each Sub Committees were appointed as below.

	Sub-Committee	Team leader
1	Field Trip (SCFT)	Eng. Gihan Jayathilaka
2	Annual Get-to gather & Foreign Field Visits (SCAG&FFV)	Eng. M.N.A. Samad
3	Public Lectures Seminars & Workshops (SCPLSW)	Eng. Manjula Samarasinghe
4	Techno Stall (SCTS)	Eng. K A B P Kuruppu
5	Building Clinic (SCBC)	Eng. Sajeewa Witaana
6	Publication and Editorial (SCPE)	Eng. Sujeewa Samararatne
7	Community Projects (SCCP)	Eng.(Ms).N.K.Wickramarathne
8	Research Development and Innovation (RDISC)	Eng. Dylan Rayen
9	CPD coordination with main committee (SCCPD)	Eng. Anuradha
10	Insee mix design project (SCIMD)	Eng. Chaminda Weerakoon
11	Melwa Steel design (SCMSD)	Eng. G Prashanthan
12	Competition among the members (SCCM)	Eng. K Arandara

13	Overseas Chapter of CESC IESL (SCOC)	Eng. Anura Gamage
14	MOU with international CESC's (SCIC)	Eng. Anura Gamage
15	Public lecture, Seminar & Workshop with other Chapters (SCCPD-C)	Eng. Prabodha Jinasena
16	Web and Social media (SCSM)	Eng. R. Sasitharan
17	Entrepreneur forum (SCEF)	Eng. Himal Hikkaduwa
18	Sustainability development (SCSD)	Eng. Indika Karunasekara
19	Coordination with Women's Engineering forum (SCWEF)	Eng. Kushmy Senaratne
20	Collaboration with Universities	Eng. U S V Lakmal

### 3. ACTIVITIES PERFORMED BY CESC

Totally 08 nos of meetings were conducted (04 physical meetings and 04 online meetings) to the date of 1st September 2020. The progress of the main activities performed by CESC can be discussed under following two categories.

1. Activities carried out by involvement through CESC
2. Activities scheduled and performed through sub committees

#### 3.1. Activities carried out by involvement of Main body of CESC

Mainly following works were completed by the Chairman or another member who is engaged in related area.

##### a. Issues raised by members

Charter evaluation process: Issues raised by the members regarding the evaluation criteria of Professional Review (PR) for the members having limited access to attend the training through listed institutions for Design & Construction experience. Eng. Manjula Samarasinghe and Eng. Mangala Silva actively communicated with the relevant parties of IESL main committees and continually updated the CESC membership during monthly meetings regarding the current status of the actions taken by IESL.

Contribution to the amendments of UDA guidelines for Building Construction: It was discussed to involve the ongoing amendments to the guidelines for building construction by Urban Development Authority. The discussions had with the relevant parties were discontinued due to COVID 19 epidemic situation.

##### b. Requests came from the General Public

Some requests were received from the various parties of the society. Following are some of such requests and the involvement of CESC.

##### Evaluation of Cracks appeared in Dimbulagala Temple:

CESC attended to visit and provide Engineering assistance to the Dimbulagala Buddhist temple to investigate and propose suitable remedials to the cracks appeared on the walls and slab of the Temple Vihara (Fig. 01)

##### Inspection to Jethawana Stupa:

A team of members from CESC together with IESL joined with University of Peradeniya and University of Moratuwa visited Jethawana stupa on the request made by the Director General, Central Cultural Fund, on 6th of July, 2020 to inspect the cracks appeared on the stupa and a report was submitted based on the observations, and information gathered from the discussions held at the site with the archaeology experts (Fig. 02).

### 3.2. Activities scheduled and performed through sub committees

There are 20 nos of sub committees formed and following are the activities performed by each subcommittee.

#### i. Field Trip (SCFT)

Purpose is to arrange technical visits/inspections to the benefit of General Membership of IESL. Accordingly, following visits were scheduled during the year 2020 (Fig. 03)

	Location / Institution	Date	Status
1	ENV Engineering Enterprise Factory, Hanwella	25.01.20	Completed
2	New Kelani Bridge, Peliyagoda – Team 01	01.02.20	Completed
	New Kelani Bridge, Peliyagoda – Team 02	15.02.20	Completed
3	Uma Oya Project, Badulla	07.03.20	Postponed
4	Aruwakkalu, Garbage Processing & dumping Site	28.03.20	Postponed
5	Mineral Sands Corporation, Pulmudai	04.04.20	Postponed
	Naval Dockyard, Tricomalee	05.04.20	Postponed
6	Broadland Hydropower Project (Virtual online visit)	24.04.20	Completed
7	Capital Twin Peak, Colombo 02	12.09.20	Completed
8	Port City Project, Colombo	26.09.20	Completed
9	Macksons Paint Factory	03.10.20	Completed
10	Polychrome Factory	17.10.20	Scheduled
11	Mac Tile Factory	31.10.20	Scheduled
12	Cinnamon Life Project, Colombo	14.11.20	Scheduled
13	Odel Mall Project, Colombo	28.11.20	Scheduled

#### ii. Annual Get-to gather & Foreign Field Visits (SCAG&FFV)

Initially arranged to visit to Egypt, Turkey, Indonesia, USA/Canada, Azerbaijan and Myanmar or Laos. First visit was planned during April 2020 for general membership and two technical visits to the Insee Cement factory at Thailand were scheduled on March 2020 due to COVID 19 issue foreign visits were postponed to the end of the year.

#### iii. Public Lectures Seminars & Workshops (SCPLSW)

	Topic	Conducted by
1	New and Innovative Technologies Including Smart Cement, Corrosion, Expansive Soils with Real-time Monitoring and Behavior Models	<i>C. Vipulanandan, Ph.D. Professor of Civil Engineering, University of Houston</i>
2	Practical Usage of Emotional Intelligence	<i>Prof. Ranjith Bandara, senior professor at University of Colombo</i>
3	Tools and Techniques Available for Better Management of Projects	<i>Shanaka de Silva</i>
4	Novel Techniques for Concrete Rods	<i>Prof. Wasantha Mamppearachchi. University of Moratuwa</i>
5	Meeting Environmental Challenges Created by Urbanizations Through Green Practices	<i>Ranjith Dissanayake. Chairman of –CESC</i>

6	Modern Concrete Technology: Transforming Waste Materials	<i>Prof. Priyan Mendis, University of Melbourne, Australia</i>
7	High Performance Concrete	<i>Dr. Thushara Priyadarshana. Open University –Sri Lanka</i>
8	Covid-19 Brings Opportunities & Challenges	Ranjith Dissanayake. Chairman of –CESC
9	Financial Freedom through Financial Intelligence	Eng. Mahesh Amarasiri MBA, FCMA(UK), ACIM(UK), B.Sc. (Eng), AMIESL (Assistant General Manager -DSI)
10	Overview of Cement Standards for Performance-Based Specifications- Part1	Dr.Moussa Baalbaki, Head of Products & Solutions Portfolio, Siam City Cement LTD
11	An opportunity for the professionals to develop risk management solutions	<i>Eng. Janaka Seneviratne, BSc. Eng. (Civil)-Sri Lanka, MSc. (Local Gov. Eng.)-Australia</i>
12	Virtual field visit to Broadlands Hydropower project	<i>Jointly organized by the Civil Engineering Sectional Committee &amp; the Water Forum of the Institution of Engineers, Sri Lanka</i>
13	The Impact of COVID-19 on Construction and Infrastructure Development: Path to Recovery and Progress	<i>Eng. (Prof.) Ranjith Dissanayake., Eng. Dr. Kamal Laksiri, Eng. Malith Mendis, Eng. Rohan Tudawe, Eng. col. Nissanka n. Wijeratne, Caf M.G. Kularatne</i>
14	IESL “Live Virtual Musical Fiesta.”2020	<i>Jointly with all the IESL Chapters around the Globe</i>
15	How GPS is Reshaping our Future- again	<i>Dr. Basnayake</i>
16	Overview of Cement Standards for Performance-Based Specifications- Part 11	<i>Dr.Moussa Baalbaki, Head of Products &amp; Solutions Portfolio, Siam City Cement LTD</i>
17	Vidyajothi Eng. (Prof) E O E Pereira Memorial Oration “Resolving Issues in the Construction Industry - Some Thoughts”	<i>Eng. (Dr.) S. B. Wijekoon</i>
18	Eng. (Dr.) A N S Kulasinghe Memorial Oration “Building on a Legacy: Extending the Kulasinghe Innovations”	<i>By. Prof Priyan Dias Senior Professor in Civil Engineering, University of Moratuwa</i>

### **IESL “LIVE VIRTUAL MUSICAL FIESTA.”2020**

Setting new standards in socializing while maintaining social distancing, the Institution of Engineers Sri Lanka (IESL) hosted its first ever Virtual Music Fiesta on the 10th of July 2020. The event was organized by the Civil Engineering Sectional Committee (CESC) in collaboration with the Music Engineers Band of IESL. All 13 chapters of IESL, both local and abroad, spreaded over north to south and Qatar to Queensland were joined the event. The event had an audience of over 3000 viewers joking via zoom & Facebook (Fig.04)

## Progress of Other sub committees

<p>Committee: Techno Stall (SCTS)          Purpose: CESC stall during the TECNO 2020 Exhibition          Progress: Preparations were postponed (both online &amp; physical)</p>
<p>Committee: Building Clinic (SCBC)          Purpose: Educate the General public in Engineering aspects          Progress: 1<sup>st</sup> session was scheduled on 13<sup>th</sup> March 2020, but postponed</p>
<p>Committee: Publication and Editorial (SCPE)          Purpose: Publish articles related to CESC in SLEN</p>
<p>Articles published:</p> <ol style="list-style-type: none"> <li>M-Sand</li> <li>Field visit to the NKB Project.</li> <li>V foam Factory visit to Dompe” Published in ISSUE 47 on 06/06/2020</li> <li>Sustainable Sri Lanka through Polycentric cities” to be published in ISSUE 48</li> <li>Building to IDH, for a new CT Scanner</li> </ol>
<p>Committee: Community Projects (SCCP)          Purpose: To address the social needs with the corporation with various stakeholders          Progress: Series of seminars for school children in remote areas (Postponed)          Engineering Drafting course for differently abled youths (Postponed)          Masks for schools having less than 100 students- Fig. 05 (Completed)</p>
<p>Committee: Research Development and Innovation (RDISC)          Purpose: Provide a plat form for the young inventors who have limited facilities to showcase their inventions          Progress: Preparations were postponed</p>
<p>Committee: CPD coordination with main committee (SCCPD)          Purpose: To gather information from the Civil Engineers regarding the required CPD programs to enhance the professional capacity          Progress: Completed followings</p> <ul style="list-style-type: none"> <li>public lecture (Lean management for Engineering business leaders and engineers)</li> <li>CPD course (Lean management for Engineers)</li> <li>CPD course (Demonstration on Stabilized earth road technology)</li> </ul>
<p>Committee: Insee mix design project (SCIMD) and Melwa Steel design (SCMSD)          Purpose: Conduct researches the field of Civil Engineering          Progress: Had discussions with Open University of Sri Lanka and University of Sri Jayawardanapura.</p>
<p>Committee: Competition among the members (SCCM)          Purpose: To increase the participation of Civil Engineers in CESC activities          Progress: Two competitions were completed and third one is scheduled</p>

Committee: Overseas Chapter of CESC IESL (SCOC)
Purpose: To coordinate with IESL overseas chapters and get their active contribution to CESC events
Progress: Preparations were postponed
Committee: MOU with international CESC's (SCIC)
Purpose: To build a link with Civil Engineering wings of Engineering institutes of other countries
Progress: Preparations were postponed
Committee: Public lecture, Seminar & Workshop with other Chapters (SCCPD-C)
Purpose: To conduct Public lectures & Workshops and Seminars around the country with the support of IESL Chapters
Progress: All the schedules were postponed
Committee: Web and Social media (SCSM)
Purpose: Provide the web-based publicity to CESC activities and online platform for events
Progress: Virtual Field Visits, Virtual Music Fiesta and Public Lectures through Zoom were successfully organized
Committee: Entrepreneur forum (SCEF)
Purpose: Develop an entrepreneurial culture among the Engineers
Progress: All the schedules were postponed
Committee: Sustainability development (SCSD)
Purpose: To make more aware about the sustainable development and its benefit to the society
Progress: All the schedules were postponed
Committee: Coordination with Women's Engineering forum (SCWEF)
Purpose: To enhance the active participation of Women Engineers in CESC activities and to provide the assistance to Women's Engineering Forum (WEF) of IESL on behalf of CESC
Progress: CESC could provide the support for the program 'Shelter for Needy' by providing assistance for site supervision and design works for the construction of two houses for selected families.

#### 4. FIGURES



Fig.1: Dimbulagala Temple and some of the issues encountered during the visit



Fig.2: Crack appeared on the Stupa and the team visiting the location.





Fig. 3: Visit to ENV Factory and NKB Project



Visit to Capital Twin peak Project



Fig. 5: Moments of Donation of face masks



Fig. 4: Moments of Live Virtual Musical Fiesta

(Reported by Eng. J M Pradeep Kumara, Secretary-CESC)

## **05. Electrical, Electronic & Telecommunication Engineering Sectional Committee**

The Electrical, Electronic and Telecommunication Engineering Sectional Committee chaired by Eng. Chamil Rohana Edirimuni, supported the Council through successfully engaging in several special assignments apart from its regular events. Details of the activities conducted by the EETESC are as follows.

### **1.0 The inaugural meeting and Electrical Electronic and Telecommunication Engineering Sectional Committee for the year 2018/2019.**

The inaugural meeting of the Electrical Electronic and Telecommunication Engineering Sectional Committee was held on 13th November 2018 at 5.15 p.m at the Institution, under the chairmanship of Eng. Chamil Edirimuni

Eng. Roshan De Silva was selected as the Deputy Chairman and Eng Priyamal Samaratunga was selected as the secretary for the session 2018/2019. Following engineers were selected as committee members.

Representing Fellows:

Eng. Kosala Kamburadeniya

Eng. Shavindranath Fernando

Representing Corporate Members:

Eng. Chulani Perera

Eng Sampath Kumara

Eng. Chamath Weerasekara

Eng. T Uthayakumar

Representing Associate Members:

Eng. Mahinda Ranasinghe

Eng. Milinda Gunawardhana

Eng. H.W.M.Ishantha

Representing Affiliate Members:

Eng. Janaka Perera

Companions & Associates 03 positions

Eng. Prasanna Perera

Following subcommittees were appointed for the session.

- a. Memorial Lectures
- b. Preparation for Techno 2019
- c. Public Lectures and Short Seminars
- d. Field visits
- e. Social Works

## 2.0 Activities Conducted by the Electrical Electronic and Telecommunication Engineering Sectional Committee (EE&TESC) for the session 2018/2019.

Following activities were conducted by the EE&TESC.

- a. EE&TESC meetings and subcommittee meetings. Altogether 04 monthly meetings were held in person and 3 meeting were held online because of the pandemic situation of the country.
- b. Memorial Lectures. Following memorial Lectures were conducted by EE&TESC.
  - i. Eng. (Prof) RH Paul Memorial Lecture. 39<sup>th</sup> Memorial oration of late Eng. (Prof) RH Paul was held on 10<sup>th</sup> February 2020 at 17:15 hrs at Eng. DJ Wimalasurendra Auditorium of IESL Head office (In memory of 116<sup>th</sup> Birthday). Eng. (Prof) Sisil Kumarawadu, Head of the Electrical Engineering Department University of Moratuwa delivered the lecture on the topic on 'Engineering Education, Training, Practice, and R&D and 120 audiences were participated. A note book was distributed among the participants in memory of the annual event.
  - ii. Eng. DJ Wimalasurendra Memorial Lecture. 31<sup>st</sup> Memorial oration of late Eng. DJ Wimalasurendra was held on 17<sup>th</sup> September 2020 (In memory of 146<sup>th</sup> Birthday) at 17:15 hrs at Eng. DJ Wimalasurendra Auditorium of IESL Head office. Eng Rohan Seneviratne Additional General Manager (Distribution Division 4) Ceylon Electricity Board. lecture on the topic 'Reimagining CEB for the future'.
- c. Public Lectures and Short Seminars. There were several proposals for conducting public lectures but due to the COVID 19 pandemic situation and health regulations imposed in the country conducting public lectures have been postponed.
  - i. **Webinar on "Legal impact of Social Media and Telecommunication: Wayforward"**  
The Webinar "Legal impact of Social Media and Telecommunication: Wayforward" was jointly organized with the Young Professional Forum of the Organization of Professional Associations on 26<sup>th</sup> August 2020 from 6.00 p.m. to 8.00 p.m. The Webinar was conducted by the Senior Cancellor Attorney At Law. Mr. Sunil Abeyrathne senior attorney at law and Eng. Mrs. Tharalika Livera (Director Compliance-Telecommunication Regulatory Commission)
- d. Field Visits. Field visits were not allowed due to the COVID 19 pandemic situation and health regulations imposed in the country. Proposals were postponed
- e. Social Works. EE&TESC has arranged following social works during the session.
  - i. CSR Projects to contribute in defeating COVID -19

### **The Institution of Engineers Sri Lanka (IESL) Contributes to the Restoration of Ventilators by Biomedical Engineering Group of the Faculty of Engineering of University of Peradeniya**

During the COVID 19 pandemic crisis, Electrical, Electronics & Telecommunication Engineering Sectional Committee of IESL had partnered with the Biomedical Engineering group of the Department of Electrical and Electronic Engineering (DEEE) of Faculty of Engineering of University of Peradeniya to restore dysfunctional ventilators as a part of a project initiated jointly by University of Peradeniya and National Institute of Fundamental Studies (NIFS).

At a time when the ventilators are hard to purchase from the market, the restoration of dysfunctional ventilators had emerged as a practical engineering solution to enhance the

country's health sector's capacity to treat severely affected COVID 19 patients. Supported by the experience and academic strengths, Biomedical Engineering group of DEEE together with the Faculty of Medicine of University of Peradeniya came forward to assist the nation in such backdrop by undertaking this task. The first batch of 12 ventilators restored under this project were handed over to the Ministry of Health on April 11, 2020 at the DEEE premises.

A team of engineers lead by a group of experts in Biomedical Engineering in DEEE and the Department of Anaesthesiology & Critical Care of University of Peradeniya together with the technical staff and graduate students of DEEE worked together with a group of IESL corporate members who are past graduates of DEEE and several medical professional from Peradeniya Teaching Hospital, to provide manpower for this project. This team was able to complete the restoration of 12 units within mere 10 days displaying their commitment and expertise. The same team continues to work on this activity in addition to their engagement in the design work of a new ventilator. The sectional committee supplied and installed a gas unit for testing the ventilators which helped their course.

The handing over event was graced by Dr. Amal Harsha De Silva – Deputy Director General of Ministry of Health and Indigenous Medical Services Ministry in the presence of Prof. Upul B.Dissanayake, Vice Chancellor of University of Peradeniya, Prof. Saman Senaweera Director of NIFS, Dr. Arjuna Thilakarathne, Provincial Director of Health, the Deans of the faculties of Engineering and Medicine Prof. Gemunu Herath and Prof. Asiri Abeyagunawardena, Head of the DEEE, Prof. Manjula Fernando and the team of volunteers who worked on the project. Eng. Chamil Edirimuni attended the event representing IESL. Several key personalities representing other co-sponsors, Ceylex Engineering Pvt., Ltd, Lanka Oxygen Pvt., Ltd, and E/94, E/04, E/05, E/10 Batches of the faculty too were present.

The sectional committee would like to thank Eng. Prof. Kithsiri Liyanage, Eng. Lalith Pallegama and Eng. Dr. Lilantha Samaranayake in bringing our attention to supply and install a gas unit for the purpose of testing the ventilators at the Department of Electrical and Electronics University of Peradeniya.

ii. CSR Project at Lady Ridgeway Hospital Borella

**Supply and installing of Public addressing system at the lady ridgeway hospital, Borella, Colombo 08.**

There is a considerable amount of public attending to the OPD and other areas of the lady ridgeway hospital, Borella, Colombo 08 daily for the children's health issues. Public Health Department of the hospital is in need on running health advices and other useful information about the COVID-19 over this Public Address system to educate the public about the pandemic to mitigate the risk of spreading the decease and other health risks.

Eng. Sampath Pathirananarachchi Member EE& TSC had proposed with the advice of Eng. Shavindranath Fernando to initiate a CSR project to supply and install a Public Addressing System to the hospital specially under the COVID – 19 situation. Eng. Sampath spearheaded the CSR Project on behalf of the The Electrical, Electronics & Telecommunication Sectional Committee (EE&TSC) and we could handed over the Public Addressing System to the Director of the Lady Ridgeway Hospital on July 30, 2020 as a product of a CSR activity.

f. Electrician Licensing Framework

The Electrician Licensing framework process had been carried out since 2015 and was mainly spearheaded by Dr. Tilak Siyambalapitiya, Eng. Kosala Kamburadeniya and subcommittee. The sectional committee was able to get the cabinet approval for the process and CIDA was entrusted to issue the Licensing last year headed by Eng. Chulani Perera. Recently, the public utilities Commission has been conducting awareness sessions in all over the island and remarkable responses are being made by the Electricians for the program and it seems that the process is much needed for them. This is much of a national interest and will enhance the standards of all the technicians if the licensing process is conducted successfully for the electricians. The internationally recognized licensing process of the electricians would generate highly paid job opportunities for them in the country and specially in other countries. The job threats for them with future bilateral agreements, FTA will be minimized. The quality workmanship for the households and other constructions will be guaranteed. There will be more and more benefits if the framework is realized.

There had been recent discussions in this term by the IESL with CEB and PUCSL and the coordination among these Engineering organizations is the key for the success. Further, there should be more discussions carried out with CIDA, PUCSL, CEB and IESL which has the role of arranging the expert panels to review their eligibility and proposing suitable courses for the Electricians. The CIDA is to confirm their ability to provide license to all the eligible electricians apart from the construction projects.

The other organizations such as IIESL, TVEC are also keen on conducting these activities. The sectional committee is of the view that the IESL shall participate and lead the discussions/ involvement to a better outcome much needed for the Electricians in the country.

g. Awareness Program on recent blackout to be held on September 2020

As the country faced a total blackout on August 17, 2020, it has brought the utmost attention to the General public and media. The IESL being the premier institution for the Engineering Profession is planning to conduct a technical awareness discussion about the incident and other related matters for the benefit of our members.

The Electrical, Electronics & Telecommunication Sectional committee of the IESL had made arrangements to coordinate CEB and other resource persons with the proposed program at IESL premises at the End of the Month September 2020 for the benefit of the members and the Power Sector.

h. Other Activities

- i. Electrician's Manual – Few chapters completed
- ii. Contribution for the report: IESL Proposal for the Economic Revival of Sri Lanka after COVID 19.
- iii. Outreach Programs - Not carried out due to the prevailing situation of the COVID 19 pandemic.



Webinar “Legal impact of Social Media and Telecommunication: Wayforward”



IESL Contributes to the Restoration of Ventilators at University of Peradeniya



Supply and installation of Public addressing system at the Lady Ridgeway hospital



Eng. D J Wimalasurendra Memorial Lecture

(Reported by Eng. Chamil Edirimuni, Chairman – EE&TESC)

## **06. IT & Computer Engineering Sectional Committee**

The sectional committee monthly meetings were held at the IESL Secretariat and online on following dates as per an annual schedule: 18 November 2019, 09 December 2019, 19 January 2020, 10 February 2020, 02 March 2020, 20 May 2020 (online), 08 June 2020 (online), 13 July 2020 (online), 10 August 2020 (online) and 14 September 2020 (online).

The sectional committee elected following main committee members for the key activities for IESL Council Session 2019/2020:; Eng. Dileepa Lathsara (Chairman), Eng. M.S.M. Musthalie (Secretary) Eng. Dr. Chandana Gamage, Eng. Jeewapadma Sandagomi, Eng. Dr. Shantha Fernando, Eng. Kushan Sharma (Subcommittee chairman for Membership Drive), Eng. Samudaya Nanayakkara, Eng. Kasun Chathuranga (Subcommittee chairman for online media presence), Eng Nalinda Herath (Subcommittee chairman for Provincial Seminars), Eng Achini S Randeniya (Subcommittee chairman for IDEA Challenge competition), Eng Vidula Hasaranga, Eng. Rusiru Boralugoda, Eng. V. Kamalanath (Subcommittee chairman for Robo Games competition), Eng. Lasith Fernando, Eng. Dushan Chathuranga, Eng. Chalana Madusanka.

The sectional committee continued with several activities to fulfill its main responsibility of popularizing computer Engineering and IT in Sri Lanka. Further, to support the key activities of IESL in upgrading and streamlining member services and policy implementations, the IT & Computer Engineering Sectional Committee contributed in following areas.

### **PUBLIC LECTURE SERIES**

- A public lecture was organized by the sectional committee on **“Data-driven Insights for Complex Biological Systems”** at IESL. The focus of the talk was on Human knowledge on the biosphere. The entire understanding of the biology of earth’s ecology remains miniscule compared to the vast unknowns. Experimental biology often attempts to further this understanding by providing insights into hitherto unseen phenomena; validating and verifying our models explaining the relatively ubiquitous; and for understanding phenomena as well as reaffirming our existing knowledge. The lecture was conducted by Eng. Rajith Vidanaarachchi, a PhD Candidate of Research School of Electrical, Energy and Materials Engineering, College of Engineering and Computer Science, Australian National University, Australia.
- A public lecture on **“Blockchain beyond Cryptocurrencies”** was conducted by Eng. Samudaya Nanayakkara at IESL. The focus of the talk was on the most prominent Financial Technology or FinTech innovation of cryptocurrencies such as Bitcoin, Ripple, Litecoin and Ethereum. The technology that underpins cryptocurrencies is known as blockchain or digitalized distributed

ledger. The capabilities of blockchain technologies can be extended far beyond cryptocurrencies. It enables existing applications to be improved and new applications such as blockchain-powered elections, power grids, supply chain management, smart contracts and many other applications. The focus of talk was on what cryptocurrencies, smart contracts and blockchain are, how they work, fundamental concepts and future applications. Eng. Samudaya is a PhD researcher at Western Sydney University, Australia.

- A public lecture was organized by the sectional committee on **“Evolution of M2M Communication”** conducted in IESL. The session was conducted by Eng. Indaka Raigama, who is a Co-Founder and CEO of iTelaSoft, Australia. The topic was focused on Machine to Machine Communication (better known as M2M), which is an integral part of the Internet of Things (IoT). The lecture was mainly focused on, What is M2M and how is it related to IoT. Also, on how M2M communication evolved in the last few decades, how M2M communication became economical and viable for consumer grade applications, the recent advances in this space and the possibilities they open. The speech further dived in to details such as modern techniques, protocols and standards in the M2M space. Also it provided some insights on how IoT and M2M communication is relevant to various sectors such as industrial automation, infrastructure management, fleet/asset management and entertainment industry.
- A public online lecture was organized by the sectional committee on **“Live and Breath with Covid-19: Adapting to New Cyber Security challenges after the pandemic”**. The online lecture was conducted by Eng. Kushan Sharma, who is the Engineering manager at TechCERT, Sri Lanka. The lecture was focused on handling corporate level cyber security issues during and after COVID 19 pandemic.
- Another online public lecture was conducted on **“Why IESL Membership? Have you become a registered Engineer in Sri Lanka?”**. The award of Engineer (Eng.) status is exclusive to The Institution of Engineers Sri Lanka (IESL). It is awarded to the candidates, fulfilling the minimum requirement of becoming an associate member defined by the IESL. This online webinar guided participants through the application process and answered their queries in obtaining the associate membership and thereafter obtaining the Engineering Council of Sri Lanka (ECSL) registration. The resource persons were, Eng. Dileepa Lathsara, Eng. Dr. Shantha Fernando, and Eng. Lt. Col. Dr. Chandana Gamage.

## **ROBO GAMES**

“IESL RoboGames” is an annual competition organized by the Information Technology and Computer Engineering Sectional Committee of the Institute of Engineers, Sri Lanka in collaboration with Department of Computer Science and Engineering, University of Moratuwa, with the objective of promoting and recognizing the talents and skills of the next generation of professionals. The competition will be held in two categories; School Category and Undergraduate Category. For the school category there were series of workshops and awareness programs held in order to introduce the concept of robotics into school’s educational activities. This provides an opportunity to promote their creativity and improve their learning efficiency, encouraging them to be future engineers and inventors.

Most of the Sri Lankan students are interested in robotics technology the main constraint for them is lack of knowledge and facilities. Only very few schools have well equipped ICT laboratories, electronic equipment and resources persons. Main idea of organizing this event is to provide assistance for students to learn the art of robot development and ultimately give them an opportunity to make use of what they have learnt and showcase their talents.



This year's games featured an interesting twist due to COVID 19. This is the first virtual robot competition to be held in Sri Lanka. The competition is based on a robot simulation software. The software offers a prototyping environment that provides the user with necessary virtual hardware and the programming capability. Competitors are expected to provide solutions to the given task by utilizing these tools.

The web site: <http://robo.cse.mrt.ac.lk/>.

### **MEMBERSHIP DRIVE**

The sectional committee conducted Membership drives to enroll new Associate Members to the IESL and also to encourage engineers to obtain the Chartered Engineer status. A membership drive was held at the Synopsys (Pvt) Ltd in Colombo. Furthermore, the membership drives gave an opportunity for practicing engineers to obtain at first hand details on how they could be more actively engaged with IESL.

### **SRI LANKA IOT CHALLENGE**

SLIoT Challenge 2020 is a Competition which is organized by Computer Science and Engineering Department, University of Moratuwa and Institution of Engineers, Sri Lanka (IESL) in collaboration with Sri Lanka Telecom PLC.

The main objective of this competition is to evaluate IoT based solutions which are capable in providing solutions to general public according to Industrial level standards. By this Competition we hope to ignite imagination and creativity by providing a competitive background among each other.

The ideas of the participants will be evaluated in various aspects to determine its creativity, value, benefits, technologies etc. Winners will be chosen from the best ideas and event day performance of the applications.

This competition is organized to improve the awareness on the concept 'Internet of Things' (IoT) and its usages among the Sri Lankan community.

The Website: <http://sliot.cse.mrt.ac.lk>

### **CPD WORKSHOP ON DOCUMENTING TRAINING AND EXPERIENCE FOR ASSOCIATE MEMBERS**

The IT & Computer Engineering Sectional Committee of the IESL conducted a CPD Workshop on documenting training and experience for Associate Members. The focus of the workshop was to prepare documents for the Professional Review process highlighting the five core competencies to be achieved during the formative stage of a young engineer's career.

Engineers who are planning to apply for the IESL Corporate Membership in IT and Computer field have participated for the workshop.

### **INTRODUCING CRITERIA FOR OBTAIN CHARTER IN THEIR WORKING FIELD**

A demand for a specific Engineering discipline may change from time to time depending on many factors. The main factor for this demand is the opportunities created by the industry. Therefore, many Engineers are working in fields which is different from their field of study. For example, there are many electronic & telecommunication Engineers and electrical Engineers who are working in the IT and software Engineering field. Most of them have already gained enough experience in their

current field, thus unable to obtain the Charter because they are working in a field that is different from their main field of study.

Therefore, a framework and criteria were recommended by the sectional committee and obtained approval from the council to create a pathway for those Engineers to get their charter by obtaining enough experience and relevant education in the ICT field. The sectional committee is continuing to work on finalizing and implementing this path for engineers who are willing to work on the IT and Computer field.

### ONLINE ACTIVITIES AND PROMOTIONS

Also, the sectional committee continued to maintain its high-profile online presence with the popular Facebook page of the committee now exceeding 6,900 followers.



Robo Games



SLIoT Challenge 2020



CPD Workshop on documenting training and experience for Associate Members

(Reported by Eng. M.S.M. Musthalie, Secretary-IT&CESC)

## 07. Mechanical Engineering Sectional Committee

The inaugural meeting of MESC for the session 2019/2020 was held 20<sup>th</sup> November, 2019 chaired by Eng. Lasantha Ekanayake (M 6962). The team leaders and members were selected at the inaugural meeting as follows. There were around 40 members participating in the monthly meeting. However, due to various circumstances, they were not able to attend on regular basis. But they are in touch with the MESC on various activities such as CSR, Field visits, Public Lecture series, etc. MESC was held on every second Wednesday in each month unless notified. MESC expects 50% or better attendance record.

Position	Selected Person	Proposed By	Seconded By	Team Members
Secretary	Eng. Rantharu (AM 10119)	Eng. Lasantha (M 6962)	Eng. Arjuna (F 1041)	
Innovation	Eng. Nagahawatte (M 7948)	Eng. Lasantha (M 6962)	Eng. Kumudu (AM 18681)	Eng. Kushan (AM 17715) Eng. Parakrama (F 606)
Public Lectures	Eng. Randika (AM 9966)	Eng. Parakrama (F 606)	Eng. Sandanayake (M 1196)	Eng. A. Bandara (AM 14509) Eng. N. Abeyesundara (AM 19156) Eng. Gayanath (AM 9125)
External Affairs	Eng. Lasantha (M 6962)	Eng. Arjuna (F 1041)	Eng. Nagahawatte (M 7948)	Eng. Arjuna (F 1041) Eng. Sandanayake (M 1196) Eng. Asela (M 6958) Eng. Kamal (AM 8760) Eng. Lochana (AM 17190) Eng. Parakrama (F 606) Eng. Nagahawatte (M 7948)
CSR Project	Eng. Muthunayake (M 5536)	Eng. Lasantha (M 6962)	Eng. Arjuna (F 1041)	Eng. Nagahawatte (M 7948) Eng. Kumudu (AM 18681) Eng. Dinesh (AM 6754) Eng. Lasantha (M 6962)
Techno Exhibition	Eng. Gayanath (AM 9125)	Eng. Arjuna (F 1041)	Eng. Lasantha (M 6962)	Eng. Loshan (AM 9133) Eng. Ravin (AM 15062) Eng. Mahesh (AM 15174)
Membership Development	Eng. Asela (M 6958) Eng. Lasantha (M 6962)	Eng. Kumudu (AM 18681) Eng. Arjuna (F 1041)	Eng. Arjuna (F 1041) Eng. Gayanath (AM 9125)	Eng. Kamal (AM 8760) Eng. Ravin (AM 15062) Eng. Loshan (AM 9133)
Field Visit	Eng. Ganesh (AM 8272) Eng. Nalin (AM 14509)	Eng. Asela (M 6958)	Eng. Rantharu (AM 10119)	
Committee Members	Eng. Parakrama (F 606) Eng. Asela (M 6958) Eng. Arjuna (F 1041)	Eng. Sandanayake (M 1196) Eng. Piyasiri (M 2028) Eng. Nirosha (AM 19156)	Eng. Roshen (AM 16244) Eng. Ranathunga (AM 12817)	

### CSR Project

#### 1. Handing over complete personal protective equipment sets

27 numbers of complete personal protective equipment sets worth LKR 250,000.00 were handed over to the health care staff of Colombo South Teaching Hospital. This project was coordinated by MESC and sponsored by Lakdhanavi Limited.

Donation was carried out on 25th March 2020 and it was followed by a discussion with a panel of doctors headed by Dr. Asela Gunawardena – The director of Colombo South Teaching Hospital about the technological assistance that hospitals and healthcare system needs implementing control measures to mitigate the spread of virus as well as developing medical equipment.

Eng. Randika Amarasuriya (Former MESC Secretary), Eng. Shakthi Dissanayake and Eng. Janitha Jayasinghe joined this occasion representing MESC, IESL and Lakdhanavi Limited respectively. Eng. Kithsiri Egodawatte coordinated this activity from Lakdhanavi Limited end.

## **2. Manufacture & Handing over Personal Protective Gowns produced by MESC**

Members of IESL-MESC set up a small scale pilot production facility to manufacture and donate PPE (Gowns) with technical support from the Sri Lanka Institute of Textile & Apparel (SLITA). The facility is currently catering to the needs of National Health care sector. DG of SLITA Eng. Robert V Peiris, a Member of MESC was instrumental in setting up the technical partnership and SLITA Eng. Sarath Vijayabahu was the main stay in the factory setup.

First set of personal protection Gowns Manufactured under this project was ceremonially handed over to the Minister of Health Pavithra Wanniarachchi. Eng. Lasantha Gayan Ekanayake- Chairman MESC, Eng. Rantharu Atthanayake – Secretary MESC, Eng. Arjuna Manamperi - Former Vice President of IESL & Council Member of Engineering Council Sri Lanka, Eng. Sarath Wijayabahu-SLITA and Dr. Anuruddha Padeniya joined this occasion.

Second set of personal protection gowns (870 Nos) produced under this project were delivered to a few Kurunegala Hospitals in collaboration with the Wayamba Chapter of IESL. This donation was fully sponsored by IESL Wayamba Chapter. Eng. Prasad Siriwardena, Officer of Wayamba Chapter coordinated with MESC.

Third set of personal protection gowns produced under this project were handed over to Dr. Udaya De Silva of Anuradhapura Teaching Hospital. Eng. Lasantha Ekanayake, Chairman – MESC, IESL participated for this occasion on behalf of the committee.

## **3. MCovid Steam Decontamination Machine**

MESC Designed and fabricated a PROTOTYPE of Steam Decontamination Machine. This was handed over to Dr. Udaya De Silva (Teaching Hospital Anuradhapura) at the IESL premises. Eng. Rantharu Atthanayake – Secretary MESC, Eng. Arjuna Manamperi, Eng. Ganesh Dahanayake and Eng. Loshan Palayangoda, all from MESC participated at the event.

MCovid SD2750 Steam Decontaminator is designed for the purpose within wards, surgical rooms, general operating areas of hospitals, ambulances and patients handling areas, without the use of chemical compounds. The device uses an electrical heating element to generate saturated steam at temperatures as high as 120 Celsius. High temperature steam has a record of destroying bacteria, certain viruses and other microorganisms including many forms of pathogens. Dr. Udaya and his team plans to test the efficacy of the machine in their hospital.

## **Public Lectures**

### **1. Rampala Memorial Lecture**

The IESL commemorated the 109th birth anniversary of the Late Eng. B.D.Rampala at the Wimalasurendra auditorium of its Headquarters on Thursday, 14th November, 2019 in the presence of a large audience comprised of Council members, Past Presidents, family members of Eng. B D Rampala, Engineers of Sri Railways and general membership of the IESL. The memorial oration, delivered by Eng. Gratian A. Peiris, from Sri Lanka Railways was on the theme “Harnessing Technology to make Sri Lanka a Developed Country: Challenges & Strategies”.

Eng. Peiris is a Chartered Mechanical Engineer as well as a Chartered Management Accountant with intensive multi- disciplinary expertise in Construction, Engineering, Development Banking, Corporate & Business planning & Management.

## **2. Holistic Approach to Safety**

Public Lecture on “Holistic Approach to Safety” Organized by Mechanical Engineering sectional Committee was held on 04<sup>th</sup> December 2019, 5.30 pm onwards at Wimalasurendra Auditorium of IESL. The lecturer was Eng. Rajendran Menon – A consultant for safety having 02 decades of experiences in relevant field.

## **3. New Regulations under the Factories Ordinance Passed by the Parliament recently**

The first public lecture in year 2020 by MESL on “New Regulations under the Factories Ordinance Passed by the Parliament recently” was successfully held at Wimalasurendra Auditorium of IESL on 17<sup>th</sup> January 2020. The Presenter was Eng. Luxman Jansz - Additional Commissioner General of Labor. The lecture was focused on five important regulations recently implemented by department of labor.

## **4. After submission of PR Application – Clearing doubts about the PR Process**

With the spread of Covid 19 pandemic, public gatherings were discouraged and as an alternative Mechanical Engineering Sectional Committee had to move to online sessions. The first ever online session organized by MESL “After submission of PR Application – Clearing doubts about the PR Process” was successfully held on 25<sup>th</sup> June 2020 5.30 pm onwards on zoom platform with the participation of more than 200 participants. A panel from IESL lead by Eng. Neil Abeysekera - Chief Executive Officer/ Executive Secretary, The Institution of Engineers, Sri Lanka answered the questions about IESL Charter process raised by the Audience during this session. This session was moderated by Eng. Arjuna Manamperi - Former Vice President of IESL & Council Member of Engineering Council Sri Lanka.

## **5. Air Conditioning Best Practices for Sri Lanka’s Infection Control**

Online lecture + Panel discussion through Zoom platform on Air Conditioning Best Practices for Sri Lanka’s Infection Control. This too was conducted on 30<sup>th</sup> June 2020 5.30pm onwards via Zoon platform. Eng. Nissanka Serasinghe – A senior Engineer having 05 decades of Experiences in the field of HVAC , Archt. Major (Rtd) Ashika Munasinghe - a retired Major in the Corps of Engineering Services of the Sri Lanka Army and a licensed Chartered Architect & Dr. Chandramali Munaweera - MBBS Graduate from The Colombo Medical Faculty, working in a leading Private Hospital Joined the session as resource persons.

## **Field Visit**

### **1. Airforce Base Katunayake**

Team Leader Eng. Ganesh Dahanayake in collaboration with Sri Lanka Air Force arranged a field visit to Airforce base at Katunayake on 7<sup>th</sup> February 2020. Around 30 members participated in this visit.



Handing over complete personal protective equipment to Colombo South Teaching Hospital



Handing over Personal Protective Gowns produced by MESC to the Minister of Health Pavithra Wanniarachchi



Handing over MCoVID Steam Decontamination Machine to Dr. Udaya De Silva (Teaching Hospital Anuradhapura)



Field visit to Airforce base at Katunayake

(Reported by Eng. Rantharu Attanayake, Secretary-MESC)