NEWS LETTER

INSTITUTION OF INCORPORATED ENGINEERS, SRI LANLA - UAE BRANCH

Volume : 13.2 Since : 2006 June 2019

Membership Development

IIESL-UAE Branch has launched a Membership Development Programme to recruit new members to the Institution. IIESL-UAE has scheduled a presentation for the potential members.

Current members can direct anyone possessing an engineering diploma and need to obtain IIESL membership, to this presentation where he will be briefed regarding the requirements and advise as to how he should proceed to apply for the IIESL memberships.

Date & Time – 19th July 2019 at 6.00 – 9.00 p.m.

Venue – Grand Excelsior Hotel, Al Muteena, Deira

For further details please contact;

Eng Deepal Rajaguru: 050 9714669
Eng Nalaka Kanthiarachchi: 050 2902242

News

- ***Annual General Meeting of IIESL:*** 13th July 2019 from 4.30 pm onwards at the Bandaranaika Memorial International Conference Hall (BMICH)
- ***Ceremonial Annual Sessions of IIESL:*** 13th July 2019, from 1.00pm – 4.00pm at the Bandaranaika Memorial International Conference Hall (BMICH)
- ***Technical Session of IIESL:*** 12th July 2019, from 8.30am – 4.30pm at the CIDA, Sausiripaya, Wijerama Mawatha, Colombo 7. Theme: Green Concept in Local Industry

WhatsApp forum for effective communication with the IIESL-UAE Members

IIESL-UAE Branch has launched a WhatsApp forum for the purpose of communication of the Branch's information among its members. Considering the busy nature of the members the forum has been formed as a one way communication to limit the information flow from the Admin to the members. Members can only send messages to the Administrators who would review the content of the message and forward to the membership, if appropriate.

Any member, if not received the message on the formation of the forum, please contact the Admin of the forum, Mr. Dulin Asiri Perera on Phone: 055 9704461 or send an email to: iiesluae@gmail.com

Sri Lankan Professionals Association in the United Arab Emirates – SLPA-UAE

Tuesday 18th June, 2019 was the day that went into the history of United Arab Emirates when the agreement was signed between the newly formed "Sri Lankan Professionals Association" in the United Arab Emirates (SLPA-UAE) and MCI Middle East LLC at Radisson Blu Hotel, Dubai in the presence of Mr. Charitha Yattogoda, Hon. Consul General of Sri Lanka and other dignitaries.

The agreement was signed by the following professional associations;

- Institution of Incorporated Engineers, Sri Lanka UAE Branch - IIESL-UAE)
- Sri Lanka Quantity Surveyors, UAE - SLQS-UAE)
- Institute of Quantity Surveyors of Sri Lanka, UAE - (IQSSL-UAE)
- Postgraduate Institute of Management Alumni, UAE - (PIMA-UAE)

Prior to signing this agreement, a Memorandum of Understanding (MOU) was signed between the four Associations in the presence of the Hon. Consul general of Sri Lanka on 28th May 2019 at the Sri Lanka Consulate General Premises.

Now with the blessings of the signed agreement, the professionals on the four Associations can conduct events like, Annual General Meetings, get-together, CPDs and other events in accordance with the regulations of the UAE.

Whilst the four Associations are the initial Member Associations of the SLPA-UAE, it is the objective of SLPA-UAE to provide the opportunity to all the Sri Lankan professionals in the UAE to join the SLPA-UAE and make this the flagship of Sri Lankan professionals in the UAE. The formalities for the other professional organizations and professionals to join the SLPA-UAE are under review and the same will be published soon.

Registration as an Engineering Practitioner under the Engineering Council of Sri Lanka.

Newly formed Engineering Council of Sri Lanka has started registering Engineering Practitioners under various categories through the IIESL and IESL. Corporate Members (Fellows and Members) and Associate Members (who possess and engineering Diploma, recognized by IIESL) can now apply for registration as;

- Incorporated Engineer
- Engineering Diplomate

Respectively.

Applicants are informed to contact any of the following Office Bearers or Members of the Council of Management of IIESL for any clarifications & assistance in this regards. Kindly read the relevant sheet of **" INSTRUCTIONS FOR OBTAINING REGISTRATION"** prior to contact them.

Eng. P.A.D.R. Chandrasiri, President Elect	077 3339064 071 8069352
Eng. W.D. Fonseka, Vice President/Chairman, Membership Functional Committee	071 8263336
Eng. R.M.S. Upali, Vice President/Chairman, Prof. Affairs Functional Committee	071 4817185
Eng. R.S.G. Punchihewa, Council Member	077 7289330

For further details please click HERE and follow instruction.

Await ….!!!

13th Annual Sessions and the AGM and Annual Get-together of the IIESL, UAE Branch will be held on:

17th October 2019

Reserve the day in your diary….

IIESL-UAE e-Journal

IIESL-UAE Branch will publish a professional e-Journal together with this year's Annual Sessions and AGM. The objective of this journal is to provide a regular channel for our members to share their knowledge and experience with the members of IIESL and other professional at large.

The objective of the publication is to encourage the members of the IIESL-UAE Branch in particular and all the members of the IIESL to spare sometime to refer, read, observe and investigate matters related to their disciplines and prepare articles which will share their knowledge and expertise among our community. This will be a part of your Continuing Professional Development (CPD) and will enable enhance your knowledge and competencies on your disciplines.

The ideal content of an article shall be around 1500 words and a few relevant pics.

If you are interested in submitting an article, please confirm by sending an email to iiesluae@gmail.com. We are expecting to receive articles by late August, 2019. If you require any further details, kindly contact our committee member, Mr. Kavindra Jayasooriya on 050 3646810.

Please submit an article and contribute your share to make IIESL-UAE's attempt to publish this journal a success.

Annual Family Get-together and New Year Celebrations

Once again the members of the IIESL-UAE Branch celebrated their Annual Get-together along with the New Year Celebrations. On 26th April 2019, the members with their families met at the Al Nabooda Club House, Al Aweer and traditionally celebrated the New Year. The members, their spouses and kids took part in the traditional New Year games and enjoyed the day with traditional Sri Lankan food and sweets.

Followed by the New Year celebrations everybody joined the Annual Get-together celebrations at the Club House. It was a place for all to enjoy the evening with fun, music, dancing and networking.

Click below to see the complete albums of photos of the day: IIESL-UAE New Year and Annual Family Get-together- 2019

Album 1 (https://photos.app.goo.gl/J4tnBmiVLcBsxMqb9)

Album 2 (https://photos.app.goo.gl/zz1NnYXUB8ExV3dG6)

Album 3 (https://photos.app.goo.gl/jRvmd5y6v9bgwCzn6)

City & Guilds – For Professional Recognition Awards

Members, Associate Members of the Institution of Incorporated Engineers, Sri Lanka can now apply for the City & Guilds Awards through the IIESL. Next Award ceremony will be held in October 2019 and members who wish to apply for awards should send their applications immediately to the:

IIESL Head Office, No 27B, Udumulla Road Battaramulla, Sri Lanka.

Please note that candidates can only apply for awards through IIESL. For details please apply for the "9200 Professional Awards Handbook" from the IIESL. Email: iiesl@iiesl.lk

Automated Construction Sites

Robots in the construction industry.

We have not seen much improvements in the construction technology in the recent past. Men with hard hats and safety shoes are still carrying out almost all the activities on a construction site, install reinforcement, pour concrete, lay bricks/concrete blocks etc. Automation has changed and transformed the world of manufacturing, however, construction sector remains relatively unaffected by the much developed automation.

Engineers are now in the process of making changes. Artificial intelligence, 3D printing, and robotics are paving the way to bring automation to building construction. Below are a few technologies likely to be found on the construction sites in the near future in mass scale.

The mesh mold wall is built using the in situ Fabricator. Image: NCCR Digital Fabrication

1) Reinforcement Mesh Maker

The building is meant to be a primarily digitally produced structure. To that end, the Fabricator, a robotic arm on caterpillar tracks, will be constructing a double layer of reinforcement. This mesh framework will subsequently be filled with concrete. The free roaming robot, using the Mesh Mold technology, as they call it, can create a framework that bends and waves facilitating the engineers and architects to design curved walls as well.

Artist's rendering of the first 3D-printed home designed in accordance with strict European building codes. Image: 3D Printhuset

2) Brick Layer

Not all walls are concrete, of course. The traditional brick/concrete block wall is built brick by brick, each one put in place by human hands. But a typical human bricklayer can only place something like 500 bricks/120 concrete blocks in a day. A semi-automated mason/ bricklayer (SAM) can lay 6,000 bricks per day, with mortar. SAM won't eliminate all human workers. They're still needed to tidy up the mortar and load SAM. But the heavy lifting will be done by the machine, saving a few backs and a few dollers as it raises brick walls faster than ever.

3) 3D Printing, Gantry Style

3D printing has been building walls, a layer at a time for a few years now. In some cases, like the structures from China's WinSun, those walls are built in sections and trucked to a site where they are assembled. Other systems do their printing on site. The concrete it will use is mostly made from sand and recycled tiles. One of the pioneering companies for 3D printing in construction, Contour Crafting, will also have a system for sale to construction companies later this year. (Read more on 3D Printing in Construction: https://blog.plangrid.com/2018/11/the-truth-about-3d-printing-in-construction/)

4) Drone Builds

3D printed buildings are limited by the gantry—or the robotic arm—that prints them. Not only are they constrained by the physical size of a printer, a large site can't really use more than one at a time, as they get in each other's way. Therefore, instead of one giant autonomous builder, hundreds or thousands, of tiny ones can be used. A swarm of robots could be capable of working together on a building of unlimited size.

A new platform uses machine learning to help gather, find and use industrial photos and videos. Image: Smartvid.io

5) Artificial Intelligence

For effective use, a 3D printer, drone, or robotic arm require quality software. For robots to successfully take over the construction site, they'll need good intelligence, of the artificial kind. With AI, constructor robots will know where they and each other are at all times. They'll also learn as they go. Deep learning is already being put to use on human dominated construction sites. Similar technology could one day guide robots to fix errors they've made, or at least to flag a human when they see something dangerous.

6) Foam Spewing Arm

Engineers have used an existing industrial robotic arm to create the Digital Construction Platform (DCP). Untethered by a gantry, it has the ability to travel anywhere at a given site, constructing as it goes. This year the researchers used the DCP to create approximately 4m high, 15m diameter dome out of foam insulation. The process took only fourteen hours. The foam of that structure, or of any similarly constructed building, could easily be fitted with reinforcement and filled with concrete.

Though some of this technology has a long way to go before it becomes a reality, much of it is practically ready to go. The primary reason we do not see robots erecting buildings is the industry's resistance to change.

One can ask, the construction industry has a well-developed model of how to build buildings, how much those buildings are going to cost, and what labor is required?

To get their technology working on actual buildings, it might be better for researchers to approach architects, who are more eager to turn to the cutting edge. But however we get there, it's undeniable that there is a time coming when buildings will practically raise themselves.

Eng. Sisira Walaliyadde

FIIESL, MIESL, MICE, I Eng., CEng.

With references from: ASME web presentations

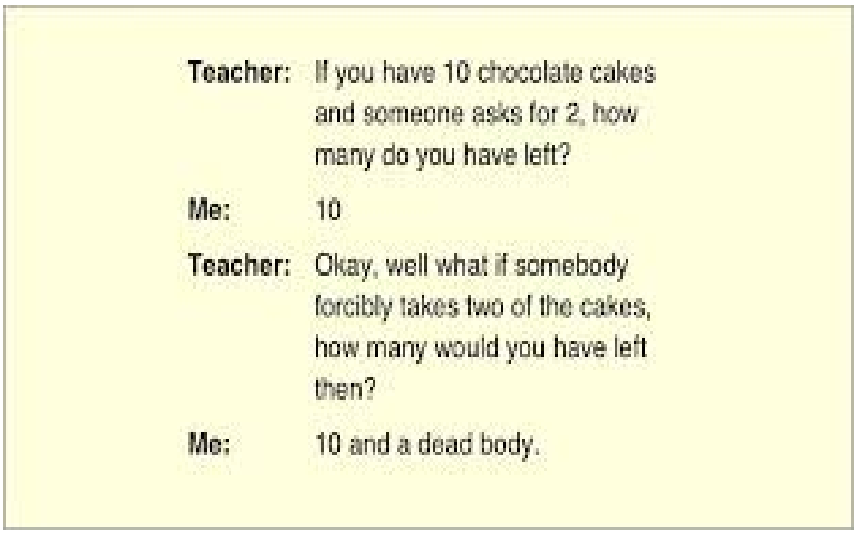
Achievements of IIESL members during the second quarter of the year:

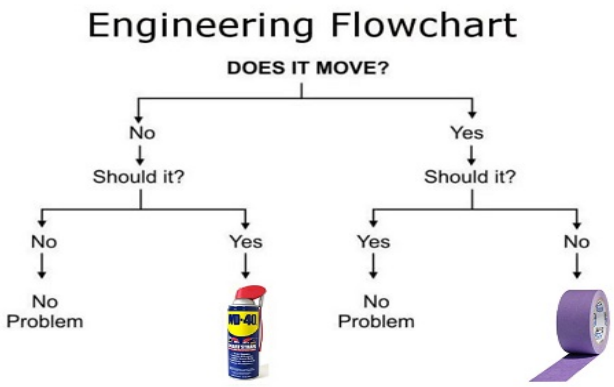
Academic & Professional Achievements

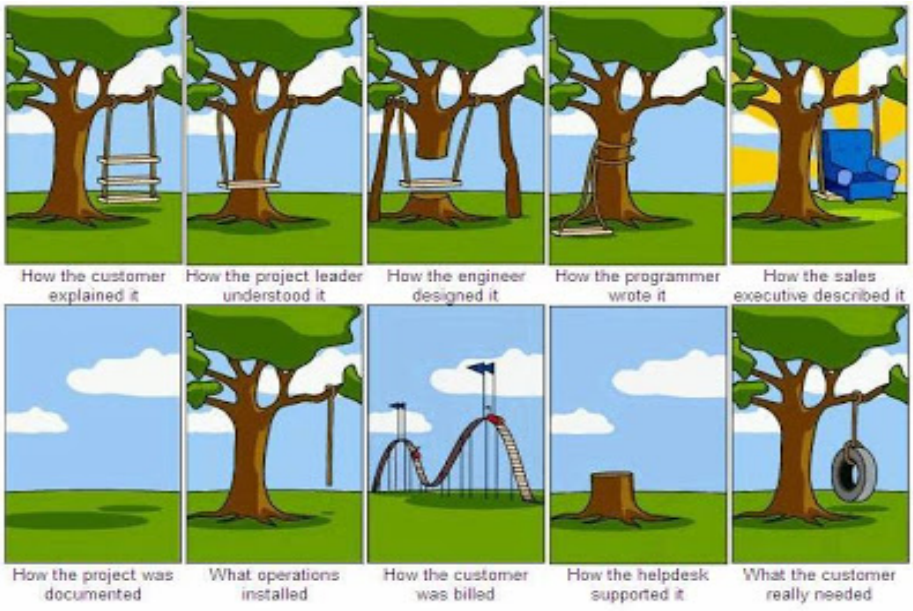
Name of the Member	Academic/Professional Achievement	Designation/ Title	Awarding Body/Institution/University	Month/Year
Eng. Arisanan Ramanathan	Corporate Member	MRICS	Royal Institution of Chartered Surveyors, UK	May-19

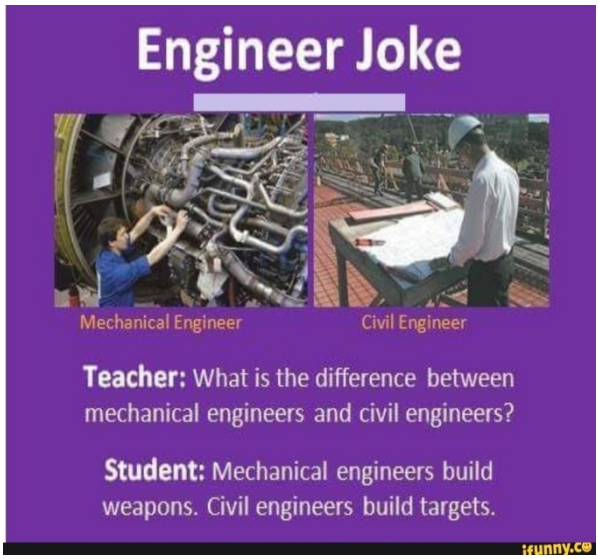
COMPLETED CPD LIST: DURING THE YEAR 2019

IIESL UAE - CPD Events Schedule Year 2019				
#	**Topic**	**Conducted by**	**Presenter**	**Date**
1	Risk Management Competencies Required for Construction Industry Professionals	ICES/IIESL	Gary Beamish, C.Eng, MICE, FCInstCES, FQSI	21/Feb/19
2	Dealing with Construction Industry Insurances"	ICES/IIESL	Rohana Alagiyage/Gaurav Sapra/Pothen Abraham	27/Mar/19
3	The monthly Progress Report and Updated Programmes	ICES/IIESL	Gary Beamish, C.Eng, MICE, FCInstCES,FQSI	21/May/19









Success or Failure of Projects

Why the products of many projects fail to perform? Why do we always find ourselves resolving the same problems again & again project after project? Are we missing something? Why do organizations undertake projects? Why many projects fail? What can we do to improve the likelihood of projects being successful?

Why Projects

Organizations need to change in order to sustain, grow & thrive in businesses. Vision of an organization is translated into values & to strategic goals. Projects are means of achieving these strategic objectives by bringing about changes & adding value to the business

Research Statistics

Research & surveys done by various professional organizations gives a good insight to the performance of projects around the world. Questions are asked to find if these projects complete on time, under budget and bring about the expected benefits to the organizations and businesses?

"PMI's Pulse of the professing report 2016" -16% of the projects were deemed as projects failed and 38% failed to meet the business intent

"PMI's Pulse of the profession report 2017", – while the project success rates are rising approximately 10% of projects deemed failed. Almost 30% of projects failed to meet the business intent.

APM's research report "Conditions for project Success" – almost 12% failed to meet the budget. Only 22% were found successful.

COIB's report in 2009 –"Managing the Risk of Delayed Completion in the 21st Century" highlights that many construction projects failed to meet timely completion causing cost overrun.

It's also noticeable that more complex the project more the chances of failure.

Project Failure

While there could be many reasons for projects to fail, below are some of the key reasons,

1. Lack of clearly defined and/or achievable milestones and measurable objectives
2. Lack of alignment with the business strategy
3. Unaligned stakeholder expectations
4. Disengaged stakeholders
5. Lack of commitment by senior management
6. Lack of involvement by the Sponsors
7. Poor project & product scope definition
8. Poor planning

9. Poor communication
10. Underperforming teams
11. Employee resistance
12. Insufficient funding

Project Success

Every project manager wants to complete his / her project successfully. For many years meeting scope, time and cost objectives was the measurement of success.

Research & statistics shows projects that complete their scope on time and under budget do not necessarily perform to the expectations. The products of such projects

1. Fail to achieve the intended technical performance
2. Are often found useless
3. Fail to provide the intended business benefits and add hence value to the business
4. Fail to satisfy the stakeholders

Such failed projects are a waste of much scares resources, time & money which are much needed for organizational growth.

Project Success Factors

Research by PMI & other professional organizations highlight several key success factors

1. Leadership
2. Effective and Efficient Governance
3. Organizational Project Management Culture
4. Clearly identified & defined goals & objectives
5. Sponsor's commitment to project success
6. Adequate planning and review
7. Engaged Stakeholders
8. Competent & high performing project teams
9. Continuous learning & development

Let us look at these factors in detail in a later article.

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