FIRST FIVE YEARS OF CIVIL AT



Edited By

Prof. S.A.S. Mohammed Ph.D., A.M., ASCE (USA) Leonine Andrade M.Tech

Department of Civil Engineering HKBK College of Engineering # 22/1, Nagawara, Bengaluru-560045 August-2018

Photo and Coverpage design by M. A. Lateef

Foreword

Civil Engineers of today's digital world have undergone a phase change from drawing boards to touch screens. In this technological evolution teaching and preparing the future professional Civil Engineers is challenging and needs continuous upgrades on basic engineering principles and computational skills.

First five years of Civil at HKBK CE is an amalgamation of activities the department had undertaken to produce Civil Engineers. It is a celebration of our 6 batches of students who had enrolled with us.

I would like to thank the Chairman, Mr. C.M. Ibrahim, and Director Mr. Faiz Mohammed C.M for having a farsighted vision and started Civil Eng. branch in 2012. In its journey of first five years the biggest priority was to establish all the labs and stabilize its human resources with strong emphasis on quality improvement. Three batches of students have graduated from the portal leaving behind a trial of achievements, to summarize

- The department has successfully obtained, completed and implemented SERB DST project worth Rs 33 lakhs,
- It has a Indian patent published in the name of the department
- It has a strong publication history featuring in ASTM and ASCE journals, it not only runs UG course but also has a doctoral course through its research centre and will be producing five Ph.Ds. shortly.
- It has state of the art equipment and infrastructure.
- Most of them have got placed through an internal setup from the department. It has strong focus on internships which has made the students obtain gainful employment.
- The student projects are of great value and have been represented in many national and international forums and diaspora.

In its short successful voyage the co-operation from all the departments helped us a lot and to name a few Mr. Abdul Hameed SA, the former Administrator was very supportive in its formative years, Prof. Dr. Sanaulla P.F, HOD, Chemistry has been actively involved with the department and has been a Co-investigator to our SERB – DST Project along with guiding our final year students in some projects. Our present Principal and former HOD Mechanical Dr. Muzammil Ahmed have evinced keen interest in the department. Our senior staffs have always worked hard for the betterment of the dept and this was not possible without their support to name a few Mr. Mubarak Ali, Mr Mohammed Abdul Lateef, Ms. M. Nihar. Lastly our students have been a great source of inspiration and there was wholehearted support from our Alumni in sharing their present details without which this report would have not been possible.

Prof. S.A.S. Mohammed Professor & Head, Dept. of Civil Engineering, HKBK CE

CONTENTS	CONTRIBUTIONS	PAGE NO:
Chapter 1 - Introduction	Mohammed Abdul Lateef	3-4
Chapter 2 - Academic achievements	Mubarak Ali	5-23
Chapter 3 - Staff achievements	Prof. S.A.S. Mohammed	24-37
Chapter 4 - R & D activities	Prof. S.A.S. Mohammed	38-48
	Bidisha Chakrabarti	
Chapter 5 - Department labs	M Nihar	45-48
	Manoj.V.P	
	Jayakarunya	
	Vindhya C.R	
	Mohammed Abdul Lateef	
	Mohammed Shahbaaz	
Chapter 6 - Photo gallery	Krati Sharma	49-61
	Dilip Kumar	
	Adil Nadeem Hussain	

INDEX

Chapter 1

INTRODUCTION

By: Prof. Mohammed Abdul Lateef, M.Tech (Ph.D.)

Assistant Professor, Dept. of Civil Engineering, HKBK CE

For every endeavour of humankind to succeed, hard work and dedication plays the most important role. Success being a continuous process is a long term realisation of service rendered to the society. Civil engineering is one such arena which delivers the basic amenities and the fundamental rights to human beings. Furthermore civil engineering also enchants the world in simplifying the life in most of the aspects may it be Environment, Transportation, Irrigation, Water Resources, Soil, Housing etc. The journey of success has enthralled the world to such an extent that imagination of something's existence without the involvement of civil engineering is very difficult. With a vision

"To empower the students through wholesome education and enable the students to develop in to highly qualified and trained professionals with ethics and emerge as responsible citizens to build a vibrant nation"

And with a mission to

"Achieve academic excellence through an in-depth knowledge in science, engineering and technology through dedication to duty, innovation in teaching and faith in human values, to enable our students to develop into outstanding professionals with high ethical standards to face the challenges of the 21st century. To provide educational opportunities to the deprived and weaker section of the society and to uplift their socio-economic status"

HKBK College of engineering since its inception in the year 1997 has strived hard in harnessing students in different fields of engineering and Civil Department started in the year 2012 in the college has a lot of feats achieved to its credit. As a youngest branch in the college the tasks of setting up the infrastructure and establishing the labs and moulding the students' minds has been well achieved. The department has always aimed at higher objectives of service and research and has successfully completed a DST project in collaboration with the chemistry department. The department has published papers in world renowned journals and proved its contribution to the field of science and technology and knowledge in general. The department

aims to continue the journey of success in the years to come and to keep serving the world with innovation and research. The civil engineering branch has successfully completed 5 years and hopes to go ahead with the mission

"To transform the department into a centre of excellence, producing quality civil engineers for the nation and for humanity with special emphasis towards sustainable development equipped with knowledge, skill, character and capability to compete at all levels"

With a mission

"To provide high quality technical education and training with research aptitude to the budding civil engineers, to nurture excellent civil engineering skills, human and social values, enhance national and global competence"

To cherish achievements in the past five years this "souvenir" is devised. This book "First five years of Civil at HKBK CE" is divided into 6 chapters, showcasing all the achievements from students and staff in a detailed manner, the sequence of chapters makes the reader inquisitive and yearns for further information. The last chapter makes a very interesting album of photos taken over these five years and is a good attraction.

Lastly the cover pages are gracefully designed with lot of passion and perseverance and is an original contribution keeping in view the high standards of professional ethics imbibed in the department. The front cover page is a photo taken at a place nearby Peer ki Gali the gate way between Jammu and Srinagar regions and the back cover is an enhanced image of a dried lake bed at Ghati Subramanya. The views expressed in this souvenir are the personal views of the authors and does not represent an individual, department and the Institution.

Chapter 2

Academic Achievements

By : **Prof. Mubarak Ali**, M.Tech(Ph.D.) Assistant Professor, Dept. Of Civil Engineering, HKBK CE

Nature provides us with plenty of resources. At the same time nature has its hostile behaviour. Human beings need to tame this nature to support development activities and utilize the natural resources properly. Throughout the history of modern civilization, Civil Engineers have been doing this work and have always been at the forefront of the drive for the improvement of our standard of living. In every modern society, Civil Engineers always play the key roles in the planning, design and construction of the infrastructure that improve the modern life. From the buildings that we live in to the offices and industries we work in, the roads and bridges that we travel on, the skyscrapers that symbolize cities and define the skylines to the towers that provide electricity, the dams that protect populations to the dams that generate power, Civil Engineers have always been the essential torch bearers of human civilization. From flood mitigation to riverbank protection, design against earthquake to protection for cyclones, planning for traffic control to environmental pollution control, they strive to mitigate human sufferings on a huge range of problems.

Civil Engineering students of HKBK CE have been in the fore front in terms of academic achievements. The success rates of our graduate students are 40, 64, and 67 students respectively from last 3 batches.

The following table gives the list of toppers from our three batches who have graduated from the portal of the college.

SEMESTER WISE TOP 5 STUDENTS LIST

ACADEMIC YEAR 2012-2016

USN	STUDENT NAME	MARKS	PERCENTAGE
1HK12CV030	Pooja G V	697	77.44
1HK12CV035	Shri. Shruthi	662	73.55
1HK12CV006	Anugna Yadav	614	68 22
1HK12CV028	Nishant		08.22
1HK12CV043	Muzammil Zeeshan	613	68.11
1HK12CV041	Syed Mannan Sami	607	67.44

3RD SEMESTER 2013-14

USN	STUDENT NAME	MARKS	PERCENTAGE
1HK12CV035	S.Shirshruthi	677	75.22
1HK12CV043	Syed Muzammil Zeeshan	659	73.22
1HK12CV030	Pooja G V	652	72.44
1HK12CV028	Nishanth S	641	71.22
1HK12CV041	Ismail K	640	71.11

4TH SEMESTER 2013-14

5TH SEMESTER 2014-15

USN	STUDENT NAME	MARKS	PERCENTAGE
1HK12CV035	S.Shirshruthi	700	77.77
1HK13CV400	Dewakar S	665	73.88
1HK12CV030	Pooja G V	660	73.33
1HK12CV005	Animesh Kanrar	639	71
1HK12CV006	Anugna Yadav	630	70

6TH SEMESTER 2014-15

USN	STUDENT NAME	MARKS	PERCENTAGE
1HK12CV005	Animesh Kanrar	687	76.33
1HK12CV007	Asmath Parvin Adil	674	74.88
1HK12CV006	Anugna Yadav	650	72.22
1HK12CV001	Aquib Patil Patel	649	72.11
1HK12CV030	Pooja G.V	648	72

7TH SEMESTER 2015-16

USN	STUDENT NAME	MARKS	PERCENTAGE
1HK12CV005	Animesh Kanrar	687	76.33
1HK12CV007	Asmath Parvin Adil	674	74.88
1HK12CV006	Anugna Yadav	650	72.22
1HK12CV001	Aquib Patil Patel	649	72.11
1HK12CV030	Pooja G.V	648	72
1HK12CV007	Asmath Praveen	639	71

USN	STUDENT NAME	MARKS	PERCENTAGE
1HK12CV001	Aaquib Patel	619	83
1HK12CV030	Pooja G V	619	83
1HK13CV400	Dewakar	616	82
1HK12CV007	Asmath Parveen Adil	611	81
1HK12CV005	Animesh Kanrar	606	81

8TH SEMESTER 2015-16

ACADEMIC YEAR 2013-2017

3RD SEMESTER 2014-15

USN	STUDENT NAME	MARKS	PERCENTAGE
1HK13CV055	Udaya Kumar Reddy.R	686	76.22
1HK13CV016	Mallika V.N	681	75.66
1HK13CV032	Naveen Singh Gusain	654	72.66
1HK13CV062	Tawseef Ahamed Parah	652	72.44
1HK13CV051	Srinidhi.N	644	71.55

4TH SEMESTER 2014-15

USN	STUDENT NAME	MARKS	PERCENTAGE
1HK13CV016	Mallika V.N	732	82
1HK13CV048	Shakir Ahmed	725	81
1HK13CV061	Zahoor Choudhary	718	80
1HK13CV056	Ummer Qadir Pandit	711	79
1HK13CV055	Udaya Kumar Reddy	710	78

5TH SEMESTER 2015-16

USN	STUDENT NAME	MARKS	PERCENTAGE
1нк13сv005	Aman Biradar	740	82.00
1нк13сv032	Naveen Singh Gusain	691	76.77
1нк13сv040	Raja Zubair	662	72 55
1нк13сv016	Mallikav.N		13.33
1нк13сv007	Anil Kumarpati	657	73.00
1нк13сv009	Burhan Ulwafa	037	
1нк13сv062	Tawseefahmadparah	633	70.33

USN	STUDENT NAME	MARKS	PERCENTAGE
1HK13CV032	Naveen Singh Gusain	697	77%
1HK13CV005	Amanbiradar	658	73%
1HK13CV016	Mallika V.N.	653	73%
1HK13CV009	Burhan Ulwafa	636	71%
1HK13CV051	Srinidhi N.	636	71%

6TH SEMESTER 2015-16

7TH SEMESTER 2016-17

USN	STUDENT NAME	MARKS	PERCENTAGE
1HK13CV005	Naveen Singh Gusain	736	81
1HK13CV032	Aman Biradar		01
1HK13CV016	Mallika V N	711	79
1HK13CV021	Mir Tahoor	708	78.66
1HK13CV009	Burhan Ulwafa	700	77.77
1HK13CV008	Anjum Sultana	694	77.11

8TH SEMESTER 2016-17

USN	STUDENT NAME	MARKS	PERCENTAGE
1HK13CV032	Naveen Singh Gusain	603	80.40
1HK13CV005	Amanbiradar	597	79.60
1HK13CV064	Aqsa Basir	582	77.60
1HK13CV009	Burhan Ul Wafa	581	77.40
1HK13CV039	Radhika	576	77.00

ACADEMIC YEAR 2014-2018

3RD SEMESTER 2014-15

USN	STUDENT NAME	MARKS	PERCENTAGE
1HK14CV067	Rakesh Shah	672	74.6
1HK14CV043	Ruby Rachel George	644	71.5
1HK14CV024	Mohammed Aleemulla	641	71.2
1HK14CV007 Dilip Kumar Ks		630	70.00
1HK14CV008	Eshan Fayaz Bhatt	622	69.1

USN	STUDENT NAME	MARKS	PERCENTAGE
1HK14CV067	Rakesh Shah	742	82
1HK14CV024	Mohammed Aleemulla	684	76
1HK14CV038	Pavithra	667	74
1HK14CV043	Ruby Rachel George	638	71
1HK14CV060	Rajneesh Pandey	631	70

4TH SEMESTER 2014-15

5TH SEMESTER 2015-16

USN	STUDENT NAME	MARKS	PERCENTAGE
1HK14CV024	Mohammed Aleemulla	698	77.56
1HK14CV038	Pavithra	696	77.33
1HK14CV067	Rakesh Shah	693	77.00
1HK14CV043	Ruby Rachel George	646	71.77
1HK14CV008	Eshaan Fayaz Bhat	645	71.66

6TH SEMESTER 2015-16

USN	STUDENT NAME	MARKS	PERCENTAGE
1HK14CV067	Rakesh Shah	747	83.00
1HK14CV024	Mohammed Aleemulla	727	80.78
1HK14CV038	Pavithra	711	79.00
1HK14CV008	Eshan Fayaz Bhat	704	78.22
1HK14CV060	Rajneesh Pandey	685	76.11

7TH SEMESTER 2016-17

USN	STUDENT NAME	MARKS	PERCENTAGE
1HK14CV024	Mohammed Aleemulla	755	83.88
1HK14CV067	Rakesh Shah	732	81.33
1HK14CV038	Pavithra	696	77.33
1HK14CV039	Pooja S.S.	687	76.33
1HK14CV005	Anand	683	75.89

USN	STUDENT NAME	MARKS	PERCENTAGE
1HK14CV038	Pavithra	628	83.74
1HK14CV039	Pooja S S	611	81.50
1HK14CV067	Rakesh Shah	606	80.80
1HK14CV043	Ruby Rachel George	594	79.20
1HK14CV029	Mohammed Izhar K R	585	78.00

8TH SEMESTER 2016-17

PROJECT DETAILS:

Projects play a very important role in showcasing the academic, professional and industrial prowess a student has gained during his course.

It has been a good opportunity to use their knowledge and creativity and come out with projects which had social, commercial and cultural importance. Under the able supervision of guides these projects were able to meet their goals and objectives. The following table gives details of all the final year projects conducted by our students from the three outgoing batches

ACADEMIC YEAR 2015-16 (Final Year)

SI NO.	PROJECT TITLES	GUIDE NAME	STUDENT NAMES
	Studies on the effect of		Eswarareddy.A.Y
1	chelating agents to desorb	Dr. Syed Abu Sayeed	Muhammed Jaffer
1	Nano Calcium silicate	Mohammed	Varsha Nair
	(NCS) amended soils		Hussen Basha
	Studies on the effect of		Abdul Khalid
	chelating agents to desorb	Dr. Courd Alex Coursed	Reehan Pasha
2	spiked Nano Calcium	Dr. Syed Abu Sayeed	Sunil.K
	silicate (NCS) amended soils	Monamilea	Krishna murthy
	Studies on the effect of		Aaquib Patel
	chelating agents to desorb		Govind
3	spiked Nano Calcium	Mohammed	Praveen Bhovi
	silicate (NCS) amended soils		Farhaan
	Investigating the resistance		Farahan safiwani
4	of Nano Calcium Silicate	Mr. Pradeep Kote &	JeevanKumar.K
	(INCS) amended concrete &	Mohammed	Potu Satish
	environments		Pooja G V

SI NO.	PROJECT TITLES	GUIDE NAME	STUDENT NAMES
	Nano calcium silicate (NCS)		Asmath Parveen Adil
~	amended concrete & mortar	Mr. Pradeep Kote &	Farris AimanYas
5	strength construction	Mohammed	Vinod Kumar
	material		Dewakar
	Flyash cement Nanocalcium		K.Harikrishna
6	silicate (NCS) mixture as a	Mr. Ashfaque Ahmed	Rajashekhar
0	sustainable construction	Saveed Mohammed	Syed Mannan
	material		S.ShriSruthi
			Ismail.K
7	Studies on the resistance of Flyash Cement NCS mixture for harsh environments	Mr. Mohammed Idrees	Nishant
/		Sayeed Mohammed	Shashi Kumar Yalwar
			MdTauqeer Ahmed
	Plant based potassium induction in soils to treat problematic soils	Mr. Irfan Ulla Sharief & Dr. Syed Abu Sayeed Mohammed	Madhukiran C.S
0			Syed Zeshan
0			Shibli Raza
			Kishore M.Naik
	A study on enhancement of		Anugna Yadav
0	geotechnical properties of	Ms. M Nihar & Dr. Syed	Muhammed Nazish
9	Nano calcium silicate (NCS)	Abu Sayeed Mohammed	T.Vinod Kumar
	amended soils		Ovan
	Sustainable use of Flyash		Animeshkanrar
10	Nano calcium silicate (NCS)	Mr. Mubarak Ali & Dr. Syed Abu Sayeed Mohammed	J.MohammedNayazBaig
10	prospective geotechnical		MdMassomSauqib
	material		MarginaAngadi

ACADEMIC YEAR 2016-17

SL NO.	PROJECT TITLES	GUIDE NAME	STUDENT NAMES
	Studies on the corrosion resistant of RCC structures amended with starch derivatives		Sajjad Ahmed
1		Dr. Syed Abu Sayeed Mohammed and Dr. Sanaulla PF	Hensa Peter
			Zahoor Choudhary
			Rameez Ahmad Banka
	2 Influence of conventional waste materials as binders on the strength characteristics of soil	Mr. Mohammed Abdul Lateef and Dr. Syed Abu Sayeed Mohammed	Shakir Ahmad
2			Ummar Qadir Pandith
			Sameer
			Adil Rahim Maniyar

SL NO.	PROJECT TITLES	GUIDE NAME	STUDENT NAMES
			Aamir Fayaz
	Influence of supplementary	Mr. Mohammed Abdul	Raja Zubair
3	strength characteristics of	Lateef and Dr. Syed Abu	Arunkumar
	soil	Sayeed Mohammed	Md. Aminul Islam Khan
			Aman Biradar
4	Effect of fly ash and lime on Geo-Technical Properties of	Mr. Mubarak Ali and Dr. Sved Abu Saveed	Amit Singh
-	Black Cotton soil	Mohammed	Mohit Kumar
			Devraj .K
			Naveen Singh Gusain
	Effect of fly ash and lime on	Mr. Mubarak Ali and Dr.	Meer Aquibulla R.
5	Geo-Technical Properties of	Syed Abu Sayeed	Mahmoud Tawfik
	Red soil	Mohammed	Adnan S Chandra Shekara
			Ramesha Kori
			Srinidhi N.
6	Embeded energy on building materials	Mua Acho Doni ND	Sujata
0		MIS. Asna Kani N K	Pradeep V.
			Prajwal A.B.
	Analysis and design of Multi storey (G+5 Library building using STAAD Pro-	Mr. Mohammed Idrees Khan	Shakir Rasool Mir
7			Tawseef Ahmad Parah
/			Mohammed Ishaque
			Mohd Umer
	Studies on almond shell	Dr. Syed Abu Sayeed	Burhan Ul Wafa
8	amended expansive soil as		Aqsa Bashir
0	a prospective geotechnical	Mohammed	Syed Zahid Nabi
	material		Adil Ahmad Handoo
			Mallika V.N.
0	Influence on strength	Dr. Syed Abu Sayeed	Anjum Sultana
9	parameters on bio- stabilizer	Mohammed	Md. Yunus Khan
	amended kaomitte son.		Hummayoun Khurshid
			Mohamad Abdul
10			Kaleem
	Replacement of fine aggregates by Fly Ash	Ms. M Nihar	Mohamed Ameersha
			Khan
			Mubeen Pasha
			Zeeshan Ahmed J.S

SL NO.	PROJECT TITLES	GUIDE NAME	STUDENT NAMES
11			Radhika
	Partial replacement of	Ma M Nibor	Shaikh Mansab Kafeel
11	aggregates by glass		Shekhappa
			Mir Tahoor Khurshid
			Sabir Rafiq Bhat
10	Analysis and Design of	Mr. Mohammed Idrees	Mohammed Khalid
12	huilding	Khan	Monirul Haque
	c unung		Jahangir Alam Ahmed
			Gayatri V.K
	Strength behavior of concrete using Rice Husk Ash as partial replacement of cement		Doddamani
13		Ms. Asha Rani N R	Santhosha Kumara .S
			Mohammed Furquan
			Syed Mehmood Afzal
	Experimental investigation on strength characteristics of Fly Ash as partial replacement of cement	Ms. Asha Rani N R	Masroor Nabi
14			Jacob Mathew
14			Shareef V M
			Ganesh S.
	Electrical Resistivity survey		Yogesh D.M.
15	of Dandupalya, Hoskote	Mr. Iftigar Ahmod Shariff	Vishal R. Patil
15	Taluk, Bangalore rural	Mi. Iluqai Allineu Shaffi	Shrihari Subramani M.
	District, Karnataka.		Anilkumar Patil
			Kavana .C.V
16	Water resource of Pavgada Taluk, Tumkur District, Karnataka	Mr. Iftiqar Ahmed Shariff	Udaya Kumar Reddy R.
			Praveenkumar
			Fairoz Pasha .C

ACADEMIC YEAR 2017-18

SI NO.	PROJECT TITLES	GUIDE NAME	STUDENT NAMES
1	Treatment of Sugar industry waste water by anaerobic method	Mrs. Jayakarunya	Dilip Kumar K.S.
			Karthik P.
			Monohara C
			Bhimsen Dasar
2	Preservation and regeneration of the Bellendur lake	Mrs. Jinju James Olickal	Syed Shafathulla

SI NO.	PROJECT TITLES	GUIDE NAME	STUDENT NAMES
			Mohammed Furhan Shariff
3	Feasibility study on Self- Sustaining Green Colony	Dr. Syed Abu Sayeed	Mohammed Imran
		Mohammed	Muhammad Umar Sharieff
			Shoaib Khan M
	Studies on use of an		Mohammed Ismail
4	indigenous clay liner to retard	Dr. Syed Abu Sayeed	Mohammed Gibreel
-	lead in a waste containment	Mohammed	Md. Salman
	facility		Nuzhat Fatima
	An experimental investigation		Ruby Rachel George
	on concrete runway by		Rajneesh Pandey
_	Synthetic Material LD slag,		Rakesh Shah
5	Reprocessed E-waste fibres, and ordinary Portland Slag Cement in the Concrete Mix Design.	Mr. Mohammed Shahbaaz	Chackson J .Ollukkaran
	Controlled Low Strength Material (CLSM)	Mrs. Krati Sharma	Anand
6			Kirti Sagar Verma
0			Pavithra
			Pooja S S
	Permeable Concrete Pavement	Mrs. Jinju James Olickal	Mohammed Aleemulla
7			Mohammed Azar
,			Nagma Shaik
			Harish N Badiger
	Physico Chemical Analysis of	Dr. Syed Abu Sayeed Mohammed	Likhith H.C.
8	Ground Water Quality and Application of GIS and		Shaik Ahmed Jawad
0			Waseem Pasha
	Remote Sensing Technique		Rishav Kumar Rakesh
			Ravikiran B.R.
9	feasibility study on Facilities	Mrs Javakarunya	Srikantha T.A.
9	Road Circle	iviis. su yukur un yu	Nabam Tatang
			Tayum Sonu
			Vinay Narayan Swamy
	Externally Bonded Glass FRP		Jaideep M.P
10	For Improving The Strength Of Concrete	Mrs. Vindhya C R	Mohammed Faizulmateen Qureshi
			Mohammed Zain K.

SI NO.	PROJECT TITLES	GUIDE NAME	STUDENT NAMES
	Comparative Study on		Md. Azhat Ruman R
11	Conventional and Geo- Polymer Concrete with and	Mag Kasti Chames	Umra Shabnum
11		MIS. Krau Sharina	Zain Ahmed Sawar
	without Polypropylene		Ismath Ali Khan
			Manoranjan K
10	Stabilization Of Black Cotton	Mr. Mohammed Abdul	Md Japhirul Rain
12	Admixtures	Lateef	Prashanth K.S.
			Ram Jiwan Adhikari
	An Experimental Study On		Farhan Ahmed T
12	Partial Replacement Of	Ma M Nibor	Md. Zuber M
15	Dust Powder And Cast Iron	IVIS. IVI. INIIIAI	Shruti Kalaburgi
	Power Waste		Vinay R
			Jan Mohammad Bhat
	Planned water supply and		Athar Ibrahim
14	drainage system	Mr. Mohammed Shahbaaz	Mohamed Hazim
			Tantry
			Suhail Qadir Parry
	Utilization Of Waste Rubber Tyres In Flexible Pavements		Ehsan Fayaz Bhat
15		Ms. M. Nihar	Md. Yusuf
15			Mohammed Izhar K.R.
			Sheikh
	Reuse Of Waste Water For Flushing And Gardening	Mrs. Jayakarunya	Nizzamuddin
10			Manoj S
10			Sandhesh Kori
			Srinivas S
			Mohammed Fayaz Shah
	Properties Of Soil By Using	Mr Mohammed Abdul	Pure Darzi
17	Lime And RHP As A	Lateef	Md Sultan Sallanuddin
	Stabilizers		Ma Sairuddin
			Nazir Ul Hassan Shoib
	Strength analysis of concrete		Tanzeem Pasna Muiz Ahomod
18	by using cinder aggregate and	Mrs Sangeetha	Muiz Anamed
	by sugar cane bagasse ash.		Raqeed Ayaz
	oj sugar cuito sugasso asir.		
	Surveying, structure analysis.		Vijay J K Nagaraj Sh
19	design and estimation of	Mrs.Vindhya C R	Ivagaraj Sil
	proposal hkbk degree college		Hanumapa Pujar
			Sagar I

SI NO.	PROJECT TITLES	GUIDE NAME	STUDENT NAMES
	Temple Waste Management	Mrs Sangeetha	Amrutha Chandra Sekhar
20			Palakshi K
			Kashif Omair
			Manjunath Kongi

INDUSTRIAL TRAINING OR INTERNSHIP

Internship or attachment of the student with an industry before she/he graduates helps her/him to grow in confidence to work in real life situations. The internship also opens the opportunity for a student to show her/his potential, which may enhance his professional career. It is considered as one of the most important and integral part for technical education in many reputed universities all over the world.

Students are very much encouraged to spend the vacation period in any of the Industries of their choice to get the feel of Industrial atmosphere and to plan their project activities and areas of interest.

Following is the list of students who have attended industrial training or Internship during summer vacation.

Sl. No.	Name of company	Name of student
1	PWD, Muzaffarpur 842002, Bihar	Kashif Omair
2	Citrus Construction company, Bengaluru	Mohammed Imran
3	L & T Metro Rail (Hyderabad) Ltd	Ishan Fayaz Bhat
		Mohd Salman,
1	HAL Helizopter division Dengelum	Syed Imran
4	TAL Hencopter division, Bengaluru	Nuzhath Fathima,
		Rakesh Shah
5	DMDCL Dependence	Chackson J .Ollukkaran
3	DMRCL, Bengaluru	Ruby Rachel George
6	S.P.C.L, Brigade Panorama, Mysore Road, Bengaluru.	Ruby Rachel George
7	Nikitha Build Tach But I to Bangalum	Shruthi Kalburgi,
	Nikilia bullu Tech rvt Lld, Bellgaluru	Amruta Chandrashekhar Arkasali

ACADEMIC YEAR 2017-18

Sl. No.	Name of company	Name of student
0	Shehha Davalonara, Pangaluru	Nagma sheik
0	Shoona Developers, Bengalulu	Mohammed Aleemulla
		Rajnesh Pandey
0	The Chief Project Officer, BIAL, Bengaluru	Rakesh Shah
9		Manjunath Kongi,
		Mohammed Izhar K.R.
10	Adarsh Developers, Bengaluru	Amruta Chandrashekhar Arkasali
11		Mohammed Nouman Sheikh
	The Prestige Estates and Projects Ltd, Rongelury	Mohammed Furhan Shariff
	Dengaluru	Ishan Fayaz Bhat

ACADEMIC YEAR 2018-19

Sl. No.	Name of company	Name of student
1	Sai Kalyan Builders And Developers	Ranjith R K
2	E Construct Design And Build Pvt Ltd	Karthik Prasad
3	E Construct Design And Build Pvt Ltd	Amit Arjun Chavan
4	Arunachal Consultant	Praveen Kumar. Mb
5	L&T Transportation And Infrastructure	Adil Faisal Khan
6	Sai Kalyan Builders And Developers	Gajendra B G
7	Sai Kalyan Builders And Developers	Manoj k n
8	Sai Kalyan Builders And Developers	Venugopalareddy B
9	Nanda Constructions	Manoj Kumar M
10	Nanda Constructions	Harshitha N
11	Baalagi Project (Nagarotthana)	Roja K T
12	Nanda Constructions	Khomala.H.R
13	Vikram Structure Private Limited	Santosh Gopashetti
14	Shobha Developers Ltd.	Kezia Ann Shiji
15	Arunachal Consultant	Rakshith Kumar
16	S R Constructions	Bharath S Patil
17	Bmrcl (Itd Cemindia)	Mohamed Abid Hussain
18	Bmrcl (Itd Cemindia)	Mohammed Rabbani
19	Bmrcl (Itd Cemindia)	Md Kashif Baig
20	Prestige Group of Constructions	Taiyab Ahmed Khazi
21	Prestige Group of Constructions	Md Inam ul Hasan
22	Prestige Group of Constructions	Md Zuber

STUDENT ACHIEVEMENTS

Alumni students play a very important role in carrying forward the vision of our Institution and with the type of education imparted it gets reflected in their future professional life. Since only three batches have graduated we have tried to document the achievements of our alumni and the important positions they have occupied thereafter. The following tables give details of their present professional activities.

Students who have cracked Gate Qualified students

Sl No.	Name	Year
1	Syed Zahid Nabi	GATE 2017
2	Naveen Singh Gussian	GATE 2017

Details of students preserving higher studies aboard

SL. NO	Name	Courses	College	Specialization
1	Hari Krishna Katipalli	MS	Latrobe University, Melbourne, Australia	Project Management
2	Satish pottu	MS	University technology of Sydney, Australia	Professional engineering
3	Vinod Kumar Thurlapati	MS	University technology of Sydney, Australia	Professional engineering

Details of students preserving higher studies aboard

SL. NO	Name	Courses	College	Specialization
1	Krishna Murthy H	M.Tech	VTU Regional and Post graduated centre Kalburgi	Highway Engineering
2	J Mohammed Nayaz Baig	M.Tech	JSS Science and Technology University	Health & water Engineering (Environmental Engg.)
3	Aman Biradar	M.Tech	PDA college of Engineering, Gulbarga	Structures
4	Anil kumar Patil	M.Tech	Sambhram Institute of Technology	Structures
5	Shaikh Mansab Kafeel	M.Tech	Resource centre for Asphalt & soil training academy	Infrastructures, construction & Management
6	Zeeshan Ahmed J S	M.Tech	Resource centre for Asphalt & soil training academy	Infrastructures, construction & Management
7	Mohammed Ishaque	M.Tech	Vijaya Vidal college of engineering	Construction Management

SL. NO	Name	Courses	College	Specialization
8	Zahoor Choudhary	M.Tech	Himachal Pradesh Technical University	Structural Engineering
9	Devraj K	M.Tech	NITTE Meenakshi	Structural Engineering
10	Aamir Fayaz	M.Tech	Ambala University Harayana.	Geotechnical Engineering

Details of Employment status of the students of civil engineering

Sl No	Name	Company	Designation/Position
1	Aaquib Patel	Total Environment building Systems Pvt Ltd.	Executive/Installation Engineering
2	Animesh Kanrar	Opus Architect and Vitana Projects	Quantity surveyor and Planning engineering
3	Sajjad Ahmed	New Consolidated construction Co Ltd	Quality Engineering
4	Meer Aquibulla R.	Sobha Developers	Site Engineering
5	Arun Kumar	Srikar Enterprises	Site Engineering
6	Srinidhi N.	K2K infrastructures	Quantity Surveyors
7	Prajwal A.B.	D S Maxx	BQE-Building Quantity Estimation
8	Vishal R. Patil	Padam Interior	Site Engineering
9	Mubeen Pasha	3D Solution	Draft man
10	Gayathri V K Doddamani	Manjunath & Co Structures	Draft man
11	Praveen Kumar	Manojna Enterprises	Site Engineering
12	Mallika V N	Sandarbh Architects	Quantity Surveyors
13	Sujata	Padam Interior & Civil Works	Draft man
14	Kavana CV	R K Infra India private Ltd.	Quantity Surveyors
15	Chandrashekar Ramesha Kori	Local Contractors	Junior Engineer
16	Mohit Kumar	Wipro Company	Trainer
17	Ganesha S	Vishwas Consultancy	Site Engineering
18	Adil Rahim Maniyar	United Piping Solution	Sale executive
19	Udaya Kumar Reddy R.	SRK	Site Engineer
20	Fairoz Pasha C	Design Point Consultancy	Site Engineer
21	Syed Mehmood Afzal	Ryan Developers	Site Engineer
22	Mohammed Furquan	Redisice Developers	Site Engineer
23	Jacob Mathew	Cherian Varkey construction company	Assistant Site Engineer
24	Humayun Khursheed	Jones Lang Lasalle Executive Project	Site Engineer

Sl No	Name	Company	Designation/Position
25	Adil Ahmad Handoo	Tawkal Construction	Site Engineer
26	Sabir Rafiq Bhat	Egyptian Group	Supervising & Management
27	Mohamed Amer Sha Khan	A K Associates	Supervising & Management
28	Santhosha Kumara S	Karnataka Rural Infrastructures Development Ltd.	Junior Engineer
29	Jahangir Alam Ahmed	Bhaskar Foundation	Civil Trainer

Details of Industrial Visit conducted for the students of civil engineering

Sl No	Month/Year	Name of the company visited
1	April-2014	Ready Mix Concrete (RMC) – Gunite plant at Yellahanka
2	March-2015	Water treatment plant of BWSSB at Thorekadunahalli
3	March-2015	Bharat Heavy Electricals Limited (BHEL) has commissioned a 5-Mw grid-connected solar power plant at Shivasamudram near Mandya.
4	November-2015	Confederation of India Industry (CII), India's premiere industry Association presents Excon 2015
5	October-2017	Karnataka State Remote Sensing Centre

TESTIMONY OF A DISTINGUISHED STUDENT 2012 BATCH

"Life goes on, whatever is happening would have been planned by the Almighty, just wait for it to be the right time and you will see the sun shining bright on you " ~Abdul Hameed SA



Mrs.Asmath Parveen Adil, (2012-2016 Batch) Software Developer, Tech Mahindra (London Campus)

On evening of 26th October 2015, when I cracked the campus interview of one of the fortune 500 companies Tech Mahindra , Head of my department and my lecturers were proud of my achievement .Being able to crack able of the most difficult aptitude of any interview pattern my family was proud of me too. And yes the sun was shining on me now.

The journey of associate software engineer to a software engineer and now to an IT consultant was not an easy ask. Being able to climb up the ladder would not have been possible without the encouragement of My HOD Dr. Syed Abu Sayeed Mohammed and the staff of Civil department, who despite of the offer being from a software company, embolden me to accept to the changes as they had recognised my potential .

Progressing through the online internal assessments courses at Tech Mahindra, I gained more knowledge on SQL, PLSQL, RDBMS and Business Intelligence. Clearing the internal job posting interview for a networking profile required a lot of learning an unlearning ,being trained on technical background in engineering did play a vital role for me to be become a Network Planner .The grace of engineering will forever be carried on as the legacy of learning new technologies and proficiency remains the same throughout .

Going forward I would always be humbled to be a part of HKBKCE, which is the only reason that I am being able to show case my talent and being appreciated for the same. From being the best speaker of my college for 2 consecutive years and also being awarded the best Sportsman of HKBK CE in the year 2016, a mother of a 5 year old child would have never felt so humbled by the support given to her .Keeping in mind that all this wouldn't have been achieved without the Grace and mercy of the Almighty. I would always be obliged to be a part of any interface that is going to be between me and HKBK College of engineering.

Co-curricular activities

Co-curricular activities can directly tie into the school curriculum and help students academically as well as benefit students in the socially. By being part of a group or club, students get the chance to interact with others whom they would not normally interact and form new social networks.

• Visvesvaraya Technological University (VTU) conducted project exhibition cum competition in 2018, students of civil engineering is participated and won the prize of worth rupees 5000/-.

Project title: studies on use of an indigenous clay linear to retard lead in a waste containment facility.

Participants: Mohammed Gibreel

Mohammed Ismail

• Karnataka State Council for Science and Technology (KSCST), Indian Institute of Science, Bangalore (Government of Karnataka) sponsored Final Year Projects at HKBK College of Engineering for Civil Department for the Academic Year 2017-18.

Project title: "Experimental Investigation on Concrete Runway by implementation of Geo Synthetic Material, LD-Slag, Reprocessed E-waste fibers and ordinary Portland slag Cement in the Concrete Mix Design".

Participants: Chackson J

- Rubu Rachel George
- Rakesh Ahah
- Rajneesh Pandey

• Cultural Activities

Students of civil Department HKBKCE has participated in cultural fest conducted by Visvesvaraya Technological University in 2017-2018.

Singing: Misba Nazz and Nabam Tatang.

Dance: Mohammed Zubair and Sheik Salman.

• Project Exhibition

Students of civil Department HKBKCE has participated in Inter Branch project exhibition and got Best Project Award:

In the year 2017-2018 Mohammed Imran, Farhan Shariff, Shoaib Khan and Mohammed---- for the project :- **"Feasibility studies on a self-sustaining green layout".** Guided by Dr. Syed Abu Sayeed Mohammed.

In the year 2016-2017 Adil Ahmed Handoo, Aqsa Bashir, Burhan-Ul-Wafa and Syed Zahid Nabi for the project: - **"Problematic soil amended with Almond Shells as a Stabilizing agent".** Guided by Dr. Syed Abu Sayeed Mohammed.

In the year 2015-2016 Anusha Yadav, shri Shruthi, Varsha Nair and Rajashekar got best project award for the project; - **"Studies on the Effect of Chelating agents to desorb lead from Artificially Spiked Nano Calcium Silicate (NCS) amended soils".** Guided by Dr. Syed Abu Sayeed Mohammed.

• Sports Activities

Sports activities help the students to keep them fit both mentally and physically. The institution provides good facilities for the students to get accustomed with the varied sports activities like Basket Ball, Football, Cricket, Throw ball, Ball-badminton, Athletics, Volley Ball and indoor games like Chess, Carroms, Table Tennis etc. Our students had participated in various sports activities in the college and inter college

sports conducted by Visvesvaraya Technological University.

Chapter 3

Staff Achievements

By: Prof. S.A.S. Mohammed Ph.D., AM ASCE (USA)

Professor and Head, Dept. of Civil Engineering, HKBK CE

1. International visits by our staff to showcase our college and their research work Prof. S.A.S.Mohammed and Mr. Mohammed Abdul Lateef have visited USA during 2014 and 2018 to present their work.

Conference report: Geo- Congress 2014, Atlanta

The Geo-Congress 2014 conference was a first for the Geo-Institute in two respects: 1) it featured sustainability as its theme, and 2) it was organized under the leadership of the Engineering Geology and Site Characterization Committee and co-sponsored by the Committee on Sustainability in Geotechnical Engineering. Furthermore, the ASCE Committee on Sustainability planned its winter meeting to coincide with the beginning of the Geo-Congress 2014 so that its members could participate in keynote and panel sessions. The conference theme, "Geo-Characterization and Modeling for Sustainability", was delivered in four tracks that are broad enough to encompass the spectrum of geotechnical engineering practice and research:

- Geo-Characterization;
- Innovation, Standardization, and Regulation;
- Numerical and Resilience Modeling; and
- •Sustainable Design, Visualization, and Communication.

The sustainability theme was carried through these tracks with dozens of technical sessions, seven panel sessions, and eight interactive poster sessions that include brief podium presentations by each author. The sessions stimulated discussion and raised awareness about sustainability and advances in geo-characterization, and also it may facilitate professional collaboration and other productive activities.

This year's technical program included "Meet the Author" Interactive Poster sessions as an approach that will help contribute to removing the stigma that "posters" are consolation prizes or otherwise "not good enough for oral presentations." The Program Committee members realized that as the Geo-Congress conferences continue to grow in the number of active participants, posters must be utilized to a greater extent if the length of the meeting is to remain 2-1/2 days.

Over the three days, numerous opportunities for social and professional interaction with new faces and memorable colleagues and friends was possible. This would also encourage the future leaders of this profession and the Geo-Institute. Some of the student activities, included the GeoWall, GeoPrediction, and GeoPoster events, and followed by interaction with students. The latest products, services, and software were on exhibition by vendors, consultants, and agencies in the Exhibit Hall.

A number of paid Short Courses on were conducted on Sunday the 23rd 0f February 2014.

PRINCIPLES OF SUSTAINABILITY IN GEOTECHNICAL ENGINEERING, conducted by Anand J. Puppala, Ph.D., P.E., D.GE, F.ASCE, Professor, University of Texas at Arlington; Dipanjan Basu, Ph.D., C.Eng., M.ASCE, Assistant Professor, University of Waterloo.

This course focused on the latest research activities related to sustainability in geotechnical engineering, including utilization of recycled materials and use of alternate materials and construction methods to reduce our carbon foot print. The life-cycle-based methods (LCA, EIA, LCC, etc.) for assessing the sustainability of geotechnical projects were also introduced.

GEO-CHARACTERIZATION FOR NUMERICAL MODELING conducted by : Roger Hart, Ph.D., P.E., M.ASCE, Principal Software Advisor, Itasca Consulting Group, Inc.; Augusto Lucarelli, Lead Geotechnical Engineer, Studio Tenico Associato (SINTESI)

The course will included general guidelines and recommended practices for numerical modeling of geo-structures such as embankments, foundations, deep excavations, etc. The main focus was on estimation of parameters for soil constitutive models with reasonable number of parameters that can be estimated from in-situ or traditional lab tests were also discussed along with their applicability. This also included models to capture the dynamic behavior or soil including liquefaction.

2D/3D SLOPE STABILITY AND SEEPAGE FOR LEVEE ANALYSIS conducted by Murray D. Fredlund, Ph.D., M.ASCE, President and CEO, Soil Vision Systems Ltd.; Scott T. Anderson, Ph.D., P.E., D.GE, M.ASCE, Senior Numerical Modeling Engineer (Geotechnical), HDR Engineering, Inc.; John D. Quaranta, Ph.D., P.E., M.ASCE, Assistant Professor, West Virginia University.

The design of levees over the past few years has come under increasing scrutiny due to the occurrence of high profile failures such as the levees around New Orleans and ways and means and technologies available for their safety were discussed.

RISK ASSESSMENT IN GEOTECHNICAL ENGINEERING conducted by D. Vaughan Griffiths, Ph.D., P.E., F.ASCE, Professor, Colorado School of Mines; Gordon A. Fenton, Ph.D., P.Eng., P.E., M.ASCE, Professor, Dalhousie University

Soils and rocks are among the most variable of all engineering materials and are, therefore, highly amenable to a probabilistic treatment. The application of statistical and probabilistic concepts to geotechnical analysis is a rapidly growing area of interest. The course content and delivery 1 assumed no more than an introductory understanding of probability and statistics. The goal was to present a, "user friendly," training on modern probabilistic techniques applied to classical geotechnical engineering problems such as seepage, settlement, bearing capacity and slope stability.

TESTING AND ANALYSIS OF PILES, AND DESIGN OF PILED FOUNDATIONS conducted by Bengt H. Fellenius, Dr.Tech., P.Eng., M.ASCE, Consulting Engineer

This course included a review of basic principles of effective stress analysis and their correlation to case histories, involving instrumented piles, residual load, and development over time. The pros and cons of the current methods of testing were indicated and the conventional head-down and the O-cell tests were discussed in reference to case histories. Principles of settlement analysis of single piles and small and large pile groups are presented from aspects of load directly on the piles combined with influence from adjacent activity. The design in

settling ground and reclaimed land where piles will be affected by drag load and downdrag were emphasized and the "Unified Pile Design Method for capacity, settlement, drag load, and downdrag" was detailed with examples from actual projects.

GEOPHYSICAL METHODS FOR GEOTECHNICAL SITE CHARACTERIZATION

conducted by Sebastiano Foti, Ph.D., Associate Professor, Politecnico di Torino, Italy; Dennis R. Hiltunen, Ph.D., M.ASCE, Professor, University of Florida; Glenn J. Rix, Ph.D., M.ASCE, Principal Geotechnical Engineering, Geosyntec Consultants; Cesare Comina, Ph.D., Researcher, Politecnico di Torino, Italy

Geophysical tests are widely used in site characterization for geotechnical and geoenvironmental applications. A wide spectrum of methods is available to reconstruct geometrical features of the subsoil accounting for different responses of soils as a porous medium and for the characteristics of the pore fluid. Seismic tests provide the advantage of an evaluation of the mechanical response of the medium, although only at very small strain levels, with the possibility of testing geomaterials in their undisturbed state on site. Non-seismic methods provide very powerful methods for imaging the subsoil and for monitoring transient processes in geo-environmental applications

GEOTECHNICAL SITE CHARACTERIZATION: INTEGRATED IN SITU TESTING, DRILLING & SAMPLING, AND LABORATORY TESTING conducted by: Don J. DeGroot, Sc.D., P.E., M.ASCE, Professor, University of Massachusetts; Jason T. DeJong, Ph.D., M.ASCE, Associate Professor, University of California at Davis

This Short Course covers in situ testing, drilling, soil sampling, and laboratory testing for performing site characterization for geotechnical design. Site characterization programs ideally combine in situ and laboratory testing and the pros and cons of both are discussed. The course focused on best practice methods, including guidance for properly specifying investigation work and for assessing the quality of data obtained. In situ and laboratory test equipment, procedures,

and data interpretation methods for determination of soil stratigraphy and soil design parameters such as compressibility and shear strength were described.

H. BOLTON SEED LECTURE AWARD was Presented to W.D. Liam Finn, Ph.D., P.Eng., Life.M.ASCE, Professor Emeritus, University of British Columbia.

He delivered a lecture on the topic "Developments in the Assessment of Liquefaction Potential and its Consequences"

KARL TERZAGHI LECTURE For more than 50 years, the Karl Terzaghi Lecture has been given by an individual honored for their exemplary contributions to the field of geotechnical engineering. Presented by: J. Carlos Santamarina, Ph.D., Ing., A.M.ASCE, Goizueta Foundation Faculty Chair and Professor, Civil and Environmental Engineering at the Georgia Institute of Technology, Atlanta, Georgia.

Energy Geotechnology: Enabling New Insights into Soil Behavior Energy is critical to life, and the coming decades will see worldwide population growth and associated economic development that will result in a pronounced increase in energy demand. Historically, geotechnical engineering has been crucial to projects that have sustained societal transformations. Once again, geotechnical engineering has a central role to play in the evolving energy challenge, from resource recovery and infrastructure development, to energy storage and waste management.

Meet the author – Interactive poster session

Approximately 100 GSP-reviewed papers were invited to participate. Authors made a brief remark during the first part of the session, and would stand by their posters during the second part of the session, ready to address comments and questions.

Technical Committee meetings were held in the evenings, Panel and technical sessions were held and a number of papers were presented in eight parallel sessions covering a number of themes on sustainability.

The Hero and Awards Luncheon were held on Wednesday 26th February 2014 honoring Professor Emeritus Fred Kulhawy's extensive contributions to his profession.

RALPH B. PECK AWARD LECTURE

Presented by: Youssef M. A. Hashash, Ph.D., P.E., F.ASCE, Professor, University of Illinois Urbana Champaign, made a presentation on Innovations in Modeling and Monitoring Technologies for Response of Deep Urban Excavations

Development of urban excavations requires a detailed understanding of the impact of construction activities on ground deformations and on adjacent structures. This presentation describes advances in modeling and monitoring techniques to aid in control of deformations around excavations in the context of a number of excavation case histories in Boston, Chicago, and San Francisco.

The Congress ended with a formal closing ceremony.

Participant's contribution to the conference

American Society of Civil Engineers (ASCE) under the aegis of Geo Institute conducted its annual congress in the city of Atlanta, Georgia State, USA, during $23 - 26^{th}$ February 2014. Two research papers of Dr Syed Abu Sayeed Mohammed were selected to be presented in this congress, paper titled "Soils Amended with Admixtures as Stabilizing Agent to Retain Heavy Metals" (Paper ID# 606 GSP 234 series 2014 pp 2216-2226) and "Surface Complexation Modeling for Stabilization of an Industrial Sludge by Alternate Materials" (Paper ID# 607 GSP 234 series pp 2235-2244). Paper No 606 "Soils Amended with Admixtures as Stabilizing Agent to Retain Heavy Metals" was presented as an interactive poster with the theme "Meet the authors" a first of its kind introduced in this congress to bring in more interaction with the academia. This progamme took place on 26^{th} of February 2014. Dr Abu Sayeed gave an introduction for about 3 minutes and later time was given for personal interaction with the author. This was done in the sub theme Innovation, Standardization, and Regulation - Part II under the moderation of Prof. Benjamin S. Rivers, PE.

Paper No. 607 "Surface Complexation Modeling for Stabilization of an Industrial Sludge by Alternate Materials" was selected for oral presentation and Dr Abu Sayeed presented on the morning of 25th February 2014 with the subtheme Sustainable Stabilization/Solidification of Contaminated Soil and Waste under the moderation of Maria Chrysochoou, Ph.D., A.M.ASCE, Kaimin Shih, Ph.D., A.M.ASCE.

The presentation went well and one of the novelty of this work was that this paper could bring out a good correlation between engineering works and geochemical modeling which is rarely done. This was appreciated by the moderator and justified that this was the main reason for selecting the paper for oral presentation.



Participation in 3^{rd} Geo-Shanghai International Conference in the city of Shanghai, China, during $26^{th} - 28^{th}$ May 2014.

Geo-Shanghai is a series international conference on geotechnical engineering held in Shanghai once every four years. A research paper of Dr Syed Abu Sayeed Mohammed was selected to be presented in this congress, paper titled "Performance of soil and soil lime mixtures as liners to retain heavy metal ions in aqueous solutions" with Paper ID: GS-M0148.



Conference report: IFCEE 2018, Orlando

Details of the paper presented in the Conference

<u>Topic:</u> Strength Characteristics of Nano Calcium Silicate, Fly Ash and Lime Blended Tropical Soils

Authors:

- 1) Dr. Syed Abu Sayeed Mohammed
- 2) Dr. Arif Ali Baig Moghal
- 3) Mohammed Abdul Lateef

<u>Sub-Theme:</u> Ground improvement and grouting

Presentation Preference: Oral

Abstract: The current study evaluates the strength characteristics of tropical soil treated with Nano calcium silicate (NCS) (synthesized with a proprietary method of the authors) and in combination with two different materials such as lime and fly ash added with dosages of 0.04% NCS, 6% lime and fly ash in the ratio of 1:1 with soil. The results of the investigation showed significant improvement in maximum dry density, plasticity index, linear shrinkage and unconfined compress strength. It was found that the strength development with various combinations were of the order Soil fly ash NCS>Soil Lime NCS>Soil NCS>Soil. Nano calcium silicate particles promoted pozzolonic reaction by transforming the calcium and silica of the mixtures into calcium silicate hydrate gel (C-S-H) this enhanced the strength characteristics of soil. Hence, to conclude these mixtures along with a small percentage of NCS would be a prospective material for ground improvement.

Details of Technical Exposure gained in IFCEE 2018

1) Ralph B. Peck Medal Lecture

Tuesday, March 6

4:00pm-6:00pm

The Ralph B. Peck Medal Lecture is presented annually by a geotechnical engineer recognized by the Geo-Institute for outstanding contributions to the profession through the analysis and publication of case histories.

2) E. A. L. Smith Lecture

Wednesday, March 7

10:45am-11:3am

The Pile Driving Contractors Association's E. A. L. Smith Award Lecture will be presented triennially at the IFCEE conference. The E. A. L. Smith Award Lecture will be presented to an individual who has emonstrated creative and original work that helped the driven pile industry provide an economical, sustainable, effective and environmentally conscious foundation solution. The creativity can be demonstrated in the form of innovative foundation design, manufacturing, installation or construction procedures that led to highly efficient and resource sensible driven pile solutions. The Inaugural E. A. L. Smith lecture will be presented by Dr. Bengt H. Fellenius, Dr. Tech., P.E.

3) Michael W. O'Neill Lecture

Wednesday, March 7 4:30pm-6:00pm

The ADSC Michael W. O'Neill Lecture Award is presented triennially at each IFCEE for outstanding contributions to the advancement of state-of-the-practice in the design and construction of deep foundations through practical, applied research and/or through

recommended improvements to design and/or construction methodologies. Presented by Clyde Baker, P.E., D.GE, M.ASCE, Principal Engineer, Applied Research Associates, Inc.

4) Osterberg Lecture

Thursday, March 8

7:30am-8:15am

The annual Osterberg Memorial Lecture and Award was established in honor of Dr. Jorj O. Osterberg, one of the true pioneers of geotechnical engineering, to recognize innovations in deep foundations construction related to engineering design, testing or education - all aspects of Jorj Osterberg's lifelong contributions. Presented by this year's recipient John A. (Jack) Hayes, P. Eng., D.I.C., President, Loadtest, Inc.

5) Ben C. Gerwick Lecture

Thursday, March 8

8:15am-9:00am

The award is presented annually to an individual, team or company, and pays tribute to Ben Gerwick, recognizing his innovative spirit and his many contributions to the design and construction of marine foundations. Gerwick had a 62 year professional career as a contractor, educator and construction engineer. Presented by this year's recipient Akio Kitamura. Inventor of Silent Piler, President, Giken Ltd.

6) Karl Terzaghi Lecture

Thursday, March 8

4:30pm-6:00pm

For more than 50 years, Geo-Institute's Karl Terzaghi Lecture has been given by an individual honored by the Geo-Institute for their exemplary contributions to the field of geotechnical engineering. Presented by this year's recipient, Rudolph Bonaparte, Ph.D., P.E., D.GE, NAE, F.ASCE.

7) H. Bolton Seed Medal Lecture

Friday, March 9 3:30pm-5:00pm Awarded annually by the Geo-Institute, the recipient of the H. Bolton Seed Medal is honoured for outstanding contributions to teaching, research, or practice in geotechnical engineering.

8) Student GeoChallenge – GeoWall, GeoPoster, GeoPrediction and GeoVideo

Friday, March 9 12:00pm-4:00pm

The GeoPrediction competition asks students to develop an accurate prediction of geotechnical behavior given detailed information regarding subsurface, boundary, and initial conditions, as well as the geotechnical/structural loading. This year, competing teams will estimate the ultimate resistance and the subsequent displacement of two drilled shaft pile at the working load and the ultimate load by static load testing. Students competing in the GeoPoster competition are challenged to present their research on foundations (e.g., shallow, drilled, driven, new types, observed performance) for judging on content and professionalism.

The GeoVideo competition includes short videos explaining various geotechnical concepts that could be used in classrooms at various levels (elementary school through college) and by the lay person to understand geotechnical principles. The competing teams have created videos around the theme "A Strong Foundation in Geotechnical Engineering." There will be six videos

playing during the competition and attendees will vote for the best video. The 2018 GeoPoster competition posters will be on Foundations (e.g., shallow, drilled, driven, new types, observed performance).

9) Other Technical sessions: Presentations on verity of topics concerned to the geotechnical engineering field were also attended which were presented by the attendees from all over the world.





Mohammed Abdul Lateef Presenting paper in IFCEE-2018 held in Orlando, USA

Dr. Syed Abu Saeed Mohammed with Prof. Roy Olson in Geo Congress 2014 held in Atlanta USA



2. International travel scheme (ITS) funded by SERB – DST to Prof. S.A.S. Mohammed to visit USA and present his work.

Science and Engineering Research Board (SERB) (A Statutory body under Department of Science & Technology, Government of India) CATEGORY- A SB/ITS-S/04712/2013-14 Phone: 40000321(O) 40000305(O) 5 & 5A, Lower Ground Floor Vasant Square Mall Sector-B.Pocket-5 Vasant Kunj New Delhi-110070 Dated: 10.01.2014 To, Dr. Syed Abu Sayeed Mohammed D/o Civil Engineering HKBK College of Engli ering Bangalore - 560045 (Karnataka) Sub.: Financial Assistance to Dr. Syed Abu Sayeed Mohammed for participating in Int. Conf. on GEO-Congress, Geo Characterization and Modeling for Sustainability to be held from 23/02/2014 to 26/02/2014 in Atlanta (USA) Sir / Madam We are happy to inform you that your application seeking financial grant to attend the above mentioned international scientific event has been recommended for support by the Science and Engineering Research Board (SERB). We will provide to and tro economic class air-fare by the shortest route, airport tax and visa fees. We hope this support will provide you an opportunity to interact with leading international experts in the area. The support, however, is subject to the following conditions. You should not have received financial support during last three years under this scheme. 2. The air tickets are to be booked in economic class by the shortest route in a National Carrier, i.e., Air India . For Travel to station not connected by Air India, you may travel by Air India to the hub/point closest to their eventual destination, beyond which you may utilize the services of another airline which should also preferably be an alliance partner of Air India. If you are traveling by Private Airline because of non-availability of tickets or any other reason, You are requested to seek relaxation from the Ministry of ChvI Aviation. The Contact details for obtaining relaxation are (1) Shri Dinesh Sharma (2) Shri Deepak Israni, Under Secretary Ministry of Civil Aviation Ministry of Civil Aviation Rajiv Gandhi Bhawan, New Delhi Rajiv Gandhi Bhawan, New Delhi FAX: 24632950/2873, Tel Fax: 24651132 FAX. 24610364 You are advised to attach a copy of permission letter from Ministry of Civil Aviation for travel by private airlines while claiming the reimbursement. Without this permission letter, it will not be possible to reimburse the travel grant. E-ticket is acceptable provided the amount of the fare is clearly reflected on the ticket. 3. You will submit tour report and other documents in the enclosed proforma within 30 days of your return to India. The claim-sheet along with all documents must be tagged/stapled properly before sending it to the Board. Institute/University Accounts Details should be signed by the competitive Authority of the Institute/ University and Certified by Authorized Official of the Bank We will reimburse the grant after deducting the support received from any other sources, if any.
 All other expanses such as per diem, taxi fare, bus fare etc. will not be reimbursed by the Department. 8. You have to make your own arrangements for foreign exchange required for the purpose You will not be treated as a delegate sponsored by the Government of India. 10. The Claim sheet for the reimbursement may be downloaded from our website www.sarb.gov.in 11. While claiming for reimbursement you are required to attach a certificate from Air India as a proof of shortest route taken for the journey. Based on this offer lefter, your institute may consider advancing necessary funds to enable you to attend the above event. We request you to intimate to us within two weeks, if you are not availing this offer. With kind regards, Your's Faithfully, DAN (R.K. Joshi) Scientist-D

3. Staff achievements 2012-18

Doctoral degree conferred

Department got its first Ph.D. on 8th April 2012 during the 11th convocation of VTU Belagavi, and the degree was conferred by the then Chief Minister of Karnataka Sri DV Sadananda Gowda to Dr. Abu Sayeed.

The Membership fees tor various categories are given Istitutional Membership Fees Institutional Membership Fees Stand alone PG Level Institutions (Figure 1, States of Southern India (Ph.D.) Stand alone PG Level Institutions (Figure 1, States of Southern India (Ph.D.) Qi years course : Rs.25,000- Diploma Level Institutions (Figure 1, States of Southern India (Ph.D.) Qi years course : Rs.25,000- Diploma Level Institutions (Figure 1, States of Southern India (Ph.D.) Qi years course : Rs.10,100- Student Chapter A Study of ATM Networks and their performance analysis (Ph.D.) Qi years course : Rs.10,100- Student Chapter A Study of ATM Networks and their performance analysis (Ph.D.) Qi years course : Rs.10,100- Student Chapter A study of ATM Networks and their performance analysis (Ph.D.) Qi years course : Rs.10,100- Student Chapter can be established in any recognised institution affering days of course in a soft course in the southers should be send in a soft course in targe. Mediasco Tor, So. The annual students instate institution and member of ISTE. The ist of the student Should be send in a soft copy along the student should be send in a soft copy along the student should the student should be send in a soft copy alongere to the student should the stot annual students instate institu		ISTE MEMBERSHIP FEES	11.4.31	THESES OF THE MONTH
 Studies on Safety and Security Management System in Large, Akrahamasian Professor Dept. of Machanical Engineering A result Notation Impacts Include Institution Impacts Include Institution Impacts Include Institution Impacts Include Institution Institute Institution Impacts Include Institution Institutions Include Institutions (Systems Course) : Res. 35,000-6 Lite Membership Fees : Res. 30,000-7 Lite Approvad Institutions Offering degree Institution Institute Institutions Institutions Institutions Institutions Institutions Institutions (Ph.D.) State Faculty Chapter All AICTE approvad Institutions Offering degree Institution Institutions Instites Institutions Institutions Institutions In		The Membership fee for various categories are given		(Topic, investigator and guide are given)
1. Institutional Membership Fees 2. Degree Level Institution imparing various programmes if or 4 years, universities etc. : : Rs.35,000- 3. Stand alone PG Level Institutions viz. MCA. MBA etc. offering two years course : : Rs.25,000- 3. IsTE Faculty Chapter 3. IsTE Student Schapter can be established in any recognised institutional Member of ISTE. 3. IsTE Student Chapter 4. IsTE Student Chapter 5. Student Membership Fees 5. Student Membership Fees 5. Student Membership Fees 5. Student Membership Fies 6. Minimum strength to establish ISTE Faculty Courses in Engineering Dagree & Diploma Level Courses in Engineering Arch. etc. 5. Student Membership Fees 5. Student Membership Fees 5. Student Membership Fees 6. Degree Level (4 years) 7. Executive Secretary 1.	pel	low:		Studies on Safety and Security Management Systems
 Degree Level Institution imparting various programmes for 4 years, universities etc. : :Rs.35,000- Stand alone PG Level Institutions viz. KCA. MBA etc. offering two years course : :Rs.25,000- Diptoma Level Institutions (2, AMA alone institutions (2, years course) : :Rs.30,004- JISTE Faculty Chapter All CTE approved institutions offering degree in Engineering A Technology Thermacy/Ach.HMCTMBA & MCA etc. are eligible to establish ISTE Faculty Chapter All CTE approved institutional Member of ISTE - Estudent Schapter is 26 (Twenty Free). Stard stander Chapter The student membership sequired for forming ISTE Chapter is 26 (Twenty Free). ISTE Student Chapter The student membership shall be valid from 1st June of last year of course. The student membership Fees The student membership Fees Student Membership Fees Dogree Level (4 years) : :Rs.2004- MBA (2 years) MBA (2 years) WEA (2 years) 	۱.	Institutional Membership Fees		in Large, Medium and Small Scale Industries located in Five States of Southern India (Ph.D)
Stand alone PG Level institutions viz, MCA, MBA etc. offering two years course : Rs.25,004- Diploma Level institutions : Rs.25,004- 2. Life Membership Fees : Rs.3,004- 3. ISTE Faculty Chapter All AICTE approved institutions offering dagree in Graineering 3. Technology/Pharmacy/Arch./HMCT/MBA & MCA etc. are eligible to establish ISTE Faculty Chapter A Study of ATM Networks and their performance analysis (Ph.D.) B. ISTE Student Chapter ISTE Student Chapter A segretmental investigation on the effect of additic polymes on the properties of fiber reinforce concrete (Ph.D.) B. ISTE Student Chapter Integrated Twin Technology of In-Vessel ar veroginade institution offering Dagree & Diploma Level B. ISTE Student Schapter can be established in any recognised institution offering Dagree & Diploma Level Integrated Twin Technology of In-Vessel ar Vermicompositing for Solid Waste Management (Ph.D.) B. ISTE Student Tempbership Shall be valid from 1st June of admission year to 30th June of last year of course. Integrated Twin Technology of In-Vessel ar Vermicompositing for Solid Waste Management (Ph.D.) Diational Member of ISTE. Design and Evaluation of Fast Dissolving Tablets Solected Antt-Histamine Drugs (Ph.D.) Distriction offering Sysms (analtalysis (Ph.D.) Rs.2004- Minimum strength to establish ISTE Student Chapter is 200 students manual students instate of Tegineering aduation offering Sysms (balad degree course/B.Arch. etc. : : Rs.2504-		Degree Level Institution imparting various programmes for 4 years, universities etc. : Rs.35,000/-		P. SIVAPRAKASH, Assistant Professor Dept. of Mechanical Engineering
Diploma Level Institutions (3 years course) : Rs.10,100- 2. Life Membership Fees : Rs.3,000- 3. ISTE Faculty Chapter All AICTE approved Institutions offering degree in Engineering & Technology/Pharmacy/Arch./MICT/MBA & MCA etc. are eligible to establish ISTE Faculty Chapter izo eligible in they are Institutional Member of ISTE. Minimum Faculty (Life Members) required for forming ISTE Chapter is 20 (Ywenty Fve). 4. ISTE Students Chapter is TE Students Chapter is Cf Wenty Fve). 4. ISTE Students Chapter is Cf Wenty Fve). 4. ISTE Students crapter can be established in any recognised institution offering Degree & Diploma Level (Aurorses in Engineering & Technology/Pharmacy/Arch./ MICT/MBA-MCA etc. provided the institute is a Institutional Member of ISTE. The student membership Shall be valid from 1st June of admission year to 30th June of last year of course. Minimum strength to establish ISTE Students intake whichever is less. The list of the students should be send in a soft copy alongwith a single DD of the total amount collected initially in the first year. Student Membership Fees Degree Level (4 years) : Rs.100- MBA (2 years) : Rs.100- : Rs.100- : Rs.100- : MBA (2 years) : Rs.100- : Rs.100- : Rs.10		Stand alone PG Level institutions viz. MCA, MBA etc. offering two years course : Rs.25,000/-		Dharmapuri, T.N. Dr. M. Sakthivel, Associate Professor
2. Lite Membership Fees : Rs.3,000/- 3. ISTE Faculty Chapter All AICTE approved institutions offering degree in Engineering & Technology/Pharmacy/Arch./HMCT/MBA & Concepter (Ph.D.) All AICTE approved institutional Member of ISTE. Similary Diploma Level Polytechnics duly approved by DTEs are also eligible if they are institutional Member of ISTE. Similary Chapter is 25 (Twenty Five). 4. ISTE Student Chapter - A students Chapter is 25 (Twenty Five). 4. ISTE Student Chapter - O.S. Prakash. Professor, Dept. dift. Diversity BDT College of Engineering Dept. BIET. Diversity BDT College of Institution offering Degree & Diploma Level (Data and the mean of ISTE. - The students membership shall be valid from 1st June of admission yearto 20th June of last year of const. - Design and Evaluation of Fast Dissolving Tablets Steled Anti-Histamine Drugs (Ph.D.) - The list of the students should be send in a soft copy alongwith a single DD of the total amount collected initially in the first year. - Design and Evaluation of Fast Dissolving Tablets Scienced Anti-Histamine Drugs (Ph.D.) - Student Membership Fees - Student Membership Fees - Student Membership Fees - Diploma Level (3 years)/MCA - Rs.50/- - Diploma Level (3 years)/MCA - Rs.150/- - Maka (2 years) - Rs.150/- - Maka (2 years) - Rs.150/- - Maka (2 years) - Rs.150/- - Diploioma Level (3 years)/MCA - Rs.	•	Diploma Level institutions (3 years course) : Rs.10,100/-		Dept. of Mechanical Engineering Anna University of Technology, Coimbatore
3. ISTE Faculty Chapter All AICTE approved institutions offering degree in Engineering & Technology/Pharmacy/Arch./HMCT/MBA & MCA etc., are eligible to establish ISTE Faculty Chapter provided they are institutional Member of ISTE, Single and Status (Life Members) required for forming ISTE. All STE Student Chapter ISTE Student Chapter ISTE Student Chapter (Courses in Engineering & Technology/Pharmacy/Arch./ HMCT/MBA.MCA etc. provided the institute is a institutional Member of ISTE. ISTE Student Chapter (Courses in Engineering & Technology/Pharmacy/Arch./ HMCT/MBA.MCA etc. provided the institute is a institutional Member of ISTE. The student membership shall be valid from 1st June of admissing year to 30th June of I last year of course. Minimum strength to establish ISTE Students Chapter is 200 students or 75% of the annual students intake whichever is less. The list of the students should be send in a soft copy alongwith a single DD of the total amount collected initially in the first year. Student Membership Fees Student Membership Fees Student Membership Fees Student Membership Fees Degree Level (4 years) Rs.200/- Institution offering 5 years dual degree course BA Arch. etc. : Rs.250/- Diploma Level (3 years) : Rs.100/- Mode of Payment Optima Level (3 years) : Rs.100/- MBA (2 years) : Rs.100/-	2.	Life Membership Fees : Rs.3,000/-	•	analysis (Ph.D.) G.S. SLINITHA, Professor, EC&E Dept.
All AICTE approved institutions offering degree in Engineering & Technology/Pharmacy/Arch./HMCT/MBA Boo eligible if they are institutional Member of ISTE. Similary Diploma Level Polytechnics duly approved by DTEs and Student Chapter is 25 (Twenty Five). 4. ISTE Students Chapter can be established in any recognised institution offering Degree & Diploma Level of admission year to 30th June of last year of course. Minimum strength to establish ISTE Students intake whichever is less. The list of the students should be send in a soft copy alongwith a single DD of the total amount collected initially in the first year. 5. Student Membership Fees 5. Student Membership forms and for more details please visit www.isteonline.in*, Filled in application forms should be sent to the ISTE Hays. directly. Executive Secretary ISTE, New Dethi	3.	ISTE Faculty Chapter		BIET, Davangere
 4. ISTE Student Chapter ISTE Students Chapter can be established in any recognised institution offering Degree & Diploma Level Courses In Engineering & Technology/Pharmacy/Arch/ HMCT/MBA-MCA etc. provided the institute is a institutional Member of ISTE. The student membership shall be valid from 1st June of alarission year to 30th June of last year of course. Minimum strength to establish ISTE Students Chapter is 200 students or 75% of the annual students intake whichever is less. The list of the students should be send in a soft copy alongwith a single DD of the total amount collected initially in the first year. Student Membership Fees Student Membership Fees Degree Level (4 years) Institution offering 5 years dual degree course/B.Arch. etc. : Rs.250/- Diptoma Level (3 years)/MCA : Rs.150/- MBA (2 years) The Membership forms and for more details please visit. "www.isteonline.in". Filled in application forms should be sent to the ISTE Hqrs. directly. Executive Secretary ISTE, New Dethin 	En Mi pri Di ala Mi	All AICTE approved institutions offering degree in igineering & Technology/Pharmacy/Arch./HMCT//MBA & CA etc. are eligible to establish ISTE Faculty Chapter ovided they are Institutional Member of ISTE. Similarly ploma Level Polytechnics duly approved by DTEs are so eligible if they are Institutional Member of ISTE. nimum Faculty (Life Members) required for forming ISTE hapter is 25 (Twenty Five).	•	 Retd. Principal University BDT College of Engineering, Davangere An experimental investigation on the effect of addition of polymers on the properties of fibre reinforce concrete (Ph.D.) ANILA KUMAR C.P., Assistant Professor Civil Engineering Dept., BIET, Davangere Dr. D.S. Prakash, Professor, Dept. of Civil Engg.
 ISTE Students Chapter can be established in any recognised institution offering Degree & Diploma Level Courses in Engineering & Technology/Pharmacy/Arch/ HMCT/MBA-MCA etc. provided the institute is a Institutional Member of ISTE. The student membership shall be valid from 1st June of admission year to 30th June of last year of course. Minimum strength to establish ISTE Students Chapter is 200 students or 75% of the annual students intake whichever is less. The list of the students should be send in a soft copy alongwith a single DD of the total amount collected initially in the first year. Student Membership Fees Student Membership Fees Degree Level (4 years) Institution offering 5 years dual degree course/B.Arch, etc. Institution offering 5 years dual degree course/B.Arch, etc. Institution at larves (3 years)/MCA MBA (2 years) The Membership forms and for more details please visit 'www.isteonline.in'. Filled in application forms should be sent to he IBTE Hgrs. directly. Executive Secretary ISTE, New Delhi 	4.	ISTE Student Chapter		University BDT College of Engineering, Davangere
 The student membership shall be valid from 1st June of admission year to 30th June of last year of course. Minimum strength to establish ISTE Students Chapter is 200 students or 75% of the annual students intake whichever is less. The list of the students should be send in a soft copy alongwith a single DD of the total amount collected initially in the first year. Student Membership Fees Student Membership Fees Degree Level (4 years) Institution offering 5 years dual degree course/B.Arch. etc. Rs.200/- Institution offering 5 years dual degree course/B.Arch. etc. Rs.150/- Diploma Level (3 years)/MCA Rs.160/- MBA (2 years) Rs.100/- Mode of Payment Only through DD drawn in favour of ISTE, payable at New Delhi. The Membership forms and for more details please visit. the ISTE Hgrs. directly. Executive Secretary ISTE, New Delhi 		ISTE Students Chapter can be established in any recognised institution offering Degree & Diploma Level Courses in Engineering & Technology/Pharmacy/Arch./ HMCT/MBA-MCA etc. provided the institute is a Institutional Member of ISTE.	•	 Integrated Twin Technology of Invessel and Vermicomposting for Solid Waste Management (Ph.D. C.C. MONSON Dr. A. Murugappan, Professor and Head, Dept. of Civil Engineering Annamalai University, Annamalainagar
 Minimum strength to establish ISTE Students Chapter is 200 students or 75% of the annual students intake whichever is less. The list of the students should be send in a soft copy alongwith a single DD of the total amount collected initially in the first year. Student Membership Fees Degree Level (4 years) Institution offering 5 years dual degree course/B.Arch. etc. Rs.200/- Institution offering 5 years dual degree course/B.Arch. etc. Rs.150/- Diploma Level (3 years)/MCA Rs.160/- MBA (2 years) Rs.100/- Mode of Payment Only through DD drawn in favour of ISTE, payable at New Beihi. The Membership forms and for more details please visit "www.isteonline.in". Filled in application forms should be sent to the ISTE Hqrs. directly. Executive Secretary ISTE, New Delhi D. NAGENDRAKUMAR, Principal & Professor Dept. of Pharmacy, Gulbarga Engineering Design of Highly Porous Bunds as Ra Water, Harvesting Structures : Hydrological a Hydraulic Studies (Ph.D.) S.G. JOSHI Dr. D.P. Girldhar, Vice Chancellor, Indus University, Ahmedabad Utilization of Alternate and Local Materials as Line for Waste Containment Facilities (Ph.D.) SYED ABU SAYEED MOHAMMED Assistant Professor, Dept. of Civil Engineering HKBK College of Engineering, Bangalore Recognition of Handwritten Kannada Characters Bas on Multi-Algorithm Fusion (Ph.D.) K. INDIRA, Assistant Professor in E&C Dept. M.S. Ramaiah Institute of Technology, Bangalore Dr. Settu Selvi, Prof. & HOD, Dept. of E&C MS Ramaiah Institute of Technology Banagalore 	÷	The student membership shall be valid from 1st June of admission year to 30th June of last year of course.	•	 Design and Evaluation of Fast Dissolving Tablets (Selected Anti-Histamine Drugs (Ph.D.)
 The list of the students should be send in a soft copy alongwith a single DD of the total amount collected initially in the first year. Student Membership Fees Degree Level (4 years) Institution offering 5 years dual degree course/B.Arch. etc. Institution offering 5 years dual degree course/B.Arch. etc. Institution a Level (3 years)/MCA MBA (2 years) Rs.100/- Mode of Payment Only through DD drawn in favour of ISTE, payable at New Delhi. The Membership forms and for more details please visit "www.isteonline.in" Filled in application forms should be sent to the ISTE Hqrs. directly. Executive Secretary ISTE, New Delhi 		Minimum strength to establish ISTE Students Chapter is 200 students or 75% of the annual students intake whichever is less.		D. NAGENDRAKUMAR, Principal & Professor Dept. of Pharmaceutics S.V.E. Trust's College of Pharmacy, Humnabad Dr. S. Appala Balu, Principal & Professor
5. Student Membership Fees - Degree Level (4 years) : Rs.200/- - Institution offering 5 years dual degree course/B.Arch. etc. : Rs.250/- - Diploma Level (3 years)/MCA : Rs.150/- - Diploma Level (3 years) : Rs.150/- - MBA (2 years) : Rs.100/- Mode of Payment : Rs.100/- Only through DD drawn in favour of ISTE, payable at New Delhi. : Recognition of Handwritten Kannada Characters Bas on Multi-Algorithm Fusion (Ph.D.) The Membership forms and for more details please visit. "www.isteonline.in". Filled in application forms should be sent to the ISTE Hqrs. directly. : Recognition of Handwritten Kannada Characters Bas on Multi-Algorithm Fusion (Ph.D.) K. INDIRA, Assistant Professor in E&C Dept. MS. Ramaiah Institute of Technology, Bangalore : NS. Ramaiah Institute of Technology Banagalore	2	The list of the students should be send in a soft copy alongwith a single DD of the total amount collected initially in the first year.		HKES College of Pharmacy, Gulbarga Engineering Design of Highly Porous Bunds as Ra
 Degree Level (4 years) Rs.200/- Institution offering 5 years dual degree course/B.Arch. etc. Rs.250/- Diploma Level (3 years)/MCA Rs.150/- MBA (2 years) Rs.100/- Mode of Payment Only through DD drawn in favour of ISTE, payable at New Delhi. The Membership forms and for more details please visit. "www.isteonline.in" Filled in application forms should be sent to the ISTE Hqrs. directly. Executive Secretary ISTE, New Delhi S.G. JOSHI Dr. D.P. Giridhar, Vice Chancellor, Indus University, Ahmedabad Utilization of Alternate and Local Materials as Line for Waste Containment Facilities (Ph.D.) SYED ABU SAYEED MOHAMMED Assistant Professor, Dept. of Civil Engineering HKBK College of Engineering, Bangalore Recognition of Handwritten Kannada Characters Bas on Multi-Algorithm Fusion (Ph.D.) K. INDIRA, Assistant Professor in E&C Dept. MS. Ramaiah Institute of Technology, Bangalore Dr. Sethu Selvi, Prof. & HOD, Dept. of E&C MS Ramaiah Institute of Technology Banagalore 	5	Student Membership Fees		Hydraulic Studies (Ph.D.)
 Institution offering 5 years dual degree course/B.Arch. etc. : Rs.250/- Diploma Level (3 years)/MCA : Rs.150/- MBA (2 years) : Rs.100/- Mode of Payment Only through DD drawn in favour of ISTE, payable at New Delhi. The Membership forms and for more details please visit. "www.isteonline.in" Filled in application forms should be sent to the ISTE Hqrs. directly. Executive Secretary ISTE, New Delhi Diploma Level (3 years) Rs.100/- Utilization of Alternate and Local Materials as Line for Waste Containment Facilities (Ph.D.) SYED ABU SAYEED MOHAMMED Assistant Professor, Dept. of Civil Engineering HKBK College of Engineering, Bangalore Recognition of Handwritten Kannada Characters Bast on Multi-Algorithm Fusion (Ph.D.) K. INDIRA, Assistant Professor in E&C Dept. M.S. Ramaiah Institute of Technology, Bangalore Dr. Sethu Selvi, Prof. & HOD, Dept. of E&C MS Ramaiah Institute of Technology Banagalore 	1	Degree Level (4 years) : Rs.200/-		S.G. JOSHI
dual degree course/B.Arch. etc . : Rs.250/- Diploma Level (3 years)/MCA : Rs.150/- MBA (2 years) : Rs.100/- Mode of Payment : Rs.100/- Only through DD drawn in favour of ISTE, payable at New Delhi. : Recognition of Handwritten Kannada Characters Bas on Multi-Algorithm Fusion (Ph.D.) SyED ABU SAYEED MOHAMMED Assistant Professor, Dept. of Civil Engineering, Bangalore Dr. Maya Naik Professor, Dept. of Civil Engineering, Bangalore BMS College of Engineering, Bangalore : Recognition of Handwritten Kannada Characters Bas on Multi-Algorithm Fusion (Ph.D.) Kuber Steretary ISTE, New Delhi : NDIRA, Assistant Professor in E&C Dept. MS. Ramaiah Institute of Technology, Bangalore : NS. Ramaiah Institute of Technology Bangalore : NS. Ramaiah Institute of Technology	1	Institution offering 5 years	1	Indus University, Ahmedabad
Diploma Level (3 years)/MCA : Rs.150/- MBA (2 years) : Rs.100/- Mode of Payment Only through DD drawn in favour of ISTE, payable at New Delhi. The Membership forms and for more details please visit. "www.isteonline.in". Filled in application forms should be sent to the ISTE Hqrs. directly. Executive Secretary ISTE, New Delhi	-	dual degree course/B.Arch. etc . : Rs.250/-	5	Utilization of Alternate and Local Materials as Line (Dh D)
 MBA (2 years) : Rs.100/- Mode of Payment Only through DD drawn in favour of ISTE, payable at New Delhi. The Membership forms and for more details please visit. "www.isteonline.in". Filled in application forms should be sent to the ISTE Hqrs. directly. Executive Secretary ISTE, New Delhi 		Diploma Level (3 years)/MCA :Rs.150/-	-	SYED ABU SAYEED MOHAMMED
Mode of Payment Dr. Maya Naik Only through DD drawn in favour of ISTE, payable at New Delhi. Dr. Maya Naik The Membership forms and for more details please visit. Professor, Dept. of Civil Engineering, Bangalore Www.isteonline.in". Filled in application forms should be sent to the ISTE Hqrs. directly. Recognition of Handwritten Kannada Characters Base on Multi-Algorithm Fusion (Ph.D.) K. INDIRA, Assistant Professor in E&C Dept. M.S. Ramaiah Institute of Technology, Bangalore Dr. Maya Naik Professor, Dept. of Civil Engineering BMS College of Engineering Bangalore Recognition of Handwritten Kannada Characters Base On Multi-Algorithm Fusion (Ph.D.) K. INDIRA, Assistant Professor in E&C Dept. M.S. Ramaiah Institute of Technology, Bangalore Dr. Sethu Selvi, Prof. & HOD, Dept. of E&C MS Ramaiah Institute of Technology Bangalore Banagalore		MBA (2 years) : Rs.100/-		Assistant Professor, Dept. of Civil Engineering
Only through DD drawn in favour of ISTE, payable at New Delhi. The Membership forms and for more details please visit "www.isteonline.in". Filled in application forms should be sent to the ISTE Hqrs. directly. Executive Secretary ISTE, New Delhi EXECUTIVE Secretary ISTE, New Delhi EXECUTIVE Secretary ISTE, New Delhi		lode of Payment	1	Dr. Maya Naik
Delhi. The Membership forms and for more details please visit. "www.isteonline.in". Filled in application forms should be sent to the ISTE Hqrs. directly. Executive Secretary ISTE, New Delhi Executive Secretary		hely through DD drawn in favour of ISTE, pavable at New	-	Professor, Dept. of Civil Engineering BMS College of Engineering Bangalore
The Membership forms and for more details please visit. "www.isteonline.in". Filled in application forms should be sent to the ISTE Hqrs. directly. Executive Secretary ISTE, New Delhi	č	elhi.	-	Becognition of Handwritten Kannada Characters Bas
ISTE, New Delhi Banagalore	Tas	The Membership forms and for more details please vision www.isteonline.in". Filled in application forms should be ent to the ISTE Hors. directly. Executive Secretary	t. a	on Multi-Algorithm Fusion (Ph.D.) K. INDIRA, Assistant Professor in E&C Dept. M.S. Ramaiah Institute of Technology, Bangalore Dr. Sethu Selvi, Prof. & HOD, Dept. of E&C MS Ramaiah Institute of Technology
		ISTE, New Del?		Banagalore

A technical talk was delivered by Dr Syed Abu Sayeed Mohammed, on 23rd November 2012 on the topic "Ground water recharge for flood control – The HKBK Experience" after the talk the participants were taken for a field visit and shown different units installed to recharge ground water in the campus of HKBKCE.

Mrs. K N Deepthi and Mr. Ashfaque Ahmend Khan attended one day workshop on Emerging trends in Civil Engineering at REVA Institute of Technology, on 16-09-2013.

Ms. Shahabaz Hakeem and Mr. Abu Bakar Siddique JM, attended two days faculty development programme at KNS Institute of technology on Innovative Technologies and practices in construction industry on 13th and 14th September 2013.

Ms. Shahabaz Hakeem and Mr. Abu Bakar Siddique JM, attended one day faculty development programme at HKBK CE on Magic thoughts - making teaching more effective on 29th August 2013.

Excon exhibition 2016

Assistant Professor Iftiqar Ahmed Shariff and Prof Irfan Ulla Shariff visited south asia's largest and biggest exhibition held in bangalore. Confederation of India Industry (CII), India's premiere industry Association presents Excon 2015 - held on 25th- 29th November 2015, Bengaluru, Karnataka, India

Publication of book in the form of a technical monograph:

Two technical monographs have been published by the department of Civil Engineering during the year 2012-2013



- A technical monograph titled "Retention of copper and chromium on soils Mechanisms" pages 292, Lap Lambert Publishers, Germany, ISBN 978-3-659-00204-5.
- 2. A technical monograph titled "Long term prediction of contaminant transport in soils" pages 189, Lap Lambert Publishers, Germany, ISBN 978-3-659-12542-3.

A 3 Days Workshop on "A COMPREHEND ON CAD FOR CIVIL ENGINEERS"

A Memorandum of understanding (MOU) was signed between HKBKCE and CADD centre for imparting training and interactions with the Civil engineering students for the next three years. As a result a workshop on "A COMPREHEND ON CAD FOR CIVIL ENGINEERS" was organized by the Department of Civil engineering, HKBKCE. In association with CADD Centre Banaswadi, Bangalore from 23 .10.2013 to 25.10.2013. The workshop was inaugurated in the presence of the Administrator Mr. Abdul Hameed S A and Principal Dr. T C Manjunath, Dr Syed Abu Sayeed Mohammed, HOD, Dept. of Civil Engineering, HKBKCE and Mr.Parathasathy, CADD Manager, Banasawadi, Bangalore.

Chapter 4

Research and development activities (R & D)

By: Dr. S.A.S. Mohammed Ph.D., AM ASCE (USA) Professor and Head, Dept. of Civil Engineering, HKBK CE

The department had been active in R & D activities and has following achievements

- 1. Establishment of a research centre in 2013 and the following 5 students have registered for their doctoral programmes and are in various stages of completion
 - a. Kotresha K, "Heavy metal immobilization by nano metal oxide amendment in contaminated red soil and black cotton soil" VTU Full time Ph.D.
 - Mubarak Ali, "Effect of Fly Ash Ageing on Geotechnical and Geo-Environmental Properties of Soil Mixtures" VTU part time Ph.D.
 - c. Irfan Ulla Shariff, "Bio stabilization; sustainable perspective for treating expansive soils." VTU part time Ph.D.
 - d. Mohammed Abdul Lateef, "Improvement in geotechnical properties of problematic soils using organic based stabilizers" VTU part time Ph.D.
 - e. Madhushree KJ, "Theoritical and experimental evaluation of enhancement in geotechnical properties of soil using bio stabilizers" VTU part time Ph.D.

The research centre is continuously in touch with distinguished faculties and Dr. Arif Ali Baig Moghal, Associate Professor, Dept. of Civil Engg, NIT, Warangal and formerly was with King Saud University, Kingdom of Saudi Arabia is an External Guide to three of our doctoral scholars and regularly visits the dept. and guides them.

Discussion with the Distinguished Professor Dr Arif Ali Baig Moghal and Dr. S.A.S. Mohammed with doctoral students in Civil Department, HKBK CE



Completion and implementation of Extra mural funded SERB – DST project 2013 – 2017, Science and Engineering research board (SERB-DST) funded a project with the following details

Nano calcium silicate – soil based mineral amendments as liners for hazardous waste containment facilities

Project No. SR/S3/MERC/0111/2012

Executive summary

This project aimed at understanding the sorption behavior of soils and nano calcium silicate (NCS) amended soils for encapsulation of heavy metal ions. The work involved classical sorption experiments followed by empirical and mechanistic modelling. The results obtained were further validated using extensive leaching tests such as ASTM D3987, TCLP, Extended TCLP and caged TCLP. This proved that encapsulation is effective in treated soils; quantification of encapsulation was done using sequential extraction procedure. The stability of encapsulated metal ions was further tested with desorption tests using strong chelating agents, strong and weak acids. It can be concluded that soils amended with nano calcium silicate is a prospective material to attenuate heavy metals making them inert and immobile. Nano Calcium Silicate (NCS) was synthesized using combustion synthesis method by mixing Calcium nitrate, fumed silica and citric acid as fuel. The fuel citric acid is a cheaper fuel instead of di formyl hydrazide. The cost of synthesizing NCS is Rs 117.77per gram in lab, commercially and using Indian made chemicals it works out to Rs 12.332/g. A Patent was filed, Application No. 2765/CHE/2015, CBR No. 10983 Title "Nano Calcium Silicate - soil based mineral amendments as liners for hazardous waste containment facilities" dated 02/06/2015.

All experiments were done in triplets for repeatability and reproducibility, background concentration of heavy metals were zero for red and black cotton soils, and for contaminated soils were with in EPA limits, except Mavalli soil where lead content was > 5mg/l. Worst case scenarios were considered and for leaching tests 3000mg/kg contaminant load was spiked to soils. For all the soils the amount of metal ions that were sorbed were found to increase almost linearly with increase in the initial concentration, dilution ratios and pH. Validation of simulated data with experimental results forms an important aspect in this study. A comparison was made for the sorption of heavy metals on soil between experimental and model generated values (done using Visual Minteq). It was found that the values obtained were concordant and

described the behaviour of heavy metals well. At a pH of 2 and 4, it was found that there was a steep fall in concentration whereas the model generated values were quite stable till a pH of 5 and fell steeply till pH of 7, and remained stable thereafter, absorbing the maximum amount of sorbent. It was observed that the contaminated soils did not leach metals in the short term due to strong interactions with soils. However, in the long run metals were leached from the soil due to their complexation with solubilized organic matter, especially in an alkaline environment where organic matter is more soluble. Hence it is imperative to make the heavy metals in soil matrix inert by encapsulating them than keeping them on a reactive medium. The main aim of this study was to address this issue by making the heavy metal inert and immobile. The mechanism for enhanced immobilization capacity when soils are amended with NCS is due to sorption and entrapment of heavy metals in the newly formed aggregates. This is because of aggregation of soil particles which encloses and binds with Ca and Si associated immobile salts, heavy metals are sorbed by soil co-ordination process. Heavy metal complex diffuses with in the crystalline reticulum of soil particles leading to efficient entrapment of heavy metals due to the presence of NCS. It produces immobile salts with moisture and CO₂ of atmosphere giving properties similar to pozzalonic cement and hydraulic properties. This results in heavy metal being brought into immobile Ca and Si salts. Hence the soil surface binds / encloses into immobile Ca and Si associated salts.

The following conclusions can be drawn from this work, along with sorption, chemisorption, ion exchange, precipitation, diffusion and surface complexation were found to occur concurrently in the system. It was not possible to determine as to which phenomenon was predominant among them. The order of sorption of metal ions was Pb>Cd>Ni. Soils amended with NCS in small percentage (0.5 -2.0%) have been found to be prospective materials to attenuate heavy metals permanently; this was confirmed with a series of rigorous leaching tests. A non-dimensional leachability index was calculated based on caged TCLP tests and was found to vary between 2- 4 for untreated soils and for soils amended with nano calcium silicate(NCS) it varied between 5 -6. As per EPA a leachability index of 6 and above is regarded as safe. It was further found that the leaching rate was 3.19cm/yr and 0.47cm/yr for untreated and treated soils respectively. Nano Calcium Silicate as a soil amendment has good potential to encapsulate the selected heavy metals. Sequential extraction process proved that encapsulation of treated soils is 20% higher than untreated soils. This percentage of encapsulation can be increased by increasing the dosage of NCS. Desorption studies proved the stability of encapsulation even

when subjected to a strong chelating agent such as EDTA. Hence it can be concluded that this combination (Soil + NCS) can be used on soils available globally having similar properties.

	SCIENCE & ENGINEERING RESEARCH BOARD	
	Technol	ogy Bhavar
	New Me	hrauli Roat
	New Dell	1.01.2013
	ORDER	
Subject;	Financial Sanction of the research project titled "Nano Calcium Soil based mineral amendments as liners for hazardo containment facilities" under the guidance of Dr. Syed A Mohammed, Department of Civil Engineering, HKBK College of E Nagavara, Bangalore -560045 Release of first grant	Silicate - us waste bu Sayeed ngineering
Si accorded thirty t Rs. 12,0 expenditi period of	anction of Science and Engineering Research Board (SERB to the above mentioned project at a total cost of Rs. 33,00,000/ hree lakh only) with break-up of Rs. 21,00,000/- under Capita 00,000/- under General head for a duration of three years. Thure for which the total allocation of Rs. 33,00,000/- has been app three years, are given below:) is hereb - (Rupees I head and he items o moved for a
SI. No.	Head	Total
٨	Non-recurring (Capital Terms)	(in Rs.)
1.	Equipments: Conductivity meter, Muffle furnace, Hot plate. pH Meter, Atomic absorption spectrophotometer, Mechanical Shaker Proctor Mini Compaction unit, Instruments to determine Index properties of Soil, CM Water	2100000
	weighing Balance	
A'	Total (Capital)	2100000
В	Recurring Items (General)	
1.	Manpower: 1 JRF @ Rs.16000-16000-18000/- pm	600000
2	Consumables	110000
3. A	(Travel (including held trips & for attending Review meeting)	99000
5.	Overheads	300000
B'	Tatal /Consesil	1200000
A'+B'	Frand Total	3300000
2. Sa (Rupees and Rs. ! the Princ year 201	anction of the SERB is also accorded to the payment of Rs. 21 twenty one lakh only) under 'Grants for creation of Capit 50,000/- (Rupees fifty thousand only) under 'Grants-in-aid -d cipal, HKBK College of Engineering, Bangalore being the gr 2-13 for implementation of the said research project.	,00,000/- tal assets Seneral to ant for the
3. The	expenditure involved is debitable to	
Grant-in	-aid for the year 2012-13 (Plan Expenditure- Capital) - Rs 2	1,00,000
	8.	
Grant-in	-aid for the year 2012-13 (Plan Expenditure- General) - Rs !	50,000/-
This relea	se is made under Science & Engineering - Engineering Scheme	9.
4. 55	inction of the grant is subject to the conditions as detailed in Annex.	re-I.
5. Tr thousan	te total release amount of Rs. 21,50,000/- (Rupeos twenty one d only) will be drawn by the Drawing & Disbursing Officer of the SE rsed by means of cheque/DD favouring "Principal, HKBK C	laikh fifty RB and will follege of
be disbu Engineer	ring, Bangalore" and will be sent to Principal, HKBK C	ollege of

		Details	of grants aw	arded to the Depa	rtment	
Name of the coordinator		Amount sa	inctioned	Sanctioned letter details	Funds Utilized	Utilization certificate details / Reason for non-submission of Utilization Certificate
		Non Recurring	Recurring			
						F. Y. wise expenditure: 2012 - 13
						(a) Under Recurring Head: Rs 34,935
						(b) Under Non-recurring Head: Rs 19,31,304
Syed Abu S	ayeed			Project Title: Nano		F. Y. wise expenditure: 2013 - 14
lead, Dept. of	Civil			calcului suicate – son based mineral		(a) Under Recurring Head: Rs 3,16,836
ngineering (Prin	ncipal	n- 01 T1-1-	- 1-1-1-1-U	amendments as liners	D- 20 64 0067	(b) Under Non-recurring Head: Rs 1,00,987
nvesugator) and anaulla PF, Pro	of. &	KS 21 LAKIIS	KS 12 LAKUS	tor nazardous waste containment facilities	-/c&U,4c,Uc SX	F. Y. wise expenditure: 2014 - 15
Head, Dept.	of			DST No: SD/S3/MEDC/0111/20		(a) Under Recurring Head: Rs 3,98,326
(Co-Investiga	tor)			12 12		(b) Under Non-recurring Head: Rs 86,129
						F. Y. wise expenditure: 2015 - 16
						(a) Under Recurring Head: Rs 1,85,568
						(b) Under Non-recurring Head: NIL

3. The department obtained an Indian patent with the following details

		(21) Application No.2765/CHE/2015 A	
(19) INDIA			
(22) Date of filing of Application :01/06/2015		(43) Publication Date : 15/12/2017	
(54) Title of the invention : NANO CALCIUM SILIC HAZARDOUS WASTE CONTAINMENT FACILIT	ATE - A SO IES	L BASED MINERAL AMENDMENTS AS LI	NERS FOR
	:C09K	(71)Name of Applicant :	
(51) International classification	8/00	1)SYED ABU SAYEED MOHAMMED	
(31) Priority Document No	:NA	Address of Applicant :HKBK College of Er	ngineering, #22/1,
(32) Priority Date (33) Name of priority country	NA NA	Nagawara, Bangalore - 500045 Karnataka Indu 25SANATILLA PATHAPALVA FAKPUD	a FEN
(86) International Application No	NA	(72)Name of Inventor :	Active Contraction
Filing Dute	:NA	1)SYED ABU SAYEED MOHAMMED	
(87) International Publication No	: NA	2)SANAULLA PATHAPALYA FAKRUD	EEN
(61) Patent of Addition to Application Number	:NA		
(62) Divisional to Application Number	NA		
Filing Date	NA		
No. of Pages : 67 No. of Claims : 8			
No. of Pages : 67 No. of Claims : 8			

4. The department has a strong publication history and the detailed list is hereby enclosed

Journal publications (2015-18)

- Mohammed, S.A.S. and Moghal, A.A.B. (2016). "Efficacy of Nano Calcium Silicate (NCS) Treatment on Tropical Soils in Encapsulating Heavy Metal Ions: Leaching Studies Validation". J. Innovative Infrastructure Solutions.1(21), 1-12. (Springer -Scopus Indexed))
- Moghal, A.A.B., Reddy, K.R., Mohammed, S.A.S., Shamrani, M.A.A., and Zahid, W.M. (2017). "Retention studies on arsenic from aqueous solutions by lime treated semi-arid soils," Intl. J. Geomate., 12(29), 2836-2843.(Scopus Indexed)
- Arif Ali Baig Moghal, Krishna R Reddy, Syed Abu Sayeed Mohammed, Mosleh Ali Al Shamrani, and Waleed M Zahid,(2017), Sorptive response of chromium and mercury form aqueous solutions using chemically modified soils, ASTM Journal of Testing and Evaluation Vol 45, No. 1, Jan 2017,DOI:10.1520/JTE20160066. (Science citation indexed)
- Syed Abu Sayeed Mohammed, Sanaulla, P. F and Arif Ali Baig Moghal, (2016) Sustainable use of locally available red earth and black cotton soils to retain Cd2+ and Ni2+ from aqueous solutions, International Journal Civil Engineering DOI 10.1007/s40999-016-0052-z. (Science citation indexed)
- Arif Ali Baig Moghal, Ali Abdul Kareem Obaid, Mosleh Ali Al-Shamrani, Waleed M Zaheed, Talal O Al – Refeai, Syed Abu Sayeed Mohammed,(2017), Physico – Chemical and geo environmental characterization of semi arid soils, International journal of Geomate 12(29),2186-2990. (Scopus Indexed)
- Moghal A.A.B,Reddy,K.R., Mohammed,S.A.S., Al- Shamrani, M.A., and Zahid,W.M.,(2016),"Lime amended semi arid soils in retaining copper, lead and Zinc from aqueous solutions," Water, Air Soil Pollution Vol 227. DOI 10.1007/s11270-016-3054-1. (Science citation indexed)

Journal publications (2008 - 2014)

1. Syed Abu Sayeed Mohammed, Shankara, Maya Naik, Sivapullaiah PV, "Sorption of iron and copper on sand bentonite flyash mixtures" International Journal of research in chemistry and environment, Vol. 4 Issue 2 ,April 2014 pp 1 - 8.

- 2. Syed Abu Sayeed Mohammed, Application of surface complexation modeling for zinc adsorption on local materials as liners for waste containment facilities. Journal of materials and environmental science, Oujda, Morocco Issue 6, September 2012.
- 3. Syed Abu Sayeed Mohammed, Retention capacity of soils and amended soils for heavy metal ions, Journal of Physical Chemistry News, El- Jadida, Morocco, October 2012
- Syed Abu Sayeed Mohammed, Potential of surface complexation and redox modeling for chromium(VI) adsorption on local materials as liners for waste containment facilities. Turkish Journal of Engineering and Environmental Sciences, Vol. 37 Issue 1 March 2013 pp 100 - 108. DOI 10.3906/muh-1112-6
- 5. Syed Abu Sayeed Mohammed, Maya Naik, A review and evaluation of selected kinetic models and sorption processes in amended soils: International Journal of research in Chemistry and environment, India, Vol. 1, issue 2, October 2011
- Syed Abu Sayeed Mohammed, Maya Naik, Utilization of Red soils and amended soils as a liner material for attenuation of copper from aqueous solution: Isotherm and Kinetic Studies. Journal of Environmental Science and Technology, 2011, pp 504 – 519. DOI 10.3923/jest.2011.504.519
- Syed Abu Sayeed Mohammed, Maya Naik, Potential Use of Black Cotton Soil with additives as a Liner material to retain Zinc: Isotherm and Kinetic Studies. International Journal of Ecology and Development, India, Volume 19, Number S11, summer 2011, pp 15 – 29.
- Syed Abu Sayeed Mohammed., Maya Naik., Adsorption Characteristics of Metals in Aqueous Solution by Local Materials with Additives as Liners for Waste Containment Facilities, Journal of Water and Environment Technology., Japan, 8(1), 2010, pp 29 – 50. doi:10.2965/jwet.2010.29
- Syed Abu Sayeed Mohammed, MayaNaik. Syed Tanveeruddin, Influence of additives on the retention of metal ions in a soil of Bangalore, India. Ambiente & Agua – An Interdisciplinary Journal of Applied Science., Brazil, 4 (1), 2009, pp 20 - 36. (doi:10.4136/ambi-agua.71)
- Syed Abu Sayeed Mohammed, MayaNaik. Sanaulla P.F, ZulfiqarAhmed M.N, Studies on contaminant transport, at an Industrial waste dumpsite of Bangalore, India'. Ambiente & Agua – An Interdisciplinary Journal of Applied Science., Brazil, 3 (3), 2008, pp 55 – 66. (doi:10.4136/ambi-agua.61)

ASCE Geotechnical special publications (Acceptance Ratio < 30%) (2015-18)

- Strength characteristics of Nano calcium silicate, flyash and lime blended tropical soils, Syed Abu Sayeed Mohammed, Arif Ali Baig Moghal., and Mohammed Abdul Lateef, IFCEE Orlando, 2018, Geotechnical Special Publication no. 296, 105-114.
- Cadmium fixation studies on contaminated soils using nanocalcium silicate treatment strategy, Syed Abu Sayeed Mohammed, Arif Ali Baig Moghal, Sanaulla P.F, Kotresha K,and Hari Prasasd Reddy, Geofrontier 2017 Geotechnical special publication no. 276, 434 – 442.
- Evaluation of Diffusion Rate Constants from Soil Column Studies In Lime Treated Semi Arid Soils - Pb2+ and Zn2+ Scenario Arif Ali Baig Moghal ,Krishna R Reddy,

Syed Abu Sayeed Mohammed, Mosleh Ali Al-Shamrani , Waleed M Zahid and Bhaskar Chittoori GEOCHICAGO 2016 Geotechnical special publication no. 273, 135 – 144.

- Potential of soils amended with nano calcium silicate mixture for lead encapsulation in an aqueous medium Syed Abu Sayeed Mohammed, Sanaulla.P.F, Munwar B Basha and Arif Ali Baig Moghal GEOCHICAGO 2016 Geotechnical special publication no. 273, 467 – 476.
- Efficacy of lime treatment on the mercury retention characteristics of semi arid soils, Arif Ali Baig Moghal, Krishna R Reddy, Syed Abu Sayeed Mohammed, Mosleh Ali Al-Shamrani4 and Waleed M Zahid, GEOCHINA 2016,Geotechnical special publication No. 261, 41- 48.
- Role of different leaching methods to arrest transport of Ni2+ in soil and soil amended with nano calcium silicate, Syed Abu Sayeed Mohammed, Sanaulla.P.F, Krishna R Reddy and Arif Ali Baig Moghal GEOCHINA 2016, ,Geotechnical special publication No. 261, 49- 56.

ASCE Geotechnical Special Publications (2014)

- Syed Abu Sayeed Mohammed, Arif Ali Baig Moghal, "Soils Amended with Admixtures as Stabilizing Agent to Retain Heavy Metals", ASCE's Geotechnical Special Publication 234 series, Feb 2014, pp 2216-2226. Permalink: <u>http://dx.doi.org/10.1061/9780784413272.216</u>
- Arif Ali Baig Moghal, Syed Abu Sayeed Mohammed, B. Munawar Basha, Mosleh Ali Al-Shamrani, "Surface Complexation Modeling for Stabilization of an Industrial Sludge by Alternate Materials", ASCE's Geotechnical Special Publication 234 series, Feb 2014, pp 2235-2244. Permalink: <u>http://dx.doi.org/10.1061/9780784413272.218</u>
- Arif Ali Baig Moghal and Syed Abu Sayeed Mohammed "Performance of Soils and Soil Lime Mixtures as Liners to Retain Heavy Metal Ions in Aqueous Solutions", Geo-Shanghai, 2014, ASCE's Geotechnical Special Publication 241 series, May 2014, pp 160-169. (doi: 10.1061/9780784413432.017)

5. Membership of Professional societies

The department obtained a nomination from American Society of Civil Engineers (ASCE) and has given Associate Membership status to Prof. SAS Mohammed.



- 6. Recently during vacation period many prominent academic activities were undertaken
- 1. Prof. SAS Mohammed submitted a new project proposal to SERB- DST with an estimated budget of Rs 57.7 lakhs.
- 2. Prof. SAS Mohammed contributed a text book chapter to Springer nature publishers after receiving an invitation from them, Book Chapter no. 5 Strontium toxicity: mechanistic response, alterations and regulations, Book Title "Strontium contamination in the Geo environment under Hand book of Environmental Chemistry," to be published by Springer nature.
- 3. Mrs. Krati Sharma visited National chemical laboratory (NCL), Pune to complete her pending research paper.
- 4. Mr. Mubarak Ali and Mr. Mohammed Abdul Lateef visited National Institute of technology (NIT) Warangal to meet their external guide and have doctoral discussions.

Chapter 5

Departmental Labs

By: Bidisha Chakrabarti, M. Tech (Ph.D.), Nihar M M.Tech, Manoj V.P, MSc. (Geology) M.Tech (Mining Engg.), Jayakarunya M.Tech. Vindhya C.R. M.Tech.

Assistant Professors, Dept. Of Civil Engineering, HKBK CE

GEOTECHNICAL LAB

Geotechnical engineering is a sub-discipline of civil engineering that analyzes the physical, mechanical and chemical properties of "earth materials" (i.e. Soil, sub-soils, and rock). Based on this analysis, geotechnical engineers determine the safest, longest lasting, and, hopefully, most environmentally equitable foundational designs. In the Civil Engineering department, Geo-technical engineering Laboratory was established in the year of 2014. The laboratory is equipped with all modern machineries. Here the student's theoretical knowledge is reinforced with practical problems. By performing all the experiments students will able to get the knowledge regarding Summary of all subsurface exploration data, including subsurface soil profile, exploration logs, laboratory or in situ test results, and ground water information and Interpretation and analysis of the subsurface data and Specific engineering recommendations for design, Discussion of conditions for solution of anticipated problems; and Recommended geotechnical special provisions.





Geotechnical Engineering Lab

ENVIRONMENTAL ENGINEERING LAB

Environmental engineering is the application of science and engineering principles to protect and utilize natural resources, control environmental pollution, improve environmental quality to enable healthy ecosystems and comfortable habitation of humans. It is based on multiple disciplines including geology, hydrology, biology, chemistry, physics, medicine, engineering, management, economics, law, etc. Environmental engineering involves water supply, pollution control, recycling, waste (solid and liquid) disposal, radiation protection, industrial hygiene, environmental sustainability, and public health. The lab mainly deals with the determination of physio-chemical and bacteriological properties of water. This will also aid to determine optimum dosing for common physiochemical treatments. The lab contains relevant fundamental chemistry and biology concepts/theories and their applications in environmental engineering. The key tests include Physical, chemical and bacteriological tests of water and waste water. Sampling and laboratory analysis of air and solid waste are also discussed in this lab.





Environmental Engineering lab

FUILD MECHANICS LABORATORY

Jar test apparatus

This lab helps to carry out the Laboratory tests on the different properties of Fluid in static and as well as dynamic condition and also investigate the flows through pipes and various channels, Losses of flow, Efficiency of Turbine etc. The laboratories cater to the needs of students in the subject of fluid mechanics and fluid machines. It strengthens and broadens the students' knowledge of incompressible fluid mechanics.

To provide hands-on experience with flows that is more complex, nonlinear, or unsteady than are typically studied in a lecture course. The laboratory is equipped with large number of equipment's and experimental set ups to study the fundamentals and applied aspects of fluid mechanics and fluid machines.

ENGINEERING GEOLOGY LAB

Engineering geology studies may be performed during the planning, environmental impact analysis, civil or structural engineering design, value engineering and construction phases of public and private works projects, and during post-construction and forensic phases of projects. Works completed by engineering geologists include; geological hazard assessments, geotechnical, material properties, landslide and slope stability, erosion, flooding, dewatering, and seismic investigations, etc.

Engineering geology studies are performed by a geologist or engineering geologist that is educated, trained and has obtained experience related to the recognition and interpretation of natural processes, the understanding of how these processes impact human made structures (and vice versa), and knowledge of methods by which to mitigate against hazards resulting from adverse natural or human made conditions. The principal objective of the engineering geologist is the protection of life and property against damage caused by various geological conditions.



Geology Lab

CAD LAB

CAD Lab of this department was established for concept to study the detailed working drawings of structures. This lab is to primarily facilitate students to evolve concepts and convert it into a complete product. Department covers CAD and STAAD-PRO (Structure analysis and design software) which benefits the students to study the design and detailing of structures and its components.

The lab is well equipped with the computers and required software's. Students study scale factors, sections of drawing, planning of residential buildings and it's detailing of structural components such as staircase, beams, columns, slab, retaining walls, water tank etc. which make our students well versed to prepare detailed working drawings and also inculcate managerial skills also.

SURVEY LAB

The main objective of this study is to help students in gaining the practical experience by exposing them to various techniques of field surveying. The students will have an understanding of the concepts involved in the preparation of layouts, plans, maps etc. At this juncture, the present course on Surveying Lab -plays a vital role for enhancing the knowledge of an aspiring civil engineer. This lab course comprises of several experiments which are intended to make the students to understand and gain familiarity with latest surveying techniques.

The study consists of Principles of Survey, Theodolite Survey, Tacheometric Survey, Setting out Works and Total Station Survey. At the end of this course, a student should be able to appreciate the role of thesurveyor in the civil engineering industry: to plan and execute a topographical survey for engineering development; plan, design and set out engineering works; manage, organise and execute a given task to meet specifications within a strict deadline; work in groups.



Survey Practice Lab in the field

CONCRETE & HIGHWAY MATERIALS LABORATORY

The objective of concrete laboratory is to determine the physical properties of building construction materials like cement, fine and coarse aggregate. The tests include determination of specific gravity, fineness, normal consistency, setting times, workability and soundness of cement, fineness modulus of fine and coarse aggregate, strength of cement mortar, cement concrete. Students can design the mix, make the specimens and test the same for their respective strengths and will also be able to infer the suitability of bitumen materials for construction of road



Concrete & Highway Materials Laboratory

SURVEY CAMP

Department of Civil Engineering conducts Survey Camp every year for the students of Civil Engineering. And every year student's participate successfully as it is the compulsory part of the University academic curriculum for 4th semester.

This camp was aimed to groom civil engineering students with essential knowledge and exposure to the real work, and to encourage leadership and teamwork skills. This survey camp resulted in encouraging and supporting students, emerging as leaders in several areas of academic provision. Students were divided into groups and monitored by faculty coordinator. In the camp all the students learn all the technical aspect which is required in Surveying.

Chapter 6

Photo Gallery

Compiled by:

Mohammed Abdul Lateef, M.Tech (Ph.D.)

Mohammed Shahbaaz, M.Tech,

Krati Sharma M.Tech,

Dilip Kumar, M.Tech.

Adil Nadeem Hussain, M.Tech.

Photo Gallery





 Dr. Syed Abu Sayeed Mohammed Being conferred with the Ph.D. Degree in the 11th convocation held at VTU Belagavi

____ Visit to Aligarh Muslim University

Sayeed Mohammed being the third candidate obtaining Ph.D Degree from BMSCE Bangalore

DEPARTMENT OF CIVIL ENGINEERING

Visit to Control facility of ChowMing and ChowXing Island underground tunnel, (YangTze and South Pacific Tunnel) Shanghai, China





Saud

Riyadh,

Saudi Arabia





Edited by: Prof. S.A.S. Mohammed and Leonine Andrade



Prof. Krishna Reddy, Director and Head, Geotechnical Division, Illinois University, Chicago, USA, and Dr. Arif Ali Baig Moghal, Associate Prof. King Saud University, Riyadh, KSA

Distinguished Professor Anand J Pupalla, University of Texas at Arlington, USA.

Signing of MOU with CADD Centre





First workshop on CADD to 2012 batch students





Interaction with Mr. Sumeet from Sycon Infrastructure





Training at PerkinElmer world centre, Thane, Mumbai





Atomic absorption spectrophotometer (AAS) procured from Perkin Elmer for USD 31,000/- (May 2013)



First Five Years of Civil at HKBK CE







Student activities – Sports: Participation in various sports events and also an organizing department in coordination with Sports Dept







Project Exhibitions

Final Year Project Exhibition and poster presentation during May 2018







Annual Tech Fest- Poster Presentation

KSCST Project Exhibition 2018 at BIET, Davangere





VTU Project Exhibition 2018 – VTU campus Belgavi

Edited by: Prof. S.A.S. Mohammed and Leonine Andrade



Intra-Departmental Model Making Competition













Students visited the newly commissioned 5 MW solar power plant for which panels have spread across 25 acres. Bharat Heavy Electricals Limited (BHEL) has commissioned a 5-Mw gridconnected solar power plant at Shivasamudram near Mandya

Visit to Power generating station Shivanasamudra







Visit to TK Halli Water treatment Plant.

Edited by: Prof. S.A.S. Mohammed and Leonine Andrade



Visit to Prestige Constructions Yelahanka Project site







Staff training for newly set up labs and practise sessions for all the faculty during vacations

A visit to Ready Mix Concrete (RMC) – Gunite plant at Yellahanka, Bangalore station



Visit to Karnataka State Remote Sensing Centre (Open Elective 2017)





Visit to TK Halli Water

treatment Plant







Celebration of Kannada Rajyotsava by faculty



Teacher's Day Celebration (2017) by 5th and 7th Semester Students



Ethnic Day celebration 2017





Ethnic day Celebrations by Faculty

Edited by: Prof. S.A.S. Mohammed and Leonine Andrade



Calypso- College	
Annual Fest	



>>>>





Farewell of 2014 Batch

VTU table tennis tournament, Civil Dept. coordinated with sports dept







Blood donation camp coordinated by Civil Dept.



Survey camp 2017



Survey camp 2016







Survey camp 2018





Edited by: Prof. S.A.S. Mohammed and Leonine Andrade

Civil Department HKBK CE's gift to the world NANO CALCIUM SILICATE (NCS)

AN ADDITIVE TO RETAIN HEAVY METALS AND A HIGH STRENGTH CIVIL ENGINEERING MATERIAL

NANO CALCIUM SILICATE (NCS) a patented (Indian patent No. 2765/CHE/2015) proprietary material synthesized by combining calcium and silica resulting in a bright white crystalline powder. The physical properties of the as formed white crystalline nano powder has density of 0.89 gcm⁻³, surface area of 0.585 m²g⁻¹ and a particle size from XRD at a range of 29-50 nm with a porosity of 17.5%. Comprises of single platelets of 5-10 nm thick and upto 300 nm across. Self-assemble into particles of about $1 - 5 \mu m$ in size with a 3 dimensional open framework "gypsum desert rose" type structure. The particles have high pore volume and a high readily accessible surface area.

USES

ENCAPSULATION OF CONTAMINATED SOILS: NCS forms aggregates because of aggregation of soil particles and enclosure / binding with Ca-associated immobile salts to render it inert and keeps it permanently. NCS would reduce the heavy metal leaching potential from contaminated soil







Fig. 3 Caged Toxicity characteristics leaching procedure (TCLP)

because of its high reduction potential and high surface area. Effective in retarding leaching from 3.19cm/yr to 0.47cm/yr for untreated and treated soils respectively.

STRENGTH ENHANCEMENT IN CONCRETE: Used as an additive in concrete, increases strength of concrete and even enhances life of concrete in harsh environment (exposure to acids and sulphates) and effective in making concrete durable. Used as a binding material with other admixtures too. Sustainable material in the construction techniques due to its ability to bind the admixtures used as a replacement of cement.

AN ADDITIVE FOR GROUND IMPROVEMENT: NCS also enhances the strength of the soils when added in specific dosages. It is very important that the soils are strong for withstanding the loads transferred from structures. NCS alone shoots up the strength of the soil and in combination with other additives.



Fig. 2 TEM Image of NCS with particle size of 50nm



Fig. 4 Combustion synthesis of NCS