

# SRI VENKATESWARA COLLEGE OF ENGINEERING DEPARTMENT OF CIVIL ENGINEERING



**Report of Seminar on** 

# "Energy Conservation And Automation In Buildings"

Organised in association with Indian Green Building Council – (IGBC)

09/10/2021

# SRI VENKATESWARA COLLEGE OF ENGINEERING

(An Autonomous Institution affiliated to Anna University, Chennai) Pennalur, SriperumbudurTk – 602117



# DEPARTMENT OF CIVIL ENGINEERING

# Report of Seminar on "Energy Conservation and Automation in Buildings"

Date : Saturday, 9<sup>th</sup>October 2021

Session 1

Time : 10 a.m.

Topic : Energy Demand Reduction in

Residences: Challenges in the

Indian Context

Speaker

Dr. Rajasekar Elangovan

Associate Professor

Department of Architecture and

Planning, Indian Institute of

Technology Roorkee

Link : <u>https://meet.google.com/irc-fesm-zxf</u>

# Session 3

Time :2 p.m.

Topic :Building Automation System and Energy Optimization

Opportunities in Buildings

Speaker

# Mr. Mayur Dangare

Delivery Manager, Johnson Controls India Pvt. Ltd.

Pune, Maharashtra

Link : <u>https://meet.google.com/uyb-nqvs-tdf</u>

# Convenor

Dr.R.Kumutha, Professor & Head/Civil Engg.

# Coordinators

Ms.Ruby Freya, Assistant Professor/ Civil Engg. Mr. G. Arun, Assistant Professor/ Civil Engg.

Target Audience : Students , Faculty members and Industry Personnel – 82 registered

Session 2 Time :12 noon Topic :Energy Efficiency in Buildings Speaker Mr. Girish R Visvanathan Director – Tech. Earthonomic Engineers Pvt Ltd Chennai Link : <u>https://meet.google.com/znh-wmde-uds</u>



# Number of Participants submitted feedback :

Session	Students	Faculty	Others
1	22	5	1
2	46	5	2
3	37	4	1

Target Audience : Students, Faculties and Industrial personnel

Session	Number of Participants attended
1	28
2	53
3	42



RUBY FREYA CVE <rubyfreya@svce.ac.in>

### Request for delivering lecture in a webinar for civil engineering students

**Rajasekar Elangovan** <raj@ar.iitr.ac.in> To: RUBY FREYA CVE <rubyfreya@svce.ac.in> 30 August 2021 at 10:57

Hi Ruby Freya

Glad to hear from you about the program.

I am currently more active in the field of building energy efficiency. I have not taken up new architectural acoustics related projects in the last couple of years. It will be better for me at this stage to speak on building energy efficiency, thermal performance or thermal comfort. Let me know if this helps.

Regards Rajasekar Elangovan PhD Assistant Professor Department of Architecture and Planning Indian Institute of Technology Roorkee Roorkee, PIN 247667, Uttarakhand, India Ph: +91 1322284838; Alternate email: erajas@gmail.com www.netzedlab.com [Quoted text hidden]



RUBY FREYA CVE <rubyfreya@svce.ac.in>

#### Request for delivering lecture in a webinar for civil engineering students

**RUBY FREYA CVE** <rubyfreya@svce.ac.in> To: Rajasekar Elangovan <raj@ar.iitr.ac.in> 30 August 2021 at 14:33

Dear Sir,

Thank you very much for expressing your interest towards delivering a lecture. I think lecture on building energy efficiency or thermal performance of buildings also. Students have gone through a value added course on green building concepts in the previous semester.

I would like to inform you that the lecture can be 1 hour or 1.5 hours maximum.

I would like to have a few details from your end once you finalise.

1. date and time for the webinar. Kindly give a few options in September and October. We can finalise after checking our academic schedule also. Saturdays any time and weekdays preferably after 6 pm is fine with us.

2. title for the talk

3. your photograph and a brief profile about yourself

4. Our college students' strength attending the event will be at least 50. Can I invite students, faculty and industry persons from other than our college?

Thank you once again.

Thanks and Regards *Ruby Freya* 9940481279

[Quoted text hidden]



Arun Gunasekaran CVE <garun@svce.ac.in>

# **Resource person for webinar Reg**

Arun Gunasekaran CVE <garun@svce.ac.in> To: Vivek Venugopal <vivek.venugopal@cii.in> Thu, Sep 9, 2021 at 12:56 PM

Sir,

Can you please suggest a person for delivering lecture on 'Energy efficiency in buildings' on 9th October. With Thanks, G. Arun



Arun Gunasekaran CVE <garun@svce.ac.in>

#### **Resource person for webinar Reg**

**Vivek Venugopal** <vivek.venugopal@cii.in> To: Arun Gunasekaran CVE <garun@svce.ac.in> Wed, Oct 6, 2021 at 9:03 AM

Dear Sir,

Good morning !!

Pleased to share the speaker profile for the webinar scheduled on 9<sup>th</sup> Oct 2021.

The timing would be 10:30 AM till 11:30 AM.

Kindly make the arrangements in-line with the requirements.

I was not well and hence the delay, inconvenience caused is regretted.

Regards,

Vivek

[Quoted text hidden]

#### 2 attachments



GRV-Linkedin.jpg 1006K

Speaker Profile - GRV EEPL.docx 14K



RUBY FREYA CVE <rubyfreya@svce.ac.in>

# Lecture on topic 'BAS and Energy Optimization Opportunities in Buildings'

Mayur Vishwanath Dangare <MAYUR.DANGARE@jci.com> To: "rubyfreya@svce.ac.in" <rubyfreya@svce.ac.in> Cc: Tushar Jadhav <Tushar.Jadhav@jci.com> 6 October 2021 at 17:24

Hello Ms. Ruby,

Greetings!

It was nice speaking to you yesterday on call.

As discussed, please find attached the document containing my brief career profile, designation and photograph.

Also, I will be delivering the lecture on topic 'Building Automation System and Energy Optimization Opportunities in Buildings' on 9<sup>th</sup> October from 2 to 3 pm.

Hope this helps.

#### **Thanks & Regards**

Mayur Dangare CEM,CEA,WELL AP Sr. Delivery Manager II – PI GCoE Sales and Engineering Support India Johnson Controls

0091-98-5075-7742 cell

Mayur.Dangare@jci.com

www.johnsoncontrols.com

Twitter: <u>@JohnsonControls</u>

LinkedIn: Johnson-Controls

The power behind your mission

18/02/2022, 15:45 Sri Venkateswara College of Engineering Mail - Lecture on topic 'BAS and Energy Optimization Opportunities in Buildings'

Johnson Controls (I) Pvt Ltd

Building No. 2 - 3rd Floor,

Cerebrum IT Park, Marigold Complex,

Kalyani Nagar, Pune - 411006

Maharashtra, India

Mayur Dangare.docx



RUBY FREYA CVE <rubyfreya@svce.ac.in>

8 October 2021 at 13:32

# Lecture on topic 'BAS and Energy Optimization Opportunities in Buildings'

**RUBY FREYA CVE** <rubyfreya@svce.ac.in> To: Mayur Vishwanath Dangare <MAYUR.DANGARE@jci.com> Cc: Sarang Bhosale <sarang.bhosale@jci.com>, Tushar Jadhav <Tushar.Jadhav@jci.com>

Dear Sir,

Thank you once again sir for accepting to deliver the lecture. Please find the attached brochure for the same.

The webinar will be online through google meet. meet.google.com/uyb-nqvs-tdf is the meeting id. We may connect 10 minutes before the session to have a trial if possible.

Thanks and Regards Ruby Freya

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B Webinar Brochure.pdf 318K



Arun Gunasekaran CVE <garun@svce.ac.in>

# Webinar details - 9th October, SVCE

Arun Gunasekaran CVE <garun@svce.ac.in> To: girish@earthonomic.com Cc: Vivek Venugopal <vivek.venugopal@cii.in>

Dear Sir,

On behalf of the department of Civil Engineering, Sri Venkateswara College of Engineering, I thank you very much for accepting to deliver a lecture on 9th October for our department students.

Please find the attached brochure for the same. Session will be online through google meet. The meeting is is https://meet.google.com/znh-wmde-uds

We shall have a trial 10 minutes before the session of possible.

Thanks and Regards G. Arun

B Webinar Brochure.pdf 318K

Fri, Oct 8, 2021 at 2:11 PM

BROCHURE







# SRI VENKATESWARA COLLEGE OF ENGINEERING

An Autonomous Institution - Affiliated to Anna University Pennalur, Sriperumbudur Tk. - 602117, Tamil Nadu

Department of Civil Engineering

Cordially invites you for a

Seminar on

"Energy Conservation and Automation in buildings"

9th October 2021, Saturday

Energy Demand Reduction in Residences: Challenges in the Indian Context





**Dr. Rajasekar Elangovan** Associate Professor Department of Architecture and Planning, Indian Institute of Technology Roorkee

Energy Efficiency in Buildings 12:00 pm



**Mr. Girish R Visvanathan** Director – Tech. Earthonomic Engineers Pvt Ltd Chennai

Building Automation System and Energy Optimization Opportunities in Buildings 2:00 pm



**Mr. Mayur Dangare** Delivery Manager, Johnson Controls India Pvt. Ltd. Pune, Maharashtra

# Register @ https://forms.gle/StAtykUH1ekGokANA

Coordinators

Ms. Ruby Freya, AP/Civil Engg. Mr. G. Arun, AP/Civil Engg. Convenor Dr. R. Kumutha, HoD/Civil Engg.



svce.ac.in

#### **Profile of the speaker Session - 1**



Dr. E. Rajasekar is an associate professor at IIT Roorkee in the department of Architecture and Planning and joint faculty at the Centre for Transportation Systems. He is an Architect specialized in functional efficiency of built environments and building physics. He holds an M.S. by research and PhD degree from Building Technology and Construction Management Division, Department of Civil Engineering, IIT Madras. Prior to joining IIT Roorkee, he has worked at the Center for Excellence and Futuristic Developments, Buildings and Factories (IC), L&T Construction as a research and development engineer for five years. His research is focused on methods and materials to achieve climate sensitive, environmentally responsive and digitally knit built environments. He is currently researching in the areas of Thermal comfort and energy efficiency in built environments, Building information modelling and energy information systems. He has received over 1 million USD grants for research in this field from various national and international agencies and industries. He has been awarded IUSSTF BHAVAN Post-Doctoral Fellowship and Shastri Indo-Canadian Doctoral Fellowship. He has authored over 50 publications in leading international journals and peer-reviewed international conferences. He has been associated with the green and energy efficiency rating of several commercial buildings across India. He has provided acoustical design and noise control solutions for various project

#### **Profile of the speaker Session – 2**



Mr. Girish is a seasoned sustainability professional and specializes in the field of energy analytics including - energy simulation, energy efficiency strategy formulation, ventilation designs, automation, and retrofits. He was bestowed the IGBC fellowship award in 2020. He works closely with various Green Building councils and is a sought-after lecturer across popular universities in India, Middle East, and Australasia. To his credit, he has facilitated several national award-winning projects with the Digital Twin approach:

The First Platinum Rated Green Factory in India – which is the highest rated Green Factory in the country.

He has also commissioned the first ever green building in the Northeast India - a full-fledged Gold rated Green hospital for the under privileged that also attracted appreciations from Bill Gates himself.

He was a part of the first ever green retrofit of a Central Government Building in India - also one of the highest rated retrofitted green building in the whole of India.

He continues to support and bridge the industry-academia gap via R&D initiatives, mentoring programs and projects focusing on advancement of green building technology.

#### Profile of the speaker Session – 3



Mr. Mayur Dangare Delivery Manager with 14+ years of experience in energy management, energy audits, energy benchmarking, measurement and verification, energy performance contracting, energy modeling for both industrial and commercial sector.

- Certified energy manager and auditor from Bureau of Energy Efficiency, India.
- WELL AP certified professional from Green Business Certification Inc.

• A bachelor in Mechanical Engineering from Pune University and a Post Graduate in Energy Management from Devi Ahilya Vishwavidyalaya, Indore.

#### **Brief Report of the Seminar**

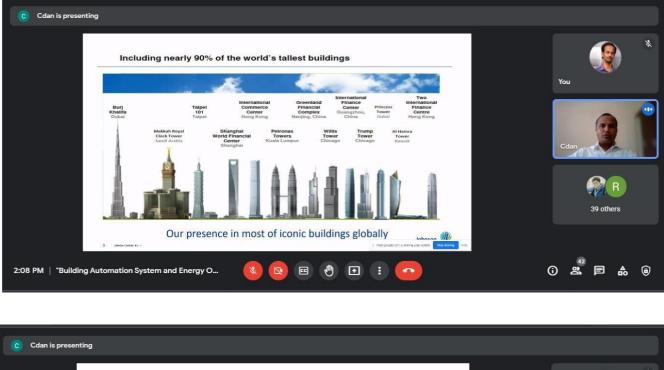
Mrs. Ruby Freya welcomed the speaker and participants to the seminar on 'Energy conservation and automation in building' and she gave a brief introduction about the speaker of the first session Dr.Rajasekar.He delivered the lecture on the topic 'Energy demand reduction in residences: challenges in Indian context'. He begins his lecture emphasis the increasing energy demand in the residential building and also the challenge specific to Indian context. The different climatic zones in India were discussed and the star rating against energy consumption in each area was also explained. Dr. Rajasekar shared his recent field study in Ahmedabad under taken by IIT Roorkee. The dynamics of energy demand for cooling energy, Lighting energy and other plug loads. The different paraments considered for the study was also explained. Then the energy demand was discussed with respect to climate responsive design, adaptive comfort criteria and Probabilistic behaviour.

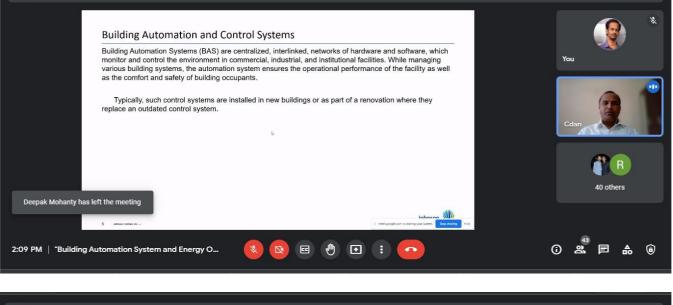
Mr. Girish the second speaker of the seminar has delivered a lecture on the topic 'Energy efficiency in buildings' he begins the lecture by discussing how the sustainability and profitability can go hand in hand, and also he has discussed about the benefits of green building. He then explained about the sustainability goals and the direction in which the corporate companies are moving towards achieving sustainability goals. The triple bottom line analysis for the test for sustainable solution was discussed and then achieving energy efficiency in existing building vs new building was explained energy efficiency. Building simulation is the process of using a computer to build a virtual replica of a building. Simulation can be done for solar shading analysis and Material analysis. The case study of GNRC institute of medical sciences building with help of state of art technologies and gadgets.

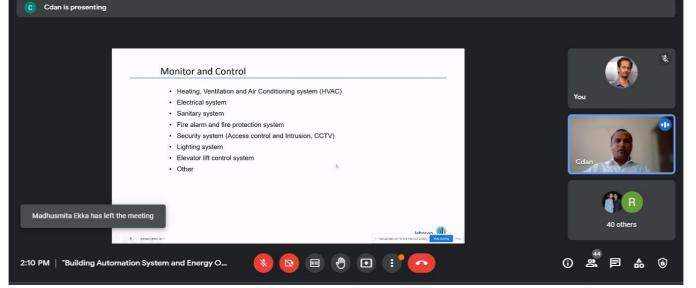
The speaker for the third session Mr. Mayur Dangaredelivered the lecture on the topic 'Building automation system and energy optimization opportunities in building'. He started the seminar by giving a brief introduction about Building Automation System (BAS) and also explained the activities that can be controlled and monitored using BAS. He then listed about the advantages of the BAS. Then he discussed about the key sub-systems for powerful integration and also about Non-traditional BMS integration. The BAS components tier 1 to tier 4 was discussed and their different level of control for each tier. He continued is his lecture explaining the system architecture and various components of the architecture. The different user interfaces available for the interaction with the system and their benefits were explained.

#### **SNAPSHOTS DURING THE SEMINAR**

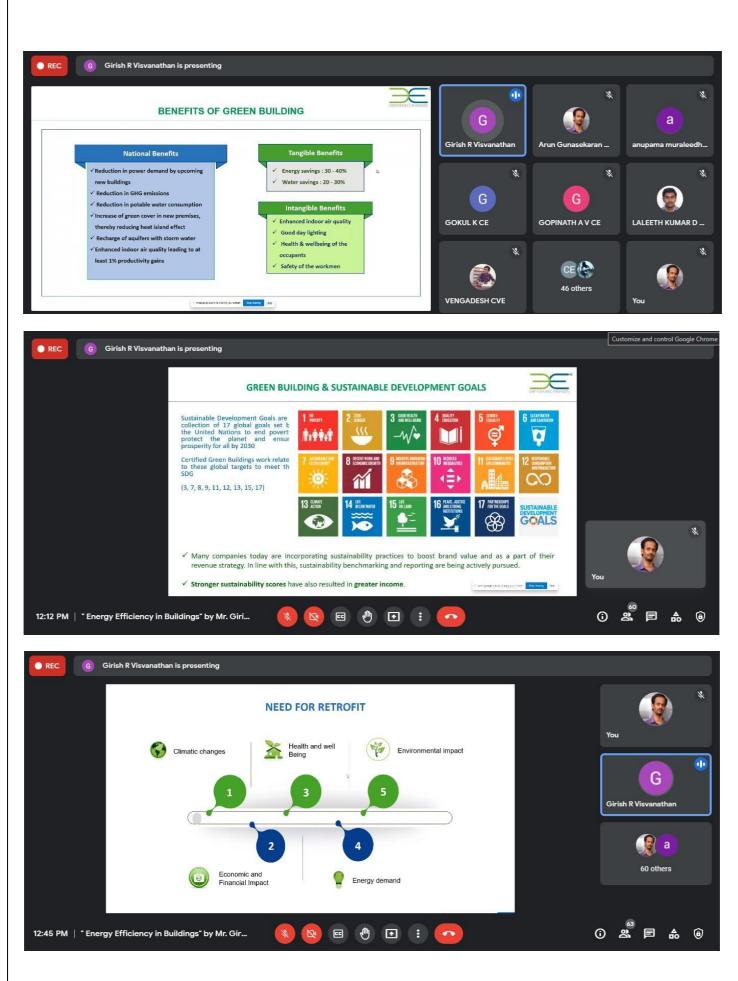
Session 1







#### Session 2



### Session 3

Session 5	
<ul> <li>Arecent field study in Ahmedabad carried out by IIT Roorkee</li> <li>30% Prediction uncertainty in annual cooling energy demand</li> <li>20% Prediction uncertainty in peak cooling energy demand</li> </ul>	Description
PARAMETERS CONSIDERED         • Sun - Earth variables         • Solar - Site related variables         • Macro - Micro Climatic variables         • Macro - Micro Climatic variables         • Site characteristics related variables         • Building spatial design related variables         • Envelope properties related variables         • Interior treatment related variables         • System design related variables         • Building usage related variables         • Building usage related variables         • Occupant behavior related variables         • Energy related variables         • Cost related variables	Ripatekar Elangovan
Energy in Buildings Common reference to • Cooling Energy (Climate loading + Internal loading) • Lighting Energy • Other plug loads	

# List of participants

S.No.	Name	Name of the Institution/Organisation	Category
1	Tushar Gahane	Miet Gondia	Student
2	S.Priyadharshani	Sri Venkateswara College Of Engineering	Student
3	S.Gowtham	Sri Venkateswara College Of Engineering	Student
4	D Praveen Kumar	Sri Venkateswara College Of Engineering	Student
5	G.Harshavarthani	Sri Venkateswara College Of Engineering	Student
6	R. Pon Pradeep	Sri Venkateshwara College Of Engineering	Student
7	Hemalatha R	Sri Venkateswara College Of Engineering	Student
8	Gogula Chezhiyan.N	Sri Venkateswara College Of Engineering	Student
9	M.Jenani	Sri Venkateswara College Of Engineering	Student
10	Anandarajan.P.V	Sri Venkateswara College Of Engineering	Student
11	Ajay Kumar	Galaxy Global Group Of Institutions	Student
12	Aurudra Adiseshaiah Krishna	Sri Venkateswara Collage Of Engineering	Student
13	Kavinselva P	Sri Venkateswara College Of Engineering	Student
14	Abishek	Srivenkateswara Clg Of Engineering	Student
15	Keerthi Vaasan R	Sri Venkateswara College Of Engineering	Student
16	Naveen S	Sri Venkateswara College Of Engineering	Student
17	K N Mohammad Salmaan Shariff	Sri Venkateswara College Of Engineering	Student
18	Balamurugan. Sp	Sri Venkateswara College Of Engineering	Student
19	Anupama M	Sambhram Institute Of Technology	Student
20	Divya Khandelwal	Marathwada Institute Of Technology Aurangabad Maharashtra	Student
21	V.Hariharan	Sri Venkateswara College Of Engineering	Student
22	Kiran Kumar Pon	Sri Venkateswara College Of Engineering	Student
23	D.Sugandhan	Svce	Student
24	Syed Afrideen.M	Sri Venkateswara College Of Engineering	Student
25	Sriram.L	Sri Venkateswara College Of Engineering	Student
26	T Lalith Kumar	Sri Venkateswara College Of Engineering	Student
27	Charan N	Svce	Student
28	Sarvesh K	Sri Venkateswara College Of Engineering	Student
29	Mohan Krishna P R	Sri Venkataswara College Of Engineering	Student
30	A.Vignesh	Sri Venkateswara College Of Engineering	Student
31	Murali Manogar Joshi S	Sri Venkateswara College Of Engineering	Student

32	Ranjana Piriyadharshini	Sri Venkateswara College Of Engineering	Student
33	Laleeth Kumar D	Sri Venkateswara College Of Engineering	Student
34	G.Saravanapandi	Sri Venkateshwara College Of Engineering	Student
35	Bharanidharan. B	Sri Venkateswara College Of Engineering	Student
36	Kavinmalar K	Sri Venkateswara College Of Engineering	Student
37	Arpit Tamrakar	Ujjain Engineering College Ujjain	Student
38	Aslam Nizam Nadaf	Dypiet Pune	Student
39	Gokul K	Sri Venkateswara College Of Engineering	Student
40	Vengadesh V	Sri Venkateswara College Of Engineering	Student
41	Guru Prakash K	Sri Venkateswara College Of Engineering	Student
42	V.Rohit	Sri Venkateswara College Of Engineering	Student
43	Ramanan.B.B	Sri Venkateswara College Of Engineering	Student
44	Padmanaban N	Sri Venkateswara College Of Engineering	Student
45	Sriram Chandran	Sri Venkateswara College Of Engineering	Student
46	G Pranav Karthik	Sri Venkateswara College Of Engineering	Student
47	Ritambhara Kumari Upadhyay	Panjab University, Chandigarh	Research Scholar
48	Kallol Samanta	Adamas University	Industry Personnel
49	Mathiyazhagan R	Sri Venkateswara College Of Engineering	Faculty
50	Babu N	Pollachi Institute Of Engineering And Technology	Faculty
51	A.Vijay Vignesh	Sri Venkateswara College Of Engineering	Faculty
52	M.Helen Santhi	Vellore Institute Of Technology, Chennai	Faculty
53	Hariswaran S	Sri Venkateswara College Of Engineering	Faculty

#### PARTICIPANTS FEEDBACK FORM

# Sri Venkateswara College of Engineering Department of Civil Engineering

Feedback Form – Seminar on "Energy Conservation and Automation in Buildings" Date : 9th October 2021, Session 2 @ 12pm Energy Efficiency in Buildings by Mr. Girish R Visvanathan, Director – Tech., Earthonomic Engineers Pvt Ltd, Chennai.

#### \* Required

1. Name of the Participant (as required in Participation Certificate) \*

2. Name of the Institution/Industry/Organisation \*

3. State \*

4. Email \*

5. Category \*

Mark only one oval.			
Student			
Research Scholar			
Faculty			
Industry Personnel			
Other:			

6. Year (for student category)

Mark only one oval.

- 🔵 IV Year
- 📃 III Year
- 📃 II Year
- 📃 l Year
- Dest graduate
- 7. Designation (Faculty / Industry Personnel)
- 8. Mobile number (Whatsapp) \*

 Please rate your satisfaction with the organisation/content of the webinar by indicating your level of agreement or disagreement with each of the following statements. \*

Mark only one oval per row.

	Strongly agree	Agree	Neutral	Disagree
The session delivered the information I expected to receive.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
The subject matter was presented effectively.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
The pace and duration of the webinar was satisfactory.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
The resource person is knowledgeable.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
The resource person presented the information in a clear and logical manner	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Sufficient time was given for interaction	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
The webinar was well organized	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
As a result of this webinar, I gained new knowledge	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

10. Are you interested in attending such programs organised in future by the Department of Civil Engineering of SVCE \*

Mark only one oval.

$\square$	) \	/es
$\square$	) (	١o

# Sri Venkateswara College of Engineering Department of Civil Engineering

53 responses

**Publish analytics** 

Name of the Participant (as required in Participation Certificate)

53 responses

Mathiyazhagan R

**TUSHAR GAHANE** 

BABU N

S.Priyadharshani

S.GOWTHAM

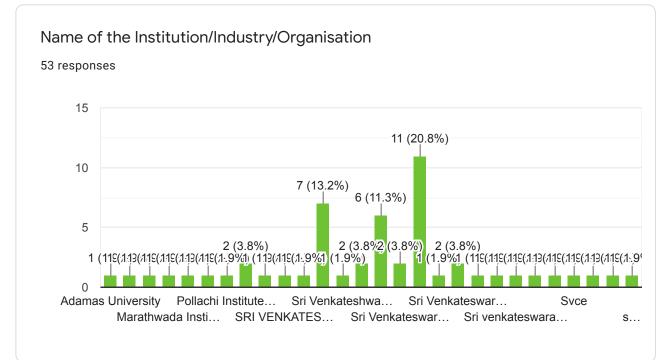
A.VIJAY VIGNESH

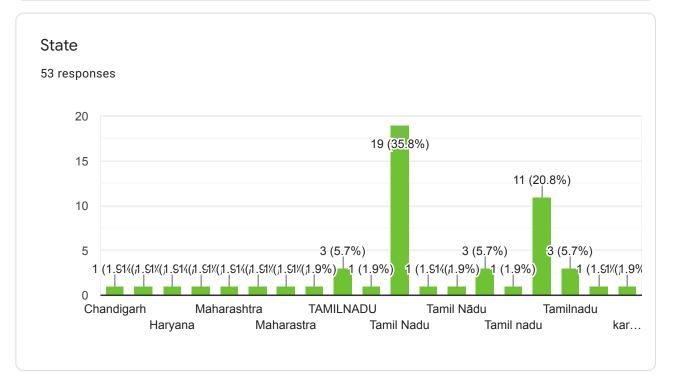
D praveen kumar

G.Harshavarthani

**R. PON PRADEEP** 

1





1

#### Email

53 responses

mathiyazhagan@svce.ac.in

tushar.gahane@gmail.com

babumail1812@gmail.com

sivarajanpriya700@gmail.com

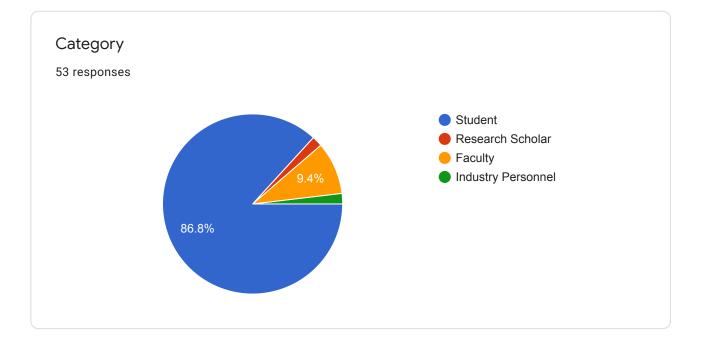
gowthamsoundaran24@gmail.com

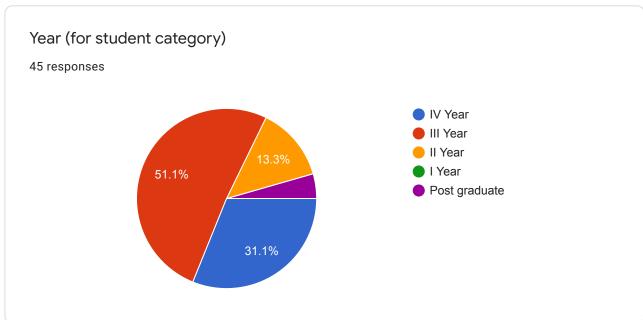
avijayvignesh@svce.ac.in

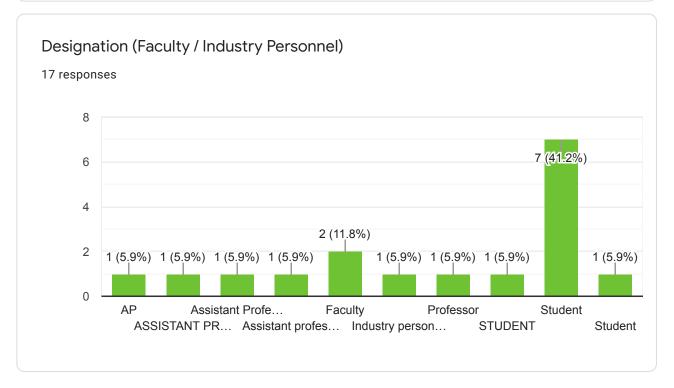
2020ce0033@svce.as.in

lavanya17082001@gmail.com

ponpradeeep@gmail.com



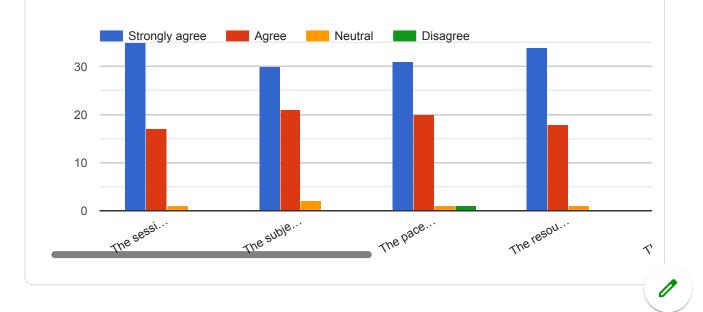


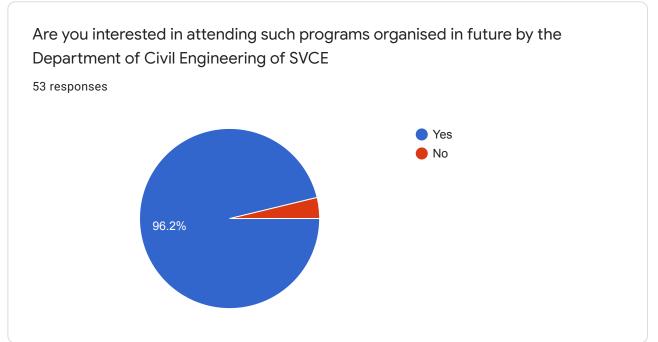




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9	677015014	
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8	870161233	
6	383051476	
9	361763869	
8	754192418	
9	384676107	
9	087930113	
9	940980727	

Please rate your satisfaction with the organisation/content of the webinar by indicating your level of agreement or disagreement with each of the following statements.





Additional Comments/Feedback	
53 responses	
Nil	
Good	L
No comments	
Nothing	
No	
nil	
Thank you	
Very informative	
Informative	

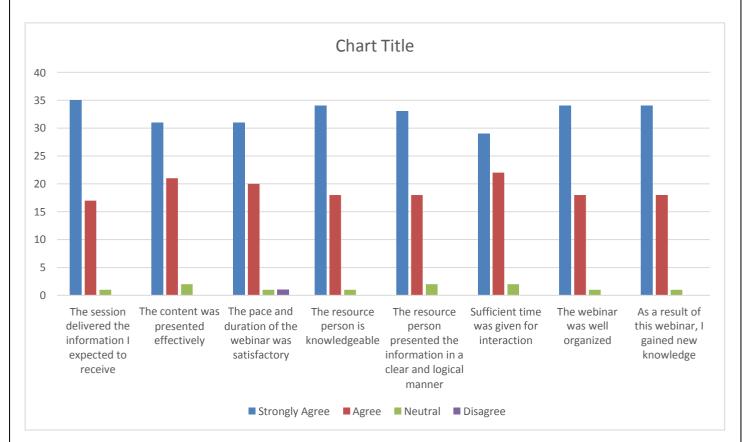
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# SUMMARY OF FEEDBACK

Total Number of respondents: 53				
Feedback	Strongly Agree	Agree	Neutral	Disagree
The session delivered the information I expected to receive	35	17	1	-
The content was presented effectively	31	21	2	-
The pace and duration of the webinar was satisfactory	31	20	1	1
The resource person is knowledgeable	34	18	1	-
The resource person presented the information in a clear and logical manner	33	18	2	-
Sufficient time was given for interaction	29	22	2	-
The webinar was well organized	34	18	1	-
As a result of this webinar, I gained new knowledge	34	18	1	-



#### Additional comments/feedback from participants:

- Very good session.
- It's a wonderful and very informative session.
- Improvised my knowledge with sustainable construction practices.

#### SPEAKER FEEDBACK

# Sri Venkateswara College of Engineering Department of Civil Engineering

FEEDBACK – Seminar on "Energy Conservation and Automation in Buildings" on 9th October 2021, Session 2 @ 12 pm - Energy Efficiency in Buildings

Thank you for your lecture. Please fill this feedback form.

Name \*

Girish R Visvanathan

Email \*

girish@earthonomic.com

Designation \*

Director

Official Address \*

Adyar Chennai

Mobile Number (whatsapp) \*

9941226780

Please rate your satisfaction with the organisation of the guest lecture by indicating your level of agreement or disagreement with each of the following statements.

How satisfied were you with the event? \*

	Strongly agree	Agree	Neutral	Disagree
Were the participants interactive?	$\bigcirc$	۲	$\bigcirc$	$\bigcirc$
Is the mode (platform) for lecture was comfortable to use?	0	۲	0	0
The guest lecture was well organized	۲	$\bigcirc$	$\bigcirc$	$\bigcirc$

Are you interested in interacting with our institution in future ? *
Yes
O No
Additional comments / feedback *
Good initiative

This form was created inside of Sri Venkateswara College of Engineering.

**Google** Forms

#### SPEAKER FEEDBACK

# Sri Venkateswara College of Engineering Department of Civil Engineering

FEEDBACK – Seminar on "Energy Conservation and Automation in Buildings" on 9th October 2021, Session 3 @ 2 pm - Building Automation System and Energy Optimization Opportunities in Buildings

Thank you for your lecture. Please fill this feedback form.

Name \*

Mayur Dangare

Email \*

Mayur.Dangare@jci.com

Designation \*

**Delivery Manager** 

Official Address \*

Johnson Controls (I) Pvt Ltd , Building No. 2 - 3rd Floor, Cerebrum IT Park, Marigold Complex, Kalyani Nagar, Pune - 411006 ,Maharashtra, India

Mobile Number (whatsapp) *	
9850757742	

Please rate your satisfaction with the organisation of the guest lecture by indicating your level of agreement or disagreement with each of the following statements.

How satisfied were you with the event? *						
	Strongly agree	Agree	Neutral	Disagree		
Were the participants interactive?	$\bigcirc$	۲	$\bigcirc$	$\bigcirc$		
Is the mode (platform) for lecture was comfortable to use?	۲	$\bigcirc$	0	0		
The guest lecture was well organized	۲	0	0	0		

Are you interested in interacting with our institution in future ? *				
• Yes				
O No				
Additional comments / feedback *				
Overall Good Session				

#### SAMPLE CERTIFICATE





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**Department of Civil Engineering** 

# **Certificate of Participation**

This is to certify that **KAVINSELVA P** 

has participated in the Seminar on Energy Conservation and Automation in Buildings -Session 1 on "Energy Demand Reduction in Residences: Challenges in the Indian Context" delivered by Dr. Rajasekar Elangovan, Associate Professor, Department of Architecture and Planning, Indian Institute of Technology Roorkee on 9<sup>th</sup> October 2021.

Ms. Ruby Freya AP / Civil Engineering Coordinator

B.As

Mr. G. Arun AP / Civil Engineering Coordinator

Dr. R. Kumutha Professor & Head / Civil Engineering Convenor

Approved by

Dr.R.Kumutha (HOD/CVE)

#### Convenor

Head of the Department Department of Civil Engineering Sri Venkateswara College of Engineering Sviperumbudur -602 117. INDIA.

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