



# **Report On**

# Three-Day Workshop on "Internet of Things (IoT) for Mechanical Engineers"

# held on 18th – 20th February 2019

Organized by

**DEPARTMENT OF MECHANICAL ENGINEERING** 

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Dr. M. Mohandass Coordinator

Dr. S. RAMESH BABU, M.E., Ph.D Professor & Head Department of Mechanical Engineering Sri Venkateswara College of Engineering Pennalur, Sriperumbudur (TK) - 602117. Tamilnadu, INDIA.

> Dr. S. Ramesh Babu Convenor

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06/1/2019 SVCE

### Sri Venkäteswara College of Engineering Department of Mechanical Engineering

#### Submitted to the Principal:

Sub: Request for conducting Three Day workshop on "IoT using Arduino for Mechanical Engineers"-reg.

The Internet of Things allows Mechanical Engineers to follow the products they design throughout their entire product lifecycle, enabling engineers to learn how their design performs in reality so they can create more productive and efficient products in the future. By utilizing the cloud, IoT platforms, smart product components, big data, and connectivity, engineers will steer the future of industrial innovation. IoT is the technology engineers need to gain valuable insights and ultimately 'to improve designs. With IoT, there's enormous potential for Mechanical Engineers to design better, smarter products. The growing network of connected products means a new set of mechanical engineering skills. To design smart products, Mechanical Engineers will need to learn how to seamlessly integrate digital and mechanical aspects, and how to influence big data to inform future designs.

The guest lecture on "Internet of Things for Mechanical Engineers" has been arranged on 22<sup>nd</sup> Jaguary 2019 (delivered by Mr. A.Parthiban from Lema Labs (incubated at IIT Madras incubation cell) for second year and third year Mechanical Engineering students. Many students (around 62 students) showed interest on IoT and requested us for arrange the short term training/workshop on IoT in our premises.

Based on the students request, it is proposed to conduct the Three Day workshop on IoT using Arduino for Mechanical Engineers on 13<sup>th</sup>, 14<sup>th</sup> & 15<sup>th</sup> February 2019 for the batch of first 31 students and 18<sup>th</sup>, 19<sup>st</sup> & 20<sup>th</sup> February 2019 for the remaining 31 students.

The fee details are as follows (as given by MS. Lema Labs),

- With Training resource materials with take away kit Rs. 2500/- per candidate.
- With Training resource materials without take away kit Rs. 1500/- per candidate.

The Principal's kind permission is required for conducting the programme and to utilize imprest amount for providing refreshment to workshop attendees.

Thanking you,

( Dr. M. MOHANDASS) Asso. Professors/ME Workshop Coordinator

HOD/ME

Workshop Convener

Approved based on the Approved based on the ct that the students wanted fave the braining

### **REGISTRATION DETAILS:**

Participants for this event are limited to 35 members and the selection is based on first come first serve basis. Hence, participants must register for the workshop to ensure their participation through email.

**Registration fee:** Rs. 2500/- (with kit)

: Rs. 1500 /- (without kit)

### **Deadline for registration:** 12-02-2019

#### Intimation of confirmation: 15-02-2019

The payment can in the form of DD drawn in favour of "The Principal, Sri Venkateswara College of Engineering" payable at Chennai and send it by post/courier to reach 'The Coordinator of the event' on or before 15-02-2019.

### Email id:

mdass@svce.ac.in, karthee@svce.ac.in

**Contact numbers :** 9445235139, 9994385896

**Address for correspondence** Department of Mechanical Engineering Sri Venkateswara College of Engineering

#### TARGETED PARTICIPANTS

Students from Mechanical discipline

#### **RESOURCE PERSON**

Eminent resource persons from LEMA labs, Chennai.

#### **TOPICS COVERED**

Introduction to IoT and its need, Basics of ARDUINO & related programming required for developing a basic IoT based system, APP creation using MIT App inventor, Creating connection and controlling devices through internet using ARDUINO, Case studies.

### **ADVISORY COMMITTEE:**

Dr.M.Sivanadham, Secretary - SVCE Dr. S.Ganesh Vaidyanathan, Principal – SVCE Dr. S.Ramesh Babu, HOD – Dept. of Mechanical Engineering. THREE DAY WORKSHOP ON INTERNET OF THINGS USING ARDUINO (February 18 -20, 2019)

## **Convenor** Dr.S.Ramesh Babu, HoD/ME

### **Coordinators** Dr.M.Mohandass, ASP/ME Mr.K.Karthee, AP/ME

### Organised by



Department of Mechanical Engineering Sri Venkateswara College of Engineering (Autonomous - Affiliated to ANNA University) Sriperumbudur tk - 602 117 www.svce.ac.in



THREE DAY WORKSHOP ON INTERNET OF THINGS USING ARDUINO (February 18 -20, 2019)

### **REGISTRATION FORM**

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NAME

YEAR & SEC

INSTITUTION :

PHONE/ MOBILE:

EMAIL ID :

AMOUNT : CASH /DD

DD NUMBER WITH DATE:

BANK BRANCH :

PLACE:

DATE :

SIGNATURE OF THE APPLICANT

### ABOUT THE COLLEGE

Sri Venkateswara College of Engineering (SVCE), a premier self-financing engineering college, was started in the year 1985 and is managed by Sri Venkateswara Educational and Health Trust. The college conducts 10 B.E / B.Tech Degree courses and 10 PG Courses in Engineering and Technology. The college is autonomous and affiliated to Anna University, Chennai and is accredited by National Assessment and Accreditation Council (NAAC) and also by National Board of Accreditation (NBA).

### ABOUT THE DEPARTMENT

The Department of Mechanical Engineering is one of the three major departments established during the beginning of the college. The department has well experienced faculty and staff members of proven ability and administrative skills. It has well equipped state of the art laboratories that cater to the needs of the students. The department also takes up industrial consultancy works from various industries. Three PG and one UG programmes are currently offered by the department.

### ABOUT THE WORKSHOP

The Internet of Things (IoT) is the latest buzzword being talked about everywhere, yet many don't fully understand the concept behind the phrase or where this technology is currently at. Widely believed to be years away, the Internet of Things is here, and it's rapidly expanding. . The implementation of IoT would dramatically improve the problem of data collection and analysis, whether derived from customers or other sources, which in turn means faster and improved decision-making for businesses in all industries. This workshop's important objective is to make the students learn how IoT can be implemented related to mechanical engineering especially in manufacturing sector through hands on approach.



### Department of Mechanical Engineering Sri Venkateswara College of Engineering Three-Day Workshop on "Internet of Things (IoT) using Arduino" DETAILED SCHEDULE Venue: Mechatronics Lab (II Floor Mechanical Block) Date:18th – 20th February 2019

DATE	SESSION	TIMING	TOPIC / DETAILS	Chief Guest/Expert Member	
		8.30 AM - 9.00 AM	Registration		
		9.00 AM - 9.30 AM	Inauguration	Dr. R.Ramesh, Professor & Assistant Dean (Academic), SVCE. (Chief Guest)	
	1	9.30 AM - 10.30 AM	Why IoT & IoT over Intranet	Expert Members from Lema Labs	
		10.30 AM - 10.45 AM	Теа	a & Snacks	
18/02/19	2	10.45 AM -12.05 PM	Basics of HTML Programming	Expert Members from Lema Labs	
		12.05 PM - 12.45 PM	Lunch Break		
	3	12.45 PM - 2.00 PM	Basics of Arduino & its Programming	Expert Members from Lema Labs	
		2.00 PM - 2.15PM	Теа	a & Snacks	
	4 2.10 PM - 3.15 PM		Basics of Arduino Programming (Cont.)	Expert Members from Lema Labs	
		3.15 PM - 4.00 PM	Doubt clarification and discussions of covered topics	Expert Members from Lema Labs	

	1	9.00 AM - 10.30 AM	How to create server and client	Expert Members from Lema Labs	
		10.30 AM - 10.45 AM	Tea & Snacks		
	2	10.45 AM -12.05 PM	Creating Android Apps using MIT App inventor	Expert Members from Lema Labs	
		12.05 PM - 12.45 PM	Lunch	n Break	
19/02/19	3	12.45 PM - 2.00 PM	Controlling Devices over the internet using MQTT	Expert Members from Lema Labs	
		2.00 PM - 2.15PM	Tea &	Snacks	
	4	2.10 PM - 3.15 PM	Controlling Devices over the internet using MQTT (Cont.)	Expert Members from Lema Labs	
		3.15 PM - 4.00 PM	Doubt clarification and discussions of covered topics	Expert Members from Lema Labs	
	1	9.00 AM - 10.30 AM	Split into 9 teams and each team assigned with a different project	Expert Members from Lema Labs	
		10.30 AM - 10.45 AM	Tea & Snacks		
	2	10.45 AM -12.05 PM	Team developed code for the given project	Expert Members from Lema Labs	
20/02/19		12.05 PM - 12.45 PM	Lunch Break		
	3	12.45 PM - 2.00 PM	Executed the project and presented to other members	Expert Members from Lema Labs & SVCE Faculties	
		2.30 PM - 2.45PM	Tea & Snacks		
		2.45 PM - 3.15 PM	Valedictory	Dr. K.S. Badrinathan Professor & Dean Educational Development SVCE.	

Expert Members from Lema Labs : Mr. Pawan Gnana Raj (Facilitator), Mr. Parthiban A (Facilitator) & two Assisting staffs (for software installation, connection establishment & hardware troubleshooting)

1/11/22, 4:32 PM

≡ 附 Gmail		Q iot workshop inaugural invitation
Compose		
		Forwarded message
Mail		From: <b>Dr. M. MOHANDASS Mec</b> < <u>mdass@svce.ac.in</u> >
		Date: Fri, 15 Feb 2019 at 11:48
Inbox	14,863	Subject: Inaugural function of "Three Day Workshop on IoT using Arduir To: HOD MECH < <u>hodme@svce.ac.in</u> >
Starred		
Snoozed		Dear Sir,
Sent		Kindly forward this mail to svce faculty group.
Drafts	75	
Categories		Dear Sir/Madam,
3D Printer	1	The Department of Mechanical Engineering cordially invites you for Ir
Assistant HOD		Please find the attachment is the invitation for the same.
Aurdino		With Regards
Block Monitoring		Dr.M. Mohandass
Center of Exceller	nce	Associate Professor
		Department of Mechanical Engineering
CO	1	Sri Venkateswara College of Engineering
Feed back by stud	dents	Pennalur, Sriperumbudur (TK)
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Meet

MECHANICAL ENGINEERING IoT Using Arduino -. PDF

## SRI VENKATESWARA COLLEGE OF ENGINEERING

(An Autonomous Institution – Affiliated to Anna University) Pennalur, Sriperumbudur (TK) – 602 117





# DEPARTMENT OF MECHANICAL ENGINEERING

Solicit your esteemed presence for the

**INAUGURAL FUNCTION** 

of

Three Day Workshop on

# INTERNET OF THINGS USING ARDUINO

## **Inaugural Address** by

Dr. R.Ramesh Professor & Asst. Dean (Academic) Sri Venkateswara College of Engineering

- Venue : Mechatronics Lab (ME Dept.)
  - Date : 18<sup>th</sup> February 2019

Timing : 9.00 AM -9.30 AM

ALL ARE WELCOME

Three Day Workshop on Internet of Things Using Arduino					
	In	augural Function			
	Dat	e: 20 <sup>th</sup> February 2019			
Т		s – 9.00 AM to 9.30 AM			
	P	rogram Schedule			
Invocation	:	Prayer			
Welcome Address	:	Dr. M. Mohandass			
		Workshop Coordinator			
HOD Address	:	Dr. S. Ramesh Babu			
		Professor & Head			
		Department of Mechanical Engineering			
Inaugural Address	:	Dr. R.Ramesh			
		Professor & Asst. Dean Academic			
		Sri Venkateswara College of Engineering			
Honouring Chief	:	Dr. S. Ramesh Babu,			
Guest		Professor & Head			
		Department of Mechanical Engineering			
Vote of Thanks	Vote of Thanks Mr. K. Karthee				
		Workshop Coordinator			
National Anthem	National Anthem				

Department of Mechanical Engineering Sri Venkateswara College of Engineering Three-Day Workshop on "Internet of Things (IoT) using Arduino" (18th – 20th February 2019)

#### **DETAILED REPORT**

The Department of Mechanical Engineering organized a Three Day workshop on "Internet of Things (IoT) using Arduino" from 18<sup>th</sup> to 20<sup>th</sup> February 2019. The program was inaugurated by, Dr.R.Ramesh, Professor & Assistant Dean (Academic), SVCE and the same was presided over by Dr. S. Ramesh Babu, Professor & Head, Mechanical Engineering.

The inaugural function of the workshop held on 18<sup>th</sup> February 2019 at 9.00 AM in the Mechatronics Laboratory, Mechanical Engineering Department. Dr. M. Mohandass, Associate Professor (one of the program coordinators) delivered the welcome address. Dr. S. Ramesh Babu HOD/ME, during his presidential address he elaborated the importance and need for this workshop. Dr. R.Ramesh, during the inaugural address, he explained role of IoT in Industry 4.0 and how it is need of the hour to learn IoT now. Finally Mr.K.Karthee, Assistant Professor (one of the program coordinator) presented the vote of thanks.

The second year Mechanical Engineering students from our college participated in the workshop. In total 38 participants registered for the program. The attendees actively participated in all the sessions and also had a very good interaction with the expert members. Individual kits are provided to each students which aided them to learn in a better way and also provided hands on experience.

The valedictory function of the workshop held on 20<sup>th</sup> February 2019 at 2.45 PM at Mechatronics laboratory. Dr. K.S. Badrinathan, Professor & Dean Educational Development has delivered the valedictory speech, during his valedictory address, he insisted the participants to practice whatever they have learnt during the three days and advised to take up projects in this area. All the participants appreciated the way in which the program was organised, the hospitality provided to them and requested us to organise similar workshops in the near future. The series of lecture topics, speakers details and photographs are attached herewith.

Dr. M. Mohandass & Mr.K.Karthee Workshop Coordinators

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Dr. S. Ramesh Babu Workshop Convenor

## Department of Mechanical Engineering Sri Venkateswara College of Engineering Three Day Workshop on IoT using Arduino 18<sup>th</sup> – 20<sup>th</sup> February 2019

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### **List of Participants**

SNo	Roll No	Register Number	Name
1	103	171001103	Srivatshan Seshadri
2	81	171001081	P. Rishi
3	110	171001110	S.K Syed Afridhis
4	123	171001123	R.yokesh
5	68	171001068	A. Prathap
6	74	171001074	Raaghul V
7	77	171001077	Rajkumar S P
8	22	171001022	T.Áshwin
9	7	171001007	Ajay.E
10	14	171001025	Barath Kumar.S
11	14	171001014	Aravinda Krishna V
12	2	171001002	A.Aakash
13	39	171001039	K.Hariharan
14	53	171001053	J.G Mohan
15	28	171001028	S.Che Ram Chandhru
16	32	171001032	Dhruv S
17	33	171001033	Dineshraj.P
18	52	171001052	A.Mohammed Safi
19	27	171001027	Bragadeeeshwar C
20	30	171001030	Deeveish V
21	59	171001059	Naveen Kumar M
22	5	171001005	Adityajeganath.k
23	29	171001029	Chinnaraja Karthikeyan.A.M
24	6	171001006	AJAI R.G
25	34	171001034	Gagan Agarwal
26	60	171001060	Naveen S
27	46	171001046	Justin Rejimone
28	36	171001036	T.C.Giridaran
29	55	171001055	Mrinal .M.Ajay
30	51	171001051	Lokeshwaran A
31	304	171001304	S.Ganesh
32	1	171001001	Aadithyabala . B
33	54	171001054	N.Moneesh
34	84	171001084	Rohan Adhikari.P
35	115	171001115	R.Vignesh
36	71	171001071	S.Praveen Kumar
37	78	171001078	K.Ramanathan
38	62	171001062	B.Nishanthan

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Dr. M. Mohandass

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Dr. S. RAMESH BABU, M.E., Ph.D Professor & Head Department of Mechanical Engineering Sri Venkateswara College of Engineering Pennalur, Sriperumbudur (TK) - 602117. Tamilnadu, INDIA.

Convener

Coordinator

I Int	No	Number	ATTENDANCE FOR WOI	18/02/19 (FN)	18/02/19 (AN)	19/02/19 (FN)	19/02/19 (AN)	20/02/19 (FN)	20/02/19 (AN)
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Dr. M. Mohandss Asso. Prof./Mech Coordinator

Ramment

Dr. S. Ramesh Babu Prof. & Head/Mech Convener

INAUGURAL FUNCTION & DAY 1 (18th February 2019)



DAY 2 (19th February 2019)





## SRI VENKATESWARA COLLEGE OF ENGINEERING

(An Autonomous Institution, Affiliated to Anna University) Pennalur, Sriperumbudur Taluk – 602 117





# SOCIETY OF MECHANICAL ENGINEERS

Solicit your esteemed presence for the

# **VALEDICTORY FUNCTION**

of

Three Day Workshop on

# **INTERNET OF THINGS**

# **USING ARDUINO**

Valedictory Address by

# **Dr. K.S. Badrinathan**

**Professor & Dean (Education Development)** Sri Venkateswara College of Engineering

Venue	:	Mechatronics Lab
Date	:	20 <sup>th</sup> February 2019
Timings	:	2.30 PM to 3.00 PM

# **ALL ARE WELCOME**

# Three Day Workshop on INTERNET OF THINGS USING ARDUINO

# **Valedictory Function**

# Date: 20<sup>th</sup> February 2019

Timings – 2.30pm to 3.00pm

### **Program Schedule**

Welcome Address :	<b>Dr. M. Mohandass</b> Workshop Coordinator
HOD Address :	<b>Dr. S. Ramesh Babu</b> Professor & Head Department of Mechanical Engineering
Valedictory Address :	<b>Dr. K.S. Badrinathan</b> Professor & Dean (Educational Development) Sri Venkateswara College of Engineering
Certi	ficate Distribution
Vote of Thanks :	Mr. K. Karthee Workshop Coordinator

**National Anthem** 



Sri Venkateswara College Of Engineering, Sriperumbudur.

(An Autonomous Institution, Affiliated to Anna University, Chennai)



## Three day workshop on "IoT Using ARDUINO" during

Feb. 18th - 20th 2019

### Feed Back Form

Name of the Participant: Ro	NAN ADH	TKARJ.P	
Year/Section: D/B			
Mobile No: 80562472	53		
E-mail ID: adhibasing	hang 6 gro	al . com	
1. Have you found the cou	rse useful ?		
(a) Yes	(b) No	(c) Can't say	(d)I already knew all this
2. Will you recommend th	is course to your	colleagues ?	
(a) Yes, certainly	(b) Yes, may be	(c) No	(d) No, never
3. Shall you be using the k	nowledge gaine	d during this course in yo	our teaching or for personal
professional advanceme	ent?		
(a) Yes	(b) No	(c) Will try	(d) There is no new learning
4. Your overall assessment	t of the course :		
(a) Waste of time	(b) Excellent	(c) Useful	(e) No comments

5. Suggestions for further improvement ?

Signature of the Participant

Workshop Co-ordinator

(Dr. M. MOHANDASS)