Annual Report 2020

IEEE COMSOC Student Branch Chapter, RV COLLEGE OF ENGINEERING®, Bengaluru, 560059

Introduction

RVCE ComSoc student branch was formed in July, 2016 and has conducted many events to expose the young minds in various segments of communication the events are listed below

Sl.No	Title of the Event	Details of Trainer	Date	No. of Participants
1	Technical talk on "Artifical Intelligence"	Mr. Pharth Sharma, KnightsRobo CORP	23/8/2017	26
2	A Technical Talk on **"**Opportunities in Microwave and its Applications**"**	Dr. P Raghavendra RAO	14/7/2017	25
3	Technical talk on "Career Guidance"	Vishwaniketan UG Fellowship	4/4/2017	72
4	Technical talk on "Semiconductor Technology "	Mr. Shreedhar Vajpaye Oracle USA	14/3/2017	42
5	Technical talk on "Career Awareness Program"	M/s CoreEL Technologies	10/2/2017	27
6	Network on Chip	Dr. John Jose, IIT Guwhati	18-12-17 to 19-12-17	135
7	Higher studies on opportunities in IITs	Dr.Janaki Raman, IIT Madras	19-01-18	75
8	Recent trends in LTE	Dr. S. Ravishankar, Dr. Sondur Lakshmipathi, Dr. Neelesh Mehta, Mr. Anand Mohandas, ..	29-01-18 - 02-02-18	40
9	Ideathon on Water management and sustainability	Sri K S Renu Kumar(Judge)	19-03-18 - 20-03-18	200
10	HAM Workshop 1	Dr. S Satyapal, Indian Institude of HAMS…	27-03-18	200
11	HAM Workshop 2	Dr. S Satyapal, Indian Institude of HAMS…	26-05-18	22
12	Emerging Technologies in Short range wireless communication	Dr. Debarati Sen, IIT Kharagpur, Dr.Goutham Simha, …	02-07-18 - 06-07-18	52
13	Fundamentals of LTE-4G	Mr. Kancichu Verdu, Dr. Ravishankar….	26-09-18 - 30-09-2018	25
14	Workshop on Random Variables and Random Processes	Mr. Karthik P N	3/6/2019- 5/6/2019	21
15	Workshop on "Emerging Trends In Multicore Processors And Network On Chip Architecture"	Dr. John Jose, Prof. Manju R	21/1/2019 -25/1/2019	53

16	Workshop on 5G Technologies	Dr. Navin Kumar Dr. V. Sridhar	16/10/2019	27
`17	Workshop on HAM	Dr.S.Sathyapal Mr. Marcus	30/3/2019	65

The people strength of the chapter was lean in the beginning but now a lot of students take active part in the events and are a part of this venture. This year the events planned are on:

We hope to keep the fervor. Going and the team will plan very many events going forward.

IEEE ComSoc EXECOM DETAILS-2020

SL NO.	NAME	IEEE REGISTATION NUMBER	Email id	Mobile Number	POSITION HELD
1	Shushrutha K S	**92336961**	shushruthks@gmail.com	9964179197	FACULTY ADVISOR
2	Kashish Malhotra	96495211	kashish@ieee.org	8510092760	CHAIRPERSON

**Add Rows as required

EVENTS HELD SUMMARY

Sl No	Event Date	Title	Duration of Event	Attendee Strength
1	7/5/2020	Webinar on "Applications of MCM in broadband communications"	2hrs	120
2	8/5/2020	Webinar on "Reducing the entropy of the world- SOCs for wireless communications"	2hrs	100
3	Upcoming	Workshop on "Aspects of 5G"	5days	
4	Upcoming	Workshop on "Quantum Computing"	1days	
5	Upcoming	Workshop on "MIMO"	3dyas	

EVENT DESCRIPTION

Event 1

TITLE: **WEBINAR ON "APPLICATIONS OF MCM IN BROADBAND COMMUNICATIONS"**
PLATFORM*:* **Google meet**

Date and Time: 07-05-2020, 4:00-5:30 pm

Number of participants: IEEE: 32 Non IEEE: 88 Total: 120

Details of Resource person: Dr. S Ravi Shankar, Professor in the Department of Electronics and communication in RV College of engineering.

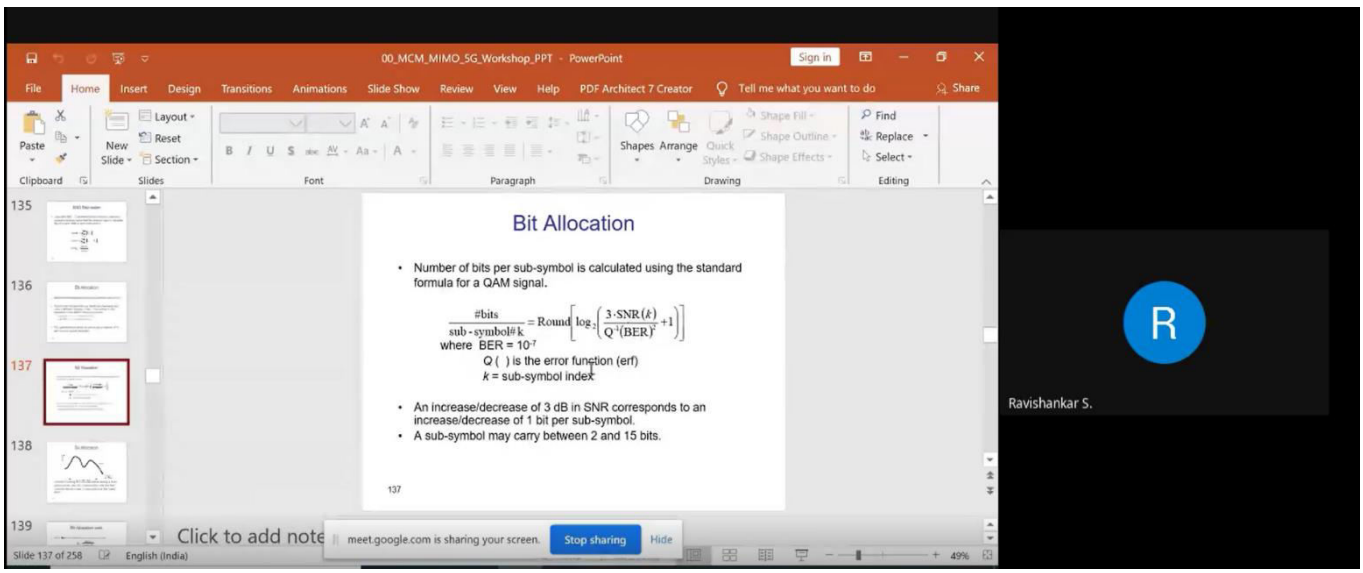
Brief Description:

The Webinar on "Applications of MCM in broadband communications" was organized by RVCE ComSoc Student Branch and was presented by Dr. S Ravi Shankar, Professor of ECE Dept RVCE, on the 7th of May, 2020. The event was conducted online, was easily accessible to people and so was attended by students all over India. The lectures and the interactive doubt sessions, the attendees took home the best of our speaker. Feedback forms revealed that all our participants were extremely happy with the event.

The workshop was attended by 120 students as well as professors from different colleges all over the country. The workshop was very successful with the students and faculty benefitted with the knowledge of advances in this field. The detailed feedback from the participants show that the objectives of the workshop was completely satisfied and the outcomes stated are guaranteed.

The event noticed an extension in its scheduled time due to active participation of all the attendees and their enthusiasm towards grabbing the most out of the provided opportunity. The speaker himself was very keen to take up all the doubts patiently.

We look forward to conduct more such events.



Event 2

TITLE: **WEBINAR ON "REDUCING THE ENTROPY OF THE WORLD- SOCS FOR WIRELESS COMMUNICATION"**

PLATFORM*:* **ZOHO meetings**

Date and Time: 8-05-2020, 4:00-5:30 pm

Number of participants: IEEE: 35 Non IEEE: 65 Total: 100

Details of Resource person: Mr. Himamshu G Khasnis, CEO, Signalchip Innovations PVT. Ltd and Nikhil B G, Lead engineer, Analog RF, Signalchip Innovations PVT. Ltd

Brief Description:

The Webinar on "Reducing the entropy of the world- SOCs for wireless communications" was organized by RVCE ComSoc Student Branch and was presented in two rounds:

The first was carried up by Mr. Himamshu G khasnis who holds an experience of 21 years in the Semiconductor Industry. He has played key roles in technology roadmap and new chipset definitions for 3G/4G/5G/DSL/WLAN/GNSS applications and has led the chip development activities for multiple successful market leading chips. After this we had a doubt session which was taken up by him with immense enthusiasm and patience.

The second was taken up by Mr. Nikhil B G who has designed state of the art data converters and synthesizers. He has been involved in the design of almost all the blocks in the Analog-RF Wireless Transceiver chain. The final interactive session was conducted post this.

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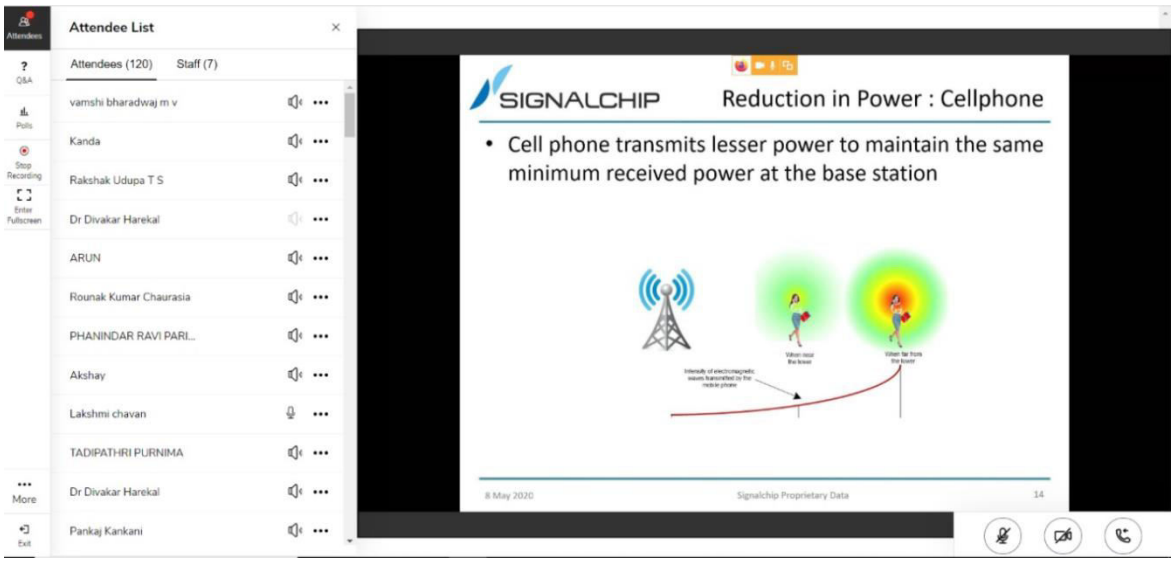
We look forward to conduct more industry-based events in future too.



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3	6/7/2020	Webinar on "Introduction to Network Virtualization"	1.5hrs	136
4	7/7/2020	Webinar on "Challenges in Network Virtualization"	2hrs	110
5	8/7/2020	Webinar on "Virtualization- The future Network"	1.5hrs	102
6	17/8/20-28/8/20	Workshop on "Advanced Communication Systems"	Morning/afternoon session	32

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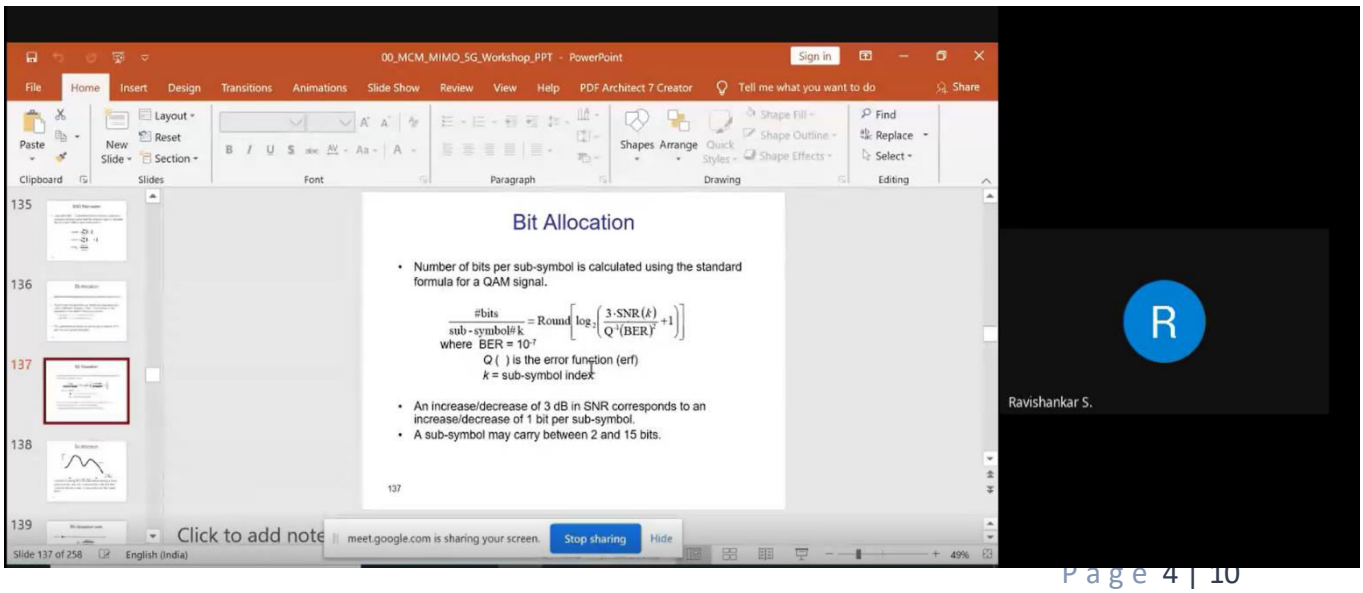

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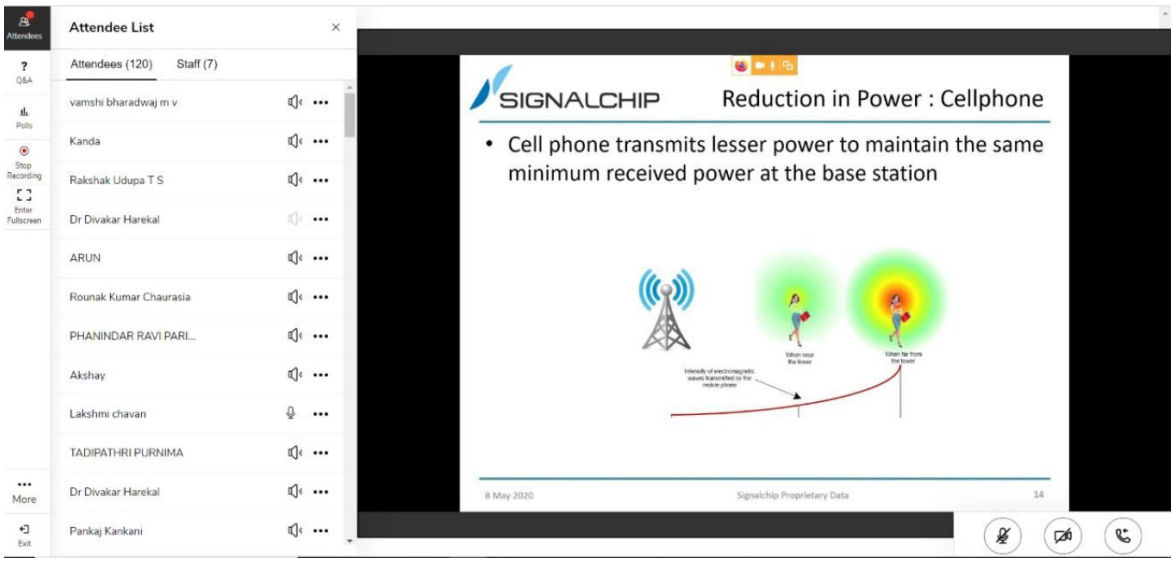


EVENT 3.

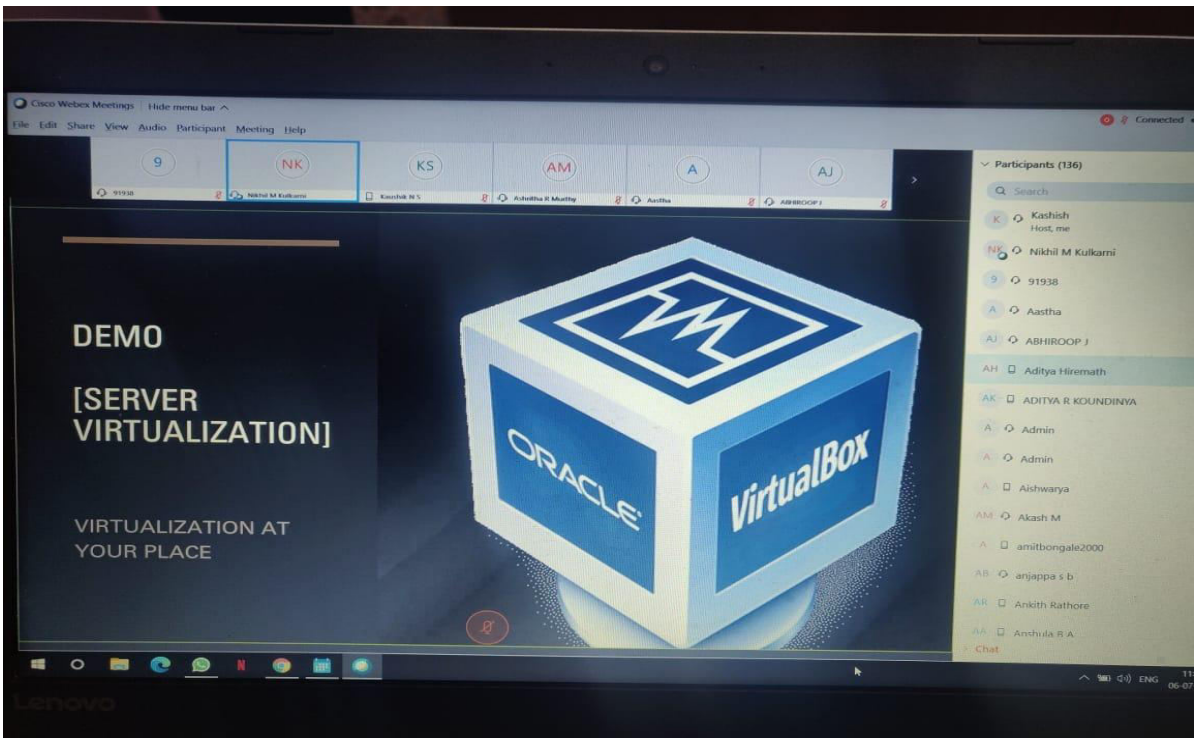
TITLE: **WEBINAR ON "INTRODUCTION TO NETWORK VIRTUALIZATION"**
PLATFORM*:* **Cisco Webex**

Date and Time: 06-07-2020, 11:00-12:30 am

Number of participants: IEEE: 30 Non IEEE: 106 Total: 136
Details of Resource person: Mr. Nikhil M. Kulkarni, Technical Marketing Engineer, Converged Infrastructure, Netapp.

Brief Description:

The Webinar on "Introduction to Network Virtualization" was organized by RVCE ComSoc Student Branch and was presented by Mr. Nikhil M. Kulkarni, Technical Marketing Engineer, Converged Infrastructure, Netapp. on the 6th of July, 2020. The event was conducted online, was easily accessible to people and so was attended by students all over India. The lectures and the interactive doubt sessions, the attendees took home the best of our speaker. Feedback forms revealed that all our participants were extremely happy with the event. The webinar included the Challenges of physicalization, Introduction to virtualization and its types, Specifications and current trends in virtualization followed by a Demo on compute virtualization which proved to be a very engrossing experience for all the attendees. The webinar was successful with the students and faculty benefitted with the knowledge of advances in this field. The detailed feedback from the participants show that the objectives of the workshop was completely satisfied and the outcomes stated are guaranteed.
Looking forward to conduct more such events.



EVENT 4.

TITLE: **WEBINAR ON "CHALLENGES IN NETWORK VIRTUALIZATION"**
PLATFORM*:* **Cisco Webex**

Date and Time: 07-07-2020, 11:00-12:30 am

Number of participants: IEEE: 20 Non IEEE: 90 Total: 110
Details of Resource person: Mr. Krishna Ramaswamy, Senior Specialist at Micro Focus (Formerly HP)

Brief Description:

The Webinar on "Challenges in Network Virtualization" was organized by RVCE ComSoc Student Branch and was presented by Mr. Krishna Ramaswamy, Senior Specialist at Micro Focus (Formerly HP), on the 7th of July, 2020. The event was conducted online, was easily accessible to people and so was attended by students all over India. This webinar included Open challenges in virtualization, Resources, performance, availability crunches, Fault Tolerance on VM, Management complexity, Overrun storage network and Resource & Configuration sync across the cluster.
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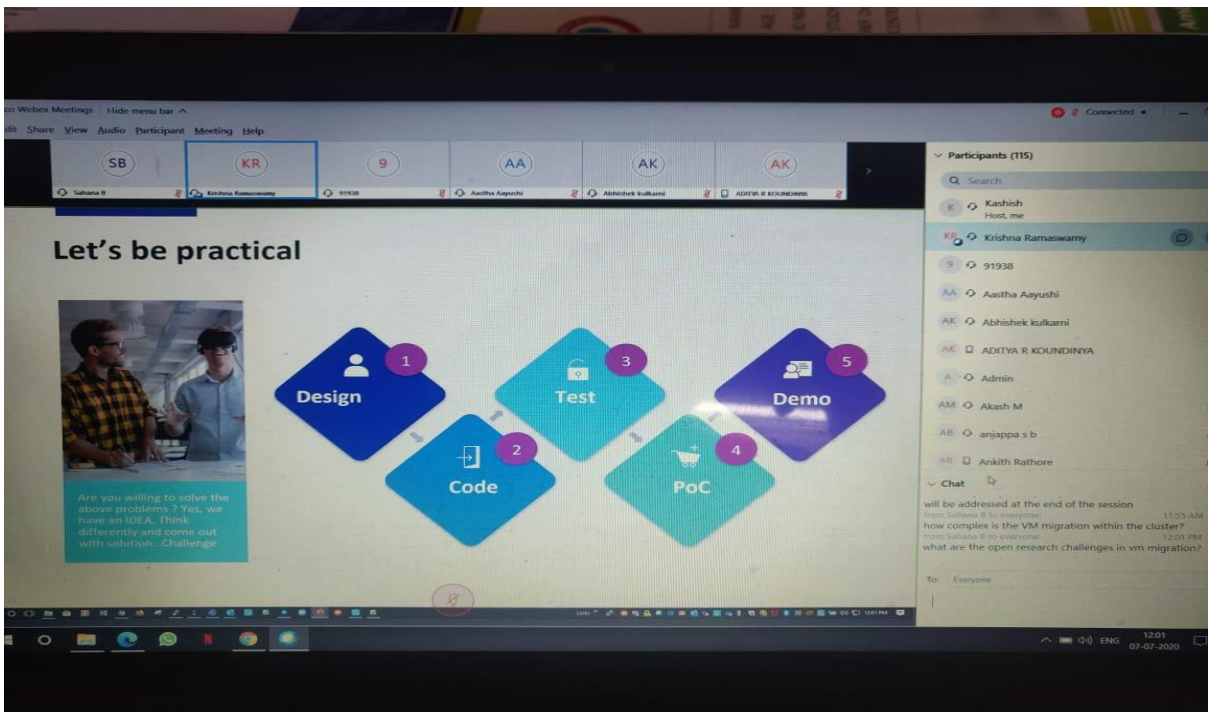
We look forward to conduct more such events.



EVENT 5.

TITLE: **WEBINAR ON "VIRTUALIZATION- THE FUTURE NETWORK"**
PLATFORM*:* **Cisco Webex**

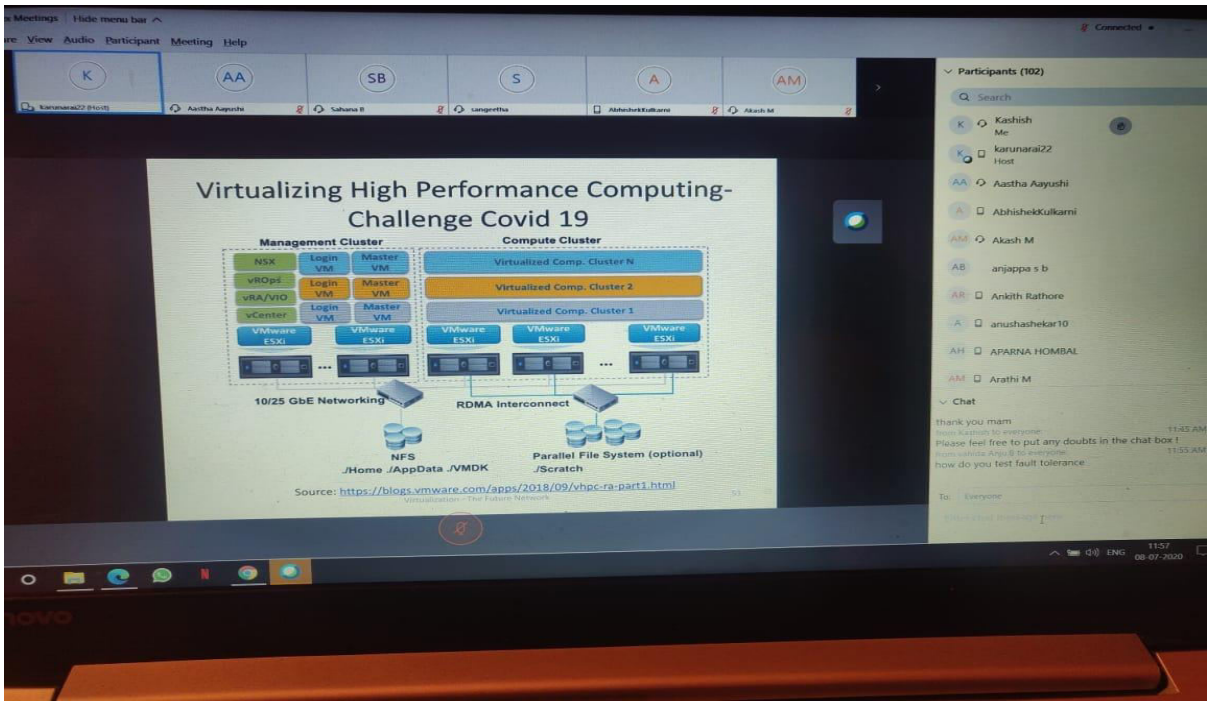
Date and Time: 08-07-2020, 11:00-12:30 am

Number of participants: IEEE: 15 Non IEEE: 87 Total: 102
Details of Resource person: Dr. Karunakara Rai, Associate Professor, NMIT

Brief Description:

The Webinar on "Virtualization- The future Network" was organized by RVCE ComSoc Student Branch and was presented by Dr. Karunakara Rai, Associate Professor, NMIT, on the 8th of July, 2020. The event was conducted online, was easily accessible to people and so was attended by students all over India. The workshop was attended by students as well as professors from different colleges all over the country. It included Hybrid cloud, Serverless computing, Multi cloud, Virtual networks, Workspace service (SSO), and High-performance computing. It was very successful with the students and faculty benefitted with the knowledge of advances in this field. The detailed feedback from the participants show that the objectives of the workshop was completely satisfied and the outcomes stated are guaranteed.

Such events are awaited.



Event 6

TITLE: **WORKSHOP ON "ADVANCED COMMUNICATION SYSTEMS"**
PLATFORM*:* **Cisco Webex**

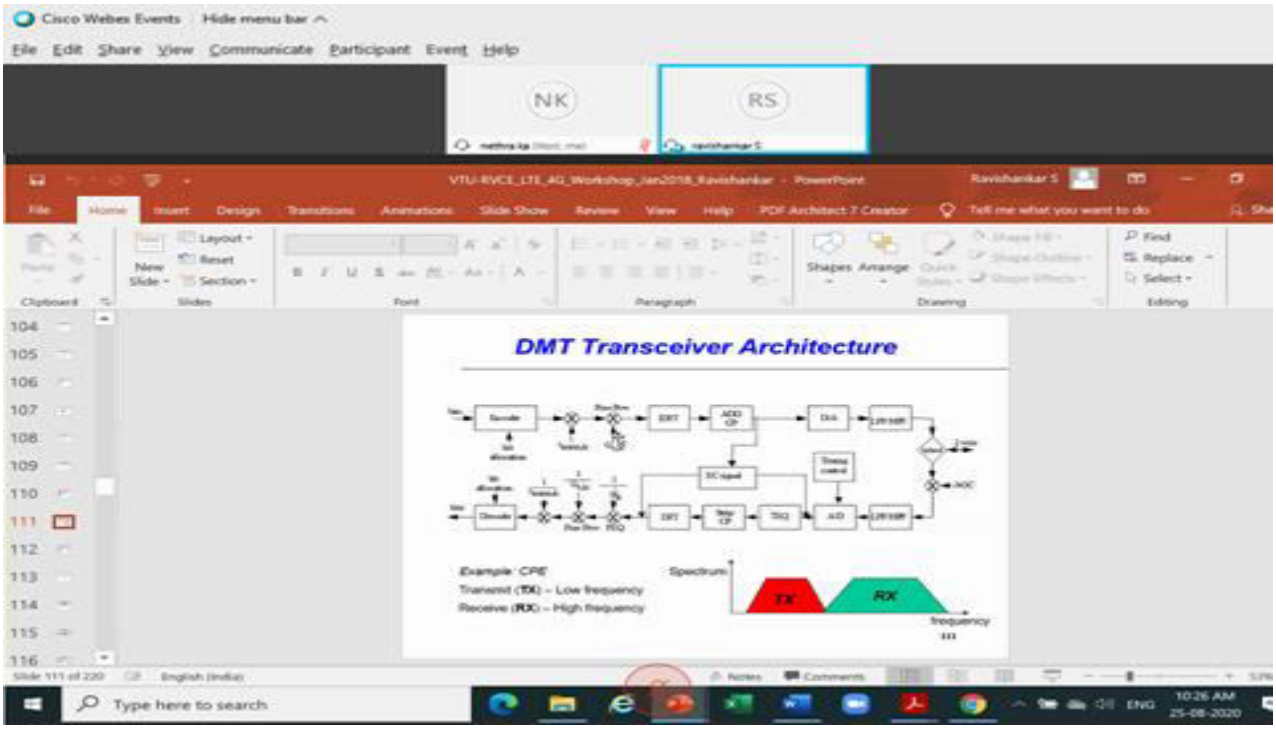
Date and Time: 17-08-2020 to 29-08-2020, morning and afternoon sessions

Number of participants: IEEE: 13 Non IEEE: 19 Total: 32

Brief Description:

Department of Electronics and Communication Engineering in Association with IEEE ComSoc Chapter, Bangalore Section had conducted a Two-Week Intensive Webinar Series On **"Advanced Wireless Communication"** during 20th – 31st July 2020. This event was organized by IEEE ComSoc Student Branch Chapter, RVCE. The webinar series had theoretical sessions during morning followed by lab sessions in the afternoon. The speakers for the morning sessions of the workshop was Dr.S Ravishankar, Professor, ECE Department, RVCE and Dr. Sandeep from IISc, Bangalore.

The workshop sessions in the afternoon were delivered by the distinguished speakers from the industry which included **Devadas Pai B**, Managing Director, Nano cell Network Pvt. Ltd, **Dr. Ganesan Thiagaragan**, CTO, MMRFIC Technologies Pvt Ltd, **Chengappa M.R**, Passionate Technologist, Hewlett Packard Enterprise, **Nilutpal Choudhury**, CEO and Founder, AvGarde Systems Pvt Ltd. Some of the afternoon sessions include laboratory demonstrations using MATLAB and NI-USRP 2920 SDR kit. Lab sessions were demonstrated by MathWorks team, Dr.Mahesh A and Dr.P N Jayanthi.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DMT Transceiver Architecture
Example: CPE
Transmit (TX) – Low frequency
Receive (RX) – High frequency
Spectrum
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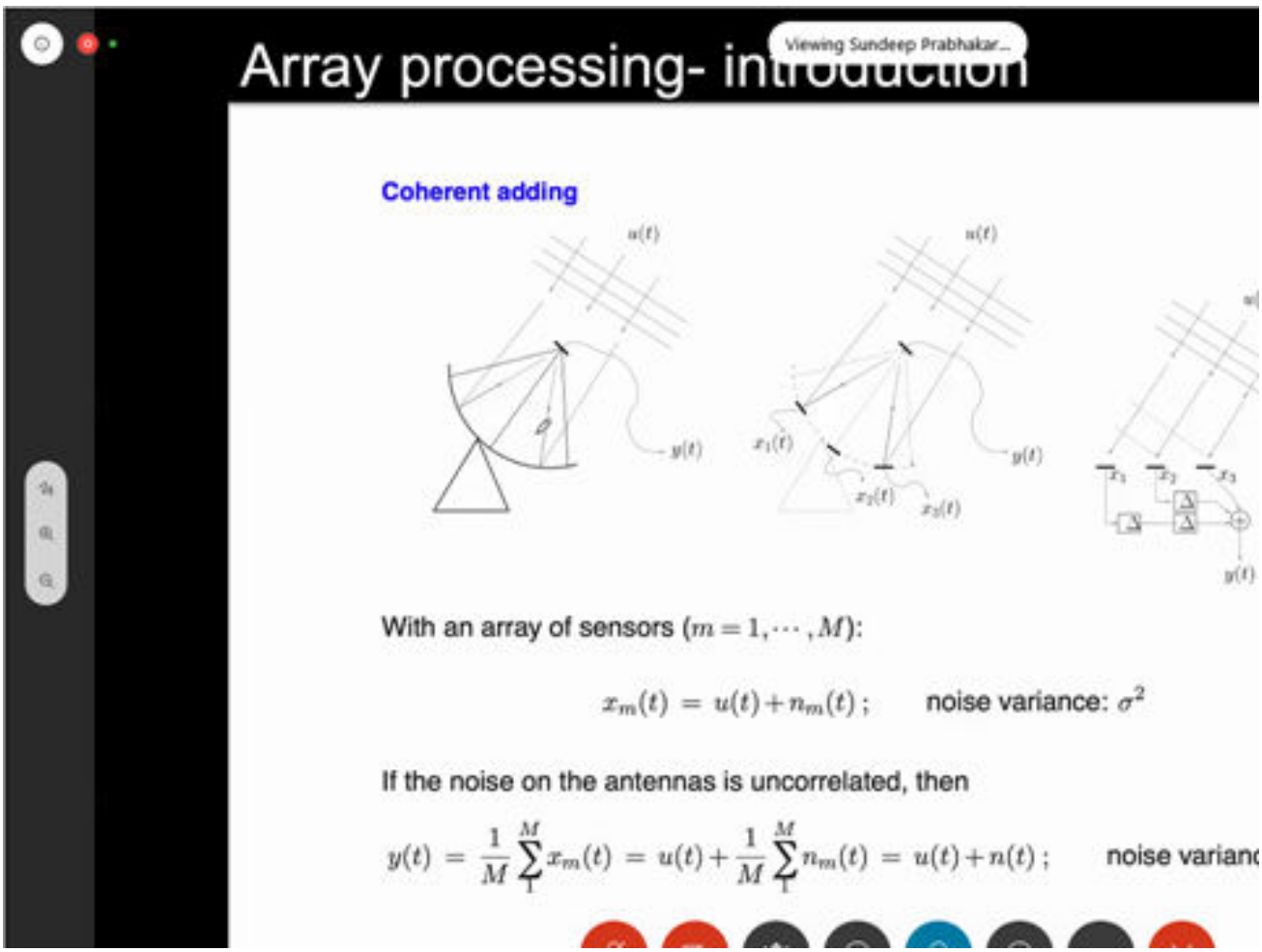
Array processing- introduction
Viewing Sundeep Prabhakar...
Coherent adding
With an array of sensors $(m = 1, \cdots, M)$:
$x_m(t) = u(t) + n_m(t)$; noise variance: σ^2
If the noise on the antennas is uncorrelated, then
$y(t) = \frac{1}{M}\sum_1^M x_m(t) = u(t) + \frac{1}{M}\sum_1^M n_m(t) = u(t) + n(t)$;