

# Annual Report 2019

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**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 “Artificial 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 Institute of HAMS...	27-03-18	200
11	HAM Workshop 2	Dr. S Satyapal, Indian Institute 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

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

1. Technical seminar on Quantum communication
2. Workshop on "computer aided modeling.
3. Technical Talk on “ SoC for 5G” so on..

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

### IEEE ComSoc EXECOM DETAILS-2019

SL NO.	NAME	IEEE REGISTRATION NUMBER	Email id	Mobile Number	POSITION HELD
1	Shushrutha K S	92336961	shushruthks@gmail.com	9964179197	FACULTY ADVISOR
2	Trilok Girish Kamagond	94739405	Trilock1998@gmail.com	9632262493	CHAIRPERSON

\*\*Add Rows as required

### EVENTS HELD SUMMARY

SI No	Event Date	Title	Duration of Event	Attendee Strength
1	3/6/2019-5/6/2019	Workshop on Random Variables and Random Processes	3	21
2	21/1/2019 - 25/1/2019	Workshop on “Emerging Trends In Multicore Processors And Network On Chip Architecture”	5	53
3	16/10/2019	Workshop on 5G Technologies	1	27
4	30/3/2019	Workshop on HAM	1	65

### EACH EVENT DESCRIPTION

#### Event 1

**TITLE: A COURSE ON PROBABILITY AND RANDOM PROCESSES**

**VENUE: Seminar Hall, Department of Electronics and Communication, RV College of Engineering**

**DATE and Time: 3<sup>RD</sup> JUNE -5<sup>TH</sup> JUNE, 2019**

**RV COLLEGE OF ENGINEERING®, Bengaluru 560059**

Number of participants: IEEE: 11      Non IEEE: 10      Total: 21

Details of Resource person: Mr. Karthik P N, graduate student in the Department of Electrical Communication Engineering (ECE) at the Indian Institute of Science (IISc), Bengaluru

Brief Description:

The course presented the fundamentals of probability theory and random processes needed by faculty/Students in communications, signal processing, computer science and other disciplines. The course was conducted by Karthik P N, graduate student in the Department of Electrical Communication Engineering (ECE) at the Indian Institute of Science (IISc), Bengaluru, working under the supervision of Rajesh Sundaresan..

#### CONTENTS COVERED IN THE WORKSHOP

1. Sample space, Events and event space, Probability, Random variables, CDF, PDF and PMF, Examples, Joint CDF, PDF and PMF.
2. Conditional probability, Conditional CDF, PDF and PMF, Bayes' theorem, Independent and Uncorrelated random variables, Expectation, Properties of Expectation.
3. Moment Generating Function, Characteristic Function, Multiple random variables, Jointly Gaussian random variables, Functions of random variables.
4. Inequalities: Markov inequality, Chebyshev inequality and Cauchy-Schwarz inequality.
5. Random Processes: Definition, Examples, Mean function, covariance function, Autocorrelation, Cross-correlation, Power spectral density, Random Processes through filters.

All topics were explained using illustrative examples Simulation of signal processing examples was also be presented.



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## Event 2

**TITLE: FIVE DAY WORKSHOP ON “EMERGING TRENDS IN MULTI-CORE PROCESSORS & NETWORK ON CHIP ARCHITECTURE”**

**VENUE: ISE seminar hall, RV College of Engineering**

Date and Time: 21-01-2019 to 25-01-2019

**Number of participants:** IEEE: 15      Non IEEE: 38      Total: 3

Details of Resource person: Dr. John Jose, an Assistant Professor in the Department of Computer Science and Engineering, IIT Guwahati, Assam. Prof. Manju R. is currently a Ph.D. scholar in the Department of Computer Science and Engineering, IIT Guwahati

### Brief Description:

The workshop on “Emerging Trends in Multi-core Processors & Network on Chip Architecture” was jointly organized by departments of Department of Electronics and Communication Engineering and Computer Science and Engineering on 21-01-2019 to 25-01-2019 at R.V. College of Engineering. The workshop was conducted under IEEE student chapter, RVCE in association with MARS Research Lab, IIT, Guwahati. The resource person for the workshop was Dr. John Jose, an Assistant Professor in the Department of Computer Science and Engineering, IIT Guwahati, Assam. Prof. Manju R. is currently a Ph.D. scholar in the Department of Computer Science and Engineering, IIT Guwahati. The workshop was comprised of theory and hands-on session. The theory session were conducted in forenoon in ISE seminar hall. The hands-on session were conducted in Cognitive Centre.

The workshop was attended by 48-students and 5-faculty from different colleges. The workshop was very successful with the students and faculty benefitted with the knowledge of advances in the field of network on chip. Since the participants of the workshop were very heterogeneous, the speaker, Dr. John Jose, Prof IITG, connected the concepts to the applications of all UG/PG branches. The detailed feedback from the participants show that the objectives of the workshop was completely satisfied and the outcomes stated are guaranteed.

Further, we would like to continue the interaction with the guest speaker by having the joint internship program for our UG/PG students which would encourage research activities and would culminate in joint paper publications. We would like to express our sincere thanks and gratitude to RSST/RVCE for their wonderful gesture, encouragement and financial assistance for conducting this workshop successfully.



### Event 3

**TITLE: WORKSHOP ON 5G TECHNOLOGIES**

**VENUE: TC Seminal Hall, RV College of Engineering**

**DATE and Time: 16-10-2019 9.00-04.00PM**

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Number of participants: IEEE: 9      Non IEEE: 18      Total: 27

Details of Resource person: Dr. Navin Kumar, Professor, Amrita School of engineering; Sri. Kiran, Engineering Manager, Intel, Bangalore, Dr. V. Sridhar, Professor, International Institute of Information Technology Bangalore (IIIT-B), Niranjan, Senior Product Manager, Nokia Networks.

**Brief Description:**

One day workshop on 5G Technologies in association with RVCE-IEEE Student Chapter, IEEE Comsoc on 16/10/2019 was organized by the Dept. of Telecommunication Engineering at RVCE.

The workshop had four technical lectures by experts from industry: (16-10-2019)

1. Dr. Navin Kumar, from Amrita School of engineering, Bangalore. He is Chair of IEEE ComSoc Bangalore Chapter and Student Branch Counselor of Amrita School of Engineering. The topic was “Spectrum Sharing In 5G” from 9.30 AM-11.30 AM.
2. Sri. Kiran, from Engineering Manager at Intel, Bangalore managing Antenna, EMI/EMC and Graphics Platform Architecture teams. The topic was “5G for the Future Of Industrial Automation” from 11.30 AM-1.15 PM.
3. Dr. V. Sridhar is Professor at the Centre for IT and Public Policy at the International Institute of Information Technology Bangalore (IIIT-B), India. The topic was “Applications of 5G Technologies” from 2.00PM -3.30PM.
4. Niranjan is currently working in Nokia Networks as a Senior Product Manager in 5G and Small Cells Business Unit driving Performance & Capacity and Indoor Location Services for Nokia Small Cells 5G and 4G Product. The topic was “5G Deployment Architecture and Performance” from 3.45 PM-4.00 PM.

The number of participants are 27, 7 faculty (6 Internal faculty+ 1 External Faculty) and 20 students (15 M.Tech Students+ 4 External Students).



#### Event 4

**TITLE: WORKSHOP ON HAM**

**VENUE: EC Seminal Hall, RV College of Engineering**

**DATE and Time: 30/3/2019 9.30am to 4pm**

Number of participants: IEEE: 20      Non IEEE: 45      Total: 65

Details of Resource person: Dr.S.Sathyapal and Mr. Marcus from the Indian Institute of HAMS.

#### Brief Description:

The HAM Workshop was held on the 30th of March ,2019 from 9.30am to 4pm in the Electronics and Communication Department Lecture Hall. The workshop was conducted by Dr.S.Sathyapal ,VU2FI and Mr. Marcus , VU2VTM from the Indian Institute of Hams.

The Programme began with a positive message of welcome rendered by Dr.Geetha K S , Head of Department and was successful conducted under the guidance of Dr. Usha Rani, Associate Professor,Department of Electronics and Communication Engineering.



Dr.Sathyapal addressed the audience with a brief yet concise introduction to HAM and its operators. He further dwelt upon the reasons why one must consider being a certified HAM- amateur operator and the ways in which it not only served an enticing hobby but also how it could be considered as an aid for the communication within the society during the time of natural calamities, national emergencies and distress. He gradually went on to unfold the steps involved in obtaining the license and the frequency bands provided for the HAM operations. It was brought to the notice of the crowd that hams also provided communication during important public gathering that demand a high amount of security.

