



# POORNIMA

## COLLEGE OF ENGINEERING

Promoted by Shanti Education Society, Affiliated to Rajasthan Technical University & Approved by AICTE

### A Report on 2-days Faculty Development Program

Flyer:



♦ **TITLE AND DURATION:** “Mobile Network Security & Smart Antenna”

March 6-7, 2020

♦ **SPONSORS:** Nil

♦ **ORGANIZERS:** Department of Electronics & Communication Engineering, Poornima College of Engineering, Jaipur.

**OBJECTIVES:**

The main objective of this workshop was to provide an exposure to the participants to the state Advances in Mobile Network Security & Smart Antenna through interaction with different eminent experts. The main content of Workshop were LTE-Advanced and 5G Security, SATCOM Security, Wi-Fi, Bluetooth and NFC Security, antenna radiation patterns and testing and optimizing antennas.

  
**Dr. Mahesh Bunde**  
B.E., M.E., Ph.D.  
Director  
Poornima College of Engineering  
ISI-6, RIICO Institutional Area  
Sitapura, JAIPUR

♦ **EXPECTED OUTCOMES:**

1. Gain expertise of Mobile Network Security like LTE and LTE-Advanced and 5G Security etc. that can be used to solve various Complex and Smart Engineering Systems.
2. Understand features of Smart Antenna in the context of their concept, various adaptive beam forming techniques.
3. Design antenna approaches used for planning, designing, operating, testing and optimizing antennas and antenna systems.

♦ **BROCHURE / POSTER / LEAFLET / FLYER:**

**DST, Rajasthan Sponsored National Workshop**  
on  
**Mobile Network Security & Smart Antenna**  
**March 6-7, 2020**

**REGISTRATION FORM**

Name: .....  
Designation: .....  
Department: .....  
Institute: .....  
Institute Address: .....  
Mailing Address: .....  
Mobile No.: .....  
E-mail: .....  
Accommodation Required: ..... (Yes/No)  
Details of the D.D\*: No. .... Dated .....  
Issued by (Bank & Branch) .....  
\*Demand Draft drawn in favor of "Poornima College of Engineering", payable at Jaipur.

**Declaration of the Candidate**  
I declare that the details furnished are true to the best of my knowledge and I agree to abide by the rules and regulations governing the conduct of the Programme.

Place: ..... Signature of Participant  
**Sponsorship Certificate**  
Mr/Ms/Dr..... is a faculty of our institution/ Organization and is permitted to attend the National Workshop on Mobile Network Security & Smart Antenna conducted by Poornima College of Engineering, Jaipur from March 6-7, 2020.  
Seal & Signature of Director / Principal

[www.pce.poornima.org](http://www.pce.poornima.org)

**PCE ACADEMIC COMMITTEE**

Dr. Ashok Kumar Sinha	Professor, ECE
Dr. Ashok Kumar Kajla	Associate Prof., ECE
Dr. Anila Dhingra	Associate Prof., ECE
Dr. Payal Bansal	Assistant Prof., ECE
Mr. Durgesh Kumar	Assistant Prof., ECE
Mr. Rajveer	Assistant Prof., ECE
Ms. Manisha Kumawat	Assistant Prof., ECE
Mr. Anil Kumar Jain	Assistant Prof., ECE
Mr. Manish Sharma	Assistant Prof., ECE
Mr. Gaurav Saxena	Assistant Prof., ECE

**HOW TO REACH**

Jaipur is one zenith of the popular tourism Golden Triangle circuit Agra-Delhi-Jaipur and is well connected to most parts of India by air, train and road. Poornima College of Engineering is located about 268 km by road & 308 km by train from Delhi. It is situated at the Jaipur, capital of Rajasthan and is encircled by several industries. Jaipur Railway Station and Jaipur Bus Stand are close by and are about 25 km. from the conference venue.

**Road Map to Poornima Group**

For further information contact  
**Dr. Garima Mathur**  
☎ : 9829393517 • E-mail : drg.mathur@poornima.org

**POORNIMA**  
COLLEGE OF ENGINEERING  
Affiliated to RTU, Kota • Approved by AICTE & UGC under 2(f) • Accredited by NBA

**DST, Rajasthan Sponsored National Workshop**  
on  
**Mobile Network Security & Smart Antenna**  
**March 6-7, 2020**

**5G**

**Technically Sponsored by**

**Organized by**  
Department of Electronics & Comm. Engineering  
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Sitapura, JAIPUR



## Poornima College of Engineering- Activity Report – 2019-20



**POORNIMA COLLEGE OF ENGINEERING**

Poornima College of Engineering (PCE), established as a brand of technical education in the year 2000, has its own glorious legacy of leading the young engineers to the mammoth sky of success. Its accomplishments forecast its journey through the hardships and its triumph over them one after another. PCE left no stone unturned since its establishment in turning the glorious vision into unbelievable reality providing the platform for knowledge and research and their practical implementations in different engineering professional prospects. Glorious glimpses of PCE:

- Highly recognized and renowned affiliated technical institution all over Rajasthan with built up area more than 3.5 lacs square feet
- Affiliated to RTU, Kota & approved by AICTE, New Delhi
- The most preferred NBA Accredited Engineering College with running of six specializations of Engineering at UG Level (CSE, ECE, EE, ME, IT, CIV) and two at PG level (CS & VLSI)
- The only institution permitted by RTU to admit RN/PIO/Gulf students & designated as centre of excellence by IBM
- An excellent institution building its rapport in all sectors of education, research and development

**WORKSHOP OBJECTIVES WITH EXPECTED OUTCOMES**

The main objective of this workshop is to provide an exposure to the participants to the state Advances in Mobile Network Security & Smart Antenna through interaction with different eminent experts.

Explosive growth of function rich smart devices coupled with rapid advances in smart networking infrastructure and upsurge of smart antennas have transformed the functional capabilities and service offering of the conventional wireless networks into next generation 5G networks.

In view of explosive growth in the number of digital cellular subscribers, service providers are becoming increasingly concerned with the limited capacities of their existing networks with security. This concern has led to the deployment of smart antenna systems throughout major metropolitan cellular. Such a configuration dramatically enhances the capacity of a wireless link through a combination of diversity gain, array gain, and interference suppression. Increased capacity translates to higher data rates for a given number of users or more users for a given data rate per user.

**Expected Outcomes:**

- Gain expertise of Mobile Network Security like LTE and LTE-Advanced and 5G Security etc. that can be used to solve various Complex and Smart Engineering Systems.
- Understand features of Smart Antenna in the context of their concept, various adaptive beam forming techniques.
- Design antenna approaches used for planning, designing, operating, testing and optimizing antennas and antenna systems.

**WORKSHOP CONTENTS**

- Overview of Mobile Networks Security & Smart Antenna
- Concepts behind LTE and LTE-Advanced and 5G Security
- Concepts of the antenna theory and antenna types
- SATCOM Security
- Concepts behind Wi-Fi, Bluetooth and NFC Security
- Understand the basic antenna terminology and terms
- Discuss concepts behind antenna radiation patterns, antenna pattern shaping, beam width, ratios,
- Discuss concepts of suppression, passive intermodulation, mechanical and electrical down tilt, reflectors, linear antenna types, array antenna, directional antenna and the Yagi.
- Discuss the effect of antenna radiation patterns and the role of various antenna components.
- Summarize the approaches used for planning, designing, operating, testing and optimizing antennas and antenna systems

**REGISTRATION**

Candidates should complete the enclosed registration form and send scanned copy by mail to the coordinator: drg.mathur@poornima.org. Confirmation of eligible candidates will be on FIRSTCOME-FIRST-SERVE basis. The complete registration form should be received to the coordinator till February 29, 2020.

**HOW TO APPLY**

The interested participants are requested to complete the online registration form <https://shorturl.at/czt19> A registration fee for participants form industries is ₹500/- which can be paid through Demand Draft.

**IMPORTANT DATES**

Deadline for receiving Registration Form: 02.03.2020  
Intimation of Selection: 04.03.2020

**ACCOMMODATION**

Accommodation will be provided to the participants on prior request based on availability in hostel on payment.

**ELIGIBILITY**

Faculty Members: Ph.D/PG/UG Scholars from AICTE recognized Engineering colleges & Polytechnic colleges.

**PATRON**

**Dr. S. M. Seth**  
Chairman (Emeritus) Poornima Group

**Dr. Shashikant Singh**  
Chairman, Poornima Group

**ADVISORS**

**Dr. M. K. M. Shah**  
Director (Admin & Finance)  
Poornima Group

**Dr. Hari Singh Shekhawat**  
Director, (Infrastructure)  
Poornima Group

**Dr. Rahul Singh**  
Director, Poornima Group

**Dr. Mahesh M. Bunde**  
Principal & Director  
Poornima College of Engineering

**Dr. Pankaj Dhemla**  
Vice-Principal  
Poornima College of Engineering

**COORDINATORS**

**Dr. Garima Mathur**  
Tarun Mishra

Professor  
Assistant Professor

**ACCOMMODATION & TRANSPORT**

**Dr. Ashwini Lata**  
Dean (Hostel), PG

**Dr. Amit Gupta**  
Proctor-In-Chief, PG

**Dr. B. P. Yadav**  
Transport Officer, PG

**Dr. Ajmeel Singh**  
Proctor, PCE

**Dr. Anmol Chaturvedi**  
Proctor, PCE

### ♦ PROGRAM SCHEDULE:

Program Outline		
Friday, Day 1: 06 March, 2020		
Activity	Duration	Time
Welcome Reception and Registration Opens	30 Min.	8.30 AM – 09.00 AM
<b>Inaugural Function</b> <b>A. Chief Guest : Prof. R. P. Yadav</b> , Professor-HAG, MNIT Jaipur <b>B. Dr. Mahesh Bunde</b> , Director, PCE, Jaipur <b>C. Mr. Pankaj Dhemla</b> , Vice Principal, PCE, Jaipur <b>D. Dr. Garima Mathur</b> , Coordinator, PCE, Jaipur <b>Venue: CG-05, Seminar Hall, PCE, Jaipur</b>	30 Min.	9.00 AM – 9.30 AM
<b>Expert Talk-1</b> <b>Topic: Concepts behind LTE and LTE-Advanced and 5G Security</b> <b>Resource Person: Prof. R. P. Yadav</b> , Professor-HAG, MNIT Jaipur <b>Venue: CG-05, Seminar Hall, PCE, Jaipur</b>	60 Min.	9.30 AM – 10.30 AM
<b>High Tea</b>	30 Min.	10.30 AM – 11.00 AM

  
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 Shilapura, JAIPUR

<b>Expert Talk-2</b> <b>Topic: Compact Planar Antennas and their Applications</b> <b>Resource Person: Dr. Sanyog Rawat, Manipal University, Jaipur</b> <b>Venue: CG-05, Seminar Hall, PCE, Jaipur</b>	120 Min.	11.00 AM - 1.00 PM
<b>Lunch Break</b>	30 Min.	1.00 PM - 1.30 PM
<b>Lab Session</b> <b>Topic: CST STUDIO SUITE</b> <b>Resource Person: Dr. Payal Bansal &amp; Mr. Tarun Mishra</b> <b>Venue: AS-02, Computer Lab, PCE, Jaipur</b>	90 Min.	1.30 PM–3.00 PM
<b>Saturday, Day 2: 07 March, 2020</b>		
<b>Activity</b>	<b>Duration</b>	<b>Time</b>
<b>Expert Talk-3</b> <b>Topic: Some Recent Results on Design, Operation and Security of IoT and Cyber-physical Systems</b> <b>Resource Person: Dr. Arpan Chattopadhyay, IIT Delhi</b> <b>Venue: CG-05, Seminar Hall, PCE, Jaipur</b>	105 Min.	08.45 AM - 10.30 AM
<b>High Tea</b>	30 Min.	10.30 AM– 11.00 AM
<b>Expert Talk-4</b> <b>Topic: Mobile &amp; Cyber Security Threats &amp; Their Countermeasures</b> <b>Resource Person: Dr. Kota Solomon Raju, Senior Principal Scientist, CEERI, Pilani</b> <b>Venue: CG-05 Poornima College of Engineering, Jaipur</b>	105 Min.	11.00 AM- 12.45 PM
<b>Lunch Break</b>	45 Min.	12.45 PM - 1.30 PM
<b>Valedictory Session</b>	30 Min.	1.30 PM – 2.00 PM

♦ **INAUGURAL SESSION:**



**“Mobile Network Security & Smart Antenna”**

**March 6-7, 2020**

Department of Electronics & Communication Engineering,  
Poornima College of Engineering, Jaipur

**Inaugural Session**

**Q- Sheet**



विज्ञान एवं प्रौद्योगिकी विभाग  
DEPARTMENT OF  
**SCIENCE & TECHNOLOGY**

Friday, 6<sup>th</sup> March, 2020

**Venue: CG 05, PCE, Jaipur**

S. No	Activity	Duration	Time
1	Reporting and Registration of Delegates	30 Min.	08:30 AM-09:00 AM
2	Welcome of Dignitaries by the anchors	2 Min.	09:00 AM-09:02 AM
3	Request the dignitaries for lightning of lamp E. <b>Chief Guest : Prof. R. P. Yadav</b> , Professor-HAG, MNIT Jaipur F. <b>Dr. Mahesh Bunde</b> , Director, PCE, Jaipur G. <b>Mr. Pankaj Dhemla</b> , Vice Principal, PCE, Jaipur H. <b>Dr. Garima Mathur</b> , Coordinator, PCE, Jaipur	3 Min.	09:02 AM-09:05 AM
4	Felicitation of Chief Guest <b>Prof. R. P. Yadav</b> by <b>Dr. Mahesh M Bunde</b> , Principal & Director, PCE, Jaipur	2 Min.	09:05 AM-09:07 AM
5	Welcome Address by <b>Dr. Garima Mathur</b> , Professor ECE, PCE, Jaipur	5 Min.	09:07 AM-09:12 AM
6	Words of Wisdom by <b>Dr. Mahesh M Bunde</b> , Director, PCE, Jaipur	10 Min.	09:12 AM-09:22 AM
7	Address by <b>Prof. R. P. Yadav</b> , Professor-HAG, MNIT Jaipur	60 Min.	09:22 AM-10:22 AM
8	Vote of Thanks by <b>Dr. Ashok Kajla</b> , Professor, ECE, PCE	3 Min.	10:22 AM-10:25 AM
9	Group Photograph	5 Min.	10:25 AM-10:30 AM
10	<b>High Tea</b>	30 Min.	10:30 AM-11:00 AM

♦ **DETAILS OF RESOURCE PERSONS:**

1. Prof. R. P. Yadav, Professor-HAG, MNIT Jaipur
2. Dr. Sanyog Rawat, Manipal University, Jaipur
3. Dr. Arpan Chattopadhyaya, IIT Delhi

  
**Dr. Mahesh Bunde**  
B.E., M.E., Ph.D.  
Director  
Poornima College of Engineering  
ISI-0, FIICO Institutional Area  
Sisupura, JAIPUR

4. Dr. Kota Solomon Raju, Senior Principal Scientist, CEERI, Pilani

♦ **GLIMPSES OF CONDUCTION:**

**Day 1: 6<sup>th</sup> March:** Inaugural session witnessed the presence of Chief Guest Prof. R. P. Yadav, Professor-HAG, MNIT Jaipur, Dr. Mahesh Bundeale, Director, PCE, Jaipur,



Mr. Pankaj Dhemla, Vice Principal, PCE, Jaipur, Dr. Garima Mathur, Coordinator, PCE, participants along with the faculty members. The event started with the lamp lighting and felicitation of the Chief Guest Prof. R. P. Yadav by Dr. Mahesh Bundeale, Director PCE. Dr. Garima Mathur put light upon workshop and its content.





In welcome address Dr. Mahesh M. Bunde, director, PCE, motivated the students to adopt the new techniques related Security and smart antenna. Prof. R.P Yadav presented his expert talk on the topic “Concepts behind LTE and LTE-Advanced and 5G Security”. Another Talk was delivered by Dr. Kanad Ray, Professor, Amity University on Topic “Biomaterial Inspired Antenna and Development of Humanoid Bot.



After Lunch Hands on Session on Compact Antenna Planner Design with the help of CST studio was conducted by Dr. Payal Bansal and Mr. Tarun Mishra.

- ♦ **Day 2: 7<sup>th</sup> March:** Dr. Sanyog Rawat, Manipal University Jaipur, delivered his talk on “Compact Planar Antennas and their Applications” at 8.45 am. In his two

hour long talk he explained about various configurations of antennas and smart antenna applications. Next eminent speaker was Dr. Kota Soloman Raju, Senior Principal Scientist, CEERI Pilani. He expressed his views on Mobile & Cyber Security Threats & their Countermeasures.



After Lunch valedictory session was held Dr. Kota Soloman Raju Chief Guest, Dr. Mahesh M Bundeale, Director, PCE, Jaipur, Mr. Pankaj Dhemla, Vice Principal, PCE, Jaipur, Dr. Garima Mathur, Coordinator, PCE, participants and faculty members attended the session.

It started with the felicitation of Chief Guest Dr. Kota Solomon Raju, by Dr. Mahesh M Bundeale, Principal & Director, PCE, Jaipur. A brief report on workshop was



presented by Dr. Garima Mathur. Valuable feedback was taken from the participants. The Certificate of participation was awarded to all the participants who successfully completed the Program.



Dr. Mahesh M Bundele congratulated the participants for taking keen interest in learning the new technologies in his address. He also appreciated the organizing team. Dr. Kota Solomon Raju said that active involvement of most prominent speakers and delegates and their innovative ideas will create a stimulating atmosphere for the further development of multi-disciplinary and convergent research in the area of mobile network security and smart antenna. Dr. Anila Dhingra, Associate Professor, ECE Deptt., PCE proposed the Vote of Thanks. At the end of the session a group photograph was taken with the Dignitaries including participants.

### **CONTENT DELIVERY / PRACTICAL SESSIONS:**



## CERTIFICATION DISTRIBUTION



## VALEDICTORY SESSIONS

### Q- Sheet

Saturday, 7<sup>th</sup> March, 2020

Venue: CG 05, PCE, Jaipur

S. No	Activity	Duration	Time
1	Welcome of Dignitaries by the anchors A. <b>Chief Guest : Dr. Kota Solomon Raju</b> , Senior Principal Scientist, CEERI, Pilani B. <b>Dr. Mahesh Bundeale</b> , Director, PCE, Jaipur C. <b>Mr. Pankaj Dhemla</b> , Vice Principal, PCE, Jaipur D. <b>Dr. Garima Mathur</b> , Coordinator, PCE, Jaipur	3 Min	1:30 PM – 1:33 PM
2	Felicitation of Chief Guest <b>Dr. Kota Solomon Raju</b> , by Dr. Mahesh M Bundeale, Principal & Director, PCE, Jaipur	3 Min	1:33 PM – 1:36 PM
3	Feedback of Workshop	5 Min	1:36 PM – 1:41 PM
4	Words of Wisdom by <b>Dr. Mahesh M Bundeale</b> , Director, PCE	5 Min	1:41 PM – 1:46 PM
5	Address by Chief Guest <b>Dr. Kota Solomon Raju</b> , Senior Principal Scientist, CEERI, Pilani	5 Min	1:46 PM – 1:51 PM
6	Certificate Distribution	10 Min	1:51 PM – 2:01 PM
7	Vote of Thanks by <b>Dr. Anila Dhingra</b> , Associate Professor, ECE, PCE	2 Min	2:01 PM – 2:03 PM
8	Group Photograph	2 Min	2:03 PM – 2:05 PM



### LIST OF PARTICIPANTS:

S. No.	Name of Participants	Name of Organization
1	Kirti Vyas	Arya College of Engineering and IT
2	Surendra Singh Dua	Global Institute of Technology
3	Lakshya Rustagi	Poornima College of Engineering
4	Himani Goyal Sharma	Poornima College of Engineering
5	Vikas Verma	Jaipur National University, Jaipur
6	Dr. Sandeep Vyas	JECRC College of Engineering
7	Prachi Mathur	Poornima College of Engineering
8	Dr. Pramod Shrama	Poornima College of Engineering
9	Mohd Asif Khan	Jaipur National University Jaipur
10	Shreya Asthana	Jaipur National University
11	Saloni Jain	Jaipur National University
12	Abhinandan Kumar	Poornima University
13	Dr. Pankaj Dadheech	SKIT, JAIPUR
14	Vivek Bhojak	Anand International College of Engineering, Jaipur
15	Vineet Chhabra	Anand International College of Engineering, Jaipur
16	Gajendra Singh	Anand International College of Engineering, Jaipur
17	Rakshita Singhal	Anand International College of Engineering, Jaipur
18	Sukhdarshan Vinayak	Global Institute of Technology
19	Mohammad Idrish Rajja	Global Institute of Technology
20	Ravi Prajapat	Global Institute of Technology
21	Dristi Ranjan	Global Institute of Technology
22	Surendra Kumar Saini	Jaipur National University, Jaipur
23	Sourav Singh	Global Institute of Technology
24	Abhishek Gupta	Poornima College of Engineering



25	Rahul Gothwal	Jaipur National University
26	Manaal Mishra	Poornima College of Engineering
27	Yogendra Kumar Katiyar	Regional College For Education Research and Technology
28	Bhoopendra Sharma	Suresh Gyan Vihar University Jaipur
29	Monika Mathur	SKIT, JAIPUR
30	Dr. Pramod Sharma	Regional College For Education Research And Technology, Jaipur.
31	Ankur	SKIT, JAIPUR
32	Shreya Mathur	Poornima College of Engineering
33	Arvind Singh	Poornima College of Engineering
34	Aman Agarwal	Poornima College of Engineering
35	Bhavana Addania	Poornima College of Engineering
36	Aman Sharma	Poornima College of Engineering
37	Itee Soni	Poornima College of Engineering
38	Siddhant Mundra	Poornima College of Engineering
39	Srishti Meena	Poornima College of Engineering
40	Arpit Sharma	Poornima College of Engineering
41	Gopesh Yadav	Poornima College of Engineering
42	Ishita Shivran	Poornima College of Engineering
43	Mohit Jangir	Arya College of Engineering and IT
44	Lokesh Chandra Lohar	Arya College of Engineering and IT
45	Mandeep Singh	Arya College of Engineering and IT
46	Lavish Chouhan	Arya College of Engineering and IT
47	Tapan Nahar	Manipal University Jaipur
48	Ishika Jain	Poornima College of Engineering
49	Kunal Singh Ranawat	Poornima College of Engineering
50	Harshit Khandelwal	Poornima College of Engineering

### FEEDBACK ANALYSIS:

1) Do you want these types of FDP in Future?



