



# GALGOTIAS COLLEGE OF ENGINEERING & TECHNOLOGY

EC-NEWSLETTER 2018-19

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“EC-Newsletter” is the yearly newsletter of the Department of ECE, Galgotias College of Engineering and Technology, Greater Noida highlighting the accomplishments of our students, faculty and staff. It mainly focuses on the major events organized, student and faculties research publications, achievements, campus placement, industrial interactions, industrial visits, higher studies details etc.



## Department of Electronics & Communication

**Chief Editor:** Dr. Lakshmanan M (Prof. and Head, ECE Dept)

**Faculty Editor:** Mr. Hitesh Kumar (Asst. Professor)

**Student Editor:** Sristi Sharma  
Utsav Verma

## About ECE Department

The Department of ECE offers B.Tech and M.Tech courses in Electronics and Communication Engineering from Dr. A.P.J. Abdul Kalam Technical University, (formerly Uttar Pradesh Technical University / Gautam Buddh Technical University) Lucknow. Electronics & Communication Engineering deals with the electronic devices, circuits, communication equipments like transmitter, receiver, integrated circuits (IC), microprocessors, satellite communication, microwave engineering, antenna and wave propagation. The department aims to impart high quality education in ECE and conduct top notch research in ECE related fields.

The department provides state-of-art infrastructure and computing facilities to students and faculty. The faculty members are actively involved in different domains of research with special focus in four thrust areas:

1. Wireless Communication and Networks
2. Microwave and Antennas,
3. VLSI Design
4. Communication Systems
5. Signal and Image Processing.

The department has a regular hardware and software labs as well as the state-of-art research labs in microwave and antennas, where faculty and students are working on funding projects and offering consultancy services. Some of the available softwares in ECE department are MATLAB, HFSS, ns-2, ns-3, Riverbed Academic edition, OrCAD PSPICE, eSim, SCILAB, OR-Tools, Expeyes, etc. The Department follows a well proven pedagogy of sharing knowledge with the young and vibrant minds of the college. As we are affiliated to AKTU University, Lucknow, the curriculum and subjects are prescribed by AKTU University. In addition to instruction in core ECE subjects, we also teach elective subjects in advanced topics such as Voice over Internet Protocol, Filter Design, Digital Image Processing, Digital System Design using VHDL, Speech Processing, Advance Digital Design using Verilog, Microcontroller for Embedded Systems, etc.

The department imparts world class training and research besides promoting active industry-institute collaboration by identifying current trends and taking part in sponsored research projects and consultancy services. The department also has a worldwide reach with its vibrant alumni network. Working shoulder with shoulder with the institution, it is constantly aiming towards reaching greater heights to serve the needs of the society and meet the aspirations of the student community.

## **Vision of Institute**

To be a leading educational institution recognized for excellence in engineering education and research producing globally competent and socially responsible technocrats.

## **Mission of Institute**

**IM1:** To provide state of the art infrastructural facilities that support achieving academic excellence.

**IM2:** To provide a work environment that is conducive for professional growth of faculty and staff.

**IM3:** To collaborate with industry for achieving excellence in research, consultancy and entrepreneurship development.

## **Vision of Department**

To be recognized as a center of excellence in Electronics and Communication Engineering for the quality and global education, interdisciplinary research and innovation, to produce committed graduates who can apply knowledge and skills for the benefit of society.

## **Mission of Department**

**DM1:** To provide quality education by providing state of the art facility and solutions for global challenges.

**DM2:** To provide a framework for promoting the industry-institution collaboration and empower the students in interdisciplinary research.

**DM3:** To transform students into socially responsible, ethical and technically proficient engineers with innovative skills and usage of modern tools.

**DM4:** To make the students corporate ready with spirit and necessary interpersonal skills.

## Program Outcomes

- P01 Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- P02 Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- P03 Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- P04 Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- P05 Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- P06 The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- P07 Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- P08 Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- P09 Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- P010 Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- P011 Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- P012 Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

### **Program Specific Outcomes**

**By the completion of Electronics & Communication Engineering program the student will be able to:**

- PS01:** Design and develop models for analog & digital electronic circuits and systems.
- PS02:** Design, develop and test electronic and communication systems for applications with real time constraints.

### **Program Educational Objectives**

<b>PEO 1</b>	Graduates will excel in their career by acquiring knowledge in the field of Electronics and Communication Engineering with the usage of modern tools and emerging technologies.
<b>PEO 2</b>	Graduates will have the capability to analyze real life problems of the society and produce innovative solutions.
<b>PEO 3</b>	Graduates exhibit professionalism, ethical attitude, communication skills and team work in core engineering, academia and research organizations through professional development and life-long learning.

**List of Faculty in The Department:**

S. No	Name	Qualification	Area of Specialization	Designation
1	Dr. Lakshmanan. M	Ph. D	Wireless Communication	Professor & HOD
2	Dr. R.L. Yadava	Ph. D	Communication	Professor
3	Dr. Jaspreet Kour	Ph. D	Image Processing	Professor
4	Dr. S.P. Singh	Ph. D	Wireless Communication	Associate Professor
5	Mr. Atul Kumar	M. Tech	Electronics and Communication	Associate Professor
6	Mr. Shahid Eqbal	M. Tech	Digital Electronics and Systems	Associate Professor
7	Mr. Amanpreet Singh Saini	M. S	Wireless Communication	Assistant Professor
8	Mr. Saurabh Katiyar	M. Tech	Micro Electronics and Embedded Technology	Assistant Professor
9	Mr. P.C. Joshi	M. Tech	VLSI Design	Assistant Professor
10	Mr. Kuldeep Singh	M. Tech	Electronics and Communication	Assistant Professor
11	Mr. Amit Gupta	M. Tech	VLSI Design	Assistant Professor
12	Ms. Ranjana Kumari	M. Tech	Electronics and Communication	Assistant Professor
13	Ms. Ruchi Agrawal	M. Tech	Communication Engineering	Assistant Professor
14	Mr. Ankit Sharma	M. Tech	Signal Processing	Assistant Professor
15	Mr. Deependra Sinha	M. Tech	Electronics and Communication	Assistant Professor

16	Mr. Madan Kumar Sharma	M. Tech	Electronics and Communication	Assistant Professor
17	Mr. Gaurav Mehra	M. Tech	VLSI Design	Assistant Professor
18	Mr. Vinay Singh	M. Tech	Digital Systems	Assistant Professor
19	Mr. Gaurav Saxena	M. Tech	Microwave Electronics	Assistant Professor
20	Mr. Mohd. Shibly	M. Tech	Nano Technology	Assistant Professor
21	Mr. Piyush Jain	M. Tech	Electronics	Assistant Professor
22	Ms. Shruti Priya	M. Tech	Wireless Communication	Assistant Professor
23	Ms. Ruchi Tripathi	M. Tech	Communication Engineering	Assistant Professor
24	Mr. Upendra kumar Acharya	M. Tech	Electronics and Communication	Assistant Professor
25	Ms. Rekha Rani	M. Tech	Electronics and Communication	Assistant Professor
26	Mr. Ausaf Hasan Tarique	M. Tech	Electronics and Communication	Assistant Professor
27	Mr. Vikram Singh Kardam	M. Tech	Signal Processing and Digital Design	Assistant Professor
28	Ms. Nishtha	M. Tech	Electronics and Communication	Assistant Professor

**Faculty Publications:****Faculty Publications in Journals**

S. No.	Name of Author	Title of Paper	Category	Name of Journal	Publication Month/ Year
1	Ankit Sharma, et al.	RCS reduction and gain enhancement of SRR inspired circularly polarized a lot antenna using metasurface	International	International Journal of Electronics and Communication, Vol. 91, pp. 132-142	Jul-18
2	Ramlal Yadava, et al.	A Compact, dual wide-band circularly polarized, modified square ring slot antenna for C and Ku band applications	International	International Journal of Microwave and Wireless Technologies, Vol. 11, No. 2, pp: 182-189	Mar-19
3	Ramlal Yadava, et al.	A low- profile triple- band circularly polarized wide slot antenna for wireless systems	International	International Journal of Microwave and Wireless Technologies, Vol. 11, No. 2, pp: 67-75	Mar-19
4	Ankit Sharma, et al.	Gain enhancement and broadband RCS reduction of a circularly polarized aperture-coupled annular slot antenna using metasurface	International	Journal of Computational Electronics, Vol. 17, No.3, pp. 1037-1046	Sep-18
5	Ankit Sharma, et al.	Analysis and design of an ultra-thin metamaterial absorber and its application for in-band RCS reduction of antenna	International	Journal of Electromagnetic Waves and Applications, Vol. 33, No. 5, pp: 654-667	Jan-19
6	Ankit Sharma, et al.	Gain enhancement and RCS reduction of CP patch antenna using partially reflecting and absorbing metasurface	International	Electromagnetics, Vol. 39, No. 2, pp: 120-135	Feb-19
7	Ankit Sharma, Lakshmanan. M, et al.	A Compact Circularly Polarized Multiband Microstrip Patch Antenna with Defective Ground Structure	International	International Journal of Electronics and Telecommunications, Vol. 65, No. 2, pp. 195-201	Apr-19
8	Shahid Eqbal, et al.	Texture feature extraction of medical images by GLRLM using wavelet transform	International	International Journal of Research and Analytical Reviews, Vol. 6, No. 2, pp. 264-269	May-19



### **Faculty Publications in Conferences**

<b>S. No.</b>	<b>Name of Author</b>	<b>Title of Paper</b>	<b>Category</b>	<b>Name of Conference</b>	<b>Publication Date/ Year</b>
1	Ramlal Yadava, et al.	DGS and SRR based FSS Microstrip Antenna for 5G Communication	International	International Conference on "Computational Intelligence and Communication Technology"	Jul-18
2	S. Pratap Singh, Lakshmanan. M, et al.	BER Simulation for Dual Hop Relaying System Over Various Fading Channels under Different Condition	International	International Conference on "Sustainable Energy, Electronics & Computing Systems"	Oct-18
3	S. Pratap Singh, Lakshmanan. M, et al.	Statistical Modeling of Interference for Molecular Nano-Communication	International	International Conference on "Sustainable Energy, Electronics & Computing Systems"	Oct-18
4	Ankit Sharma, Lakshmanan. M, et al.	Gain Enhancement of Circularly Polarized Microstrip Patch Antenna using Metasurface	International	IEEE International Conference on "Power Electronics, Intelligent Control and Energy Systems"	Oct-18
5	Jaspreet Kour, et al.	Smart Applications of Internet of Things	International	First International Conference on "Secure Cyber Computing and Communications", (ICSCCC-2018)	Dec-18
6	Gaurav Saxena, et al.	High Isolation EBG Based MIMO Antenna for X-Band Applications	International	6th International Conference on "Signal Processing and Integrated Networks" (SPIN 2019)	Mar-19
7	S. Pratap Singh, Lakshmanan. M, et al.	Channel Impairment Analysis in Nano Communication under CM-3 Scenario	International	6th International Conference on "Signal Processing and Integrated Networks" (SPIN 2019)	Mar-19
8	Piyush Jain, Lakshmanan. M, et al.	Outage Probability and Average Capacity Analysis over $\alpha$ - $\mu$ Distribution of Free Space Optical Communication System	International	International Conference On "Vision Towards Emerging Trends In	Mar-19

				Communication And Networking"	
9	Lakshmanan. M, Piyush Jain, Saurabh Katiyar, et al.	Modeling and Analysis of Hybrid SIM with L-PPM and MSK over Double Generalized Gamma Distribution in Free Space Optical Communication System	International	International Conference On "Vision Towards Emerging Trends In Communication And Networking"	Mar-19
10	S. Pratap Singh, et al.	Closed form solutions of various window functions in fractional fourier transform domain	International	6th International Conference on Computing for Sustainable Global Development, INDIACom 2019, 8991277, pp. 64-68	Mar-19
11	Upendra Kumar Acharya, et al.	Particle swarm optimization exponential constriction factor (PSO-ECF) based channel equalization	International	6th International Conference on Computing for Sustainable Global Development, INDIACom 2019, 8991224, pp. 94-97	Mar-19

### **Students Publications:**

S. No	Name of the Students	Name of the Faculty Mentor	Title of the Paper	Conference/Journal	Date, Month & Year
1	Sristi Sharma Utsav Verma	Dr. S. Pratap Singh Dr. Lakshmanan. M	Statistical Modeling of Interference for Molecular Nano-Communication	International Conference on Sustainable Energy, Electronics & Computing Systems	Oct 2018
2	Ujjawal Sarkar Shubham Kumar Mangal Sujay Kumar Tanuj Agarwal	Mr. Ankit Sharma Dr. Lakshmanan. M	Gain Enhancement of Circularly Polarized Microstrip Patch Antenna using Metasurface	IEEE International Conference on Power Electronics, Intelligent Control and Energy Systems	Oct 2018
3	Aditi Verma Ashish Mishra Anushka Singh	Dr. S. Pratap Singh Dr. Lakshmanan. M	BER Simulation for Dual Hop Relaying System Over Various Fading Channels under Different Condition	International Conference on Sustainable Energy, Electronics & Computing Systems	Oct 2018

4	Ashish Mishra Anushka Singh Aditi Verma	Dr. S. Pratap Singh Dr. Lakshmanan. M	BER analysis of FRFT-OFDM system over Alpha-Mu fading channel under CFO	International Conference On Vision Towards Emerging Trends In Communication And Networking	30 - 31, Mar 2019
5	Shekhar Singh Amit Kumar Soni	Dr. S. Pratap Singh Dr. Lakshmanan. M	Channel Impairment Analysis in Nano Communication under CM-3 Scenario	6th International Conference on Signal Processing and Integrated Networks (SPIN 2019)	7-8, Mar 2019
6	Akshit Saaxena Atyant Jain	Mr. Piyush Jain Dr. Lakshmanan. M	Outage Probability and Average Capacity Analysis over $\alpha$ - $\mu$ Distribution of Free Space Optical Communication System	International Conference On Vision Towards Emerging Trends In Communication And Networking	30 - 31, Mar 2019
7	Pawan Tiwari Nikhil Kumar Pragati Singh Chhavi Srivastava	Dr. Lakshmanan. M Mr. Piyush Jain Mr. Saurabh Katiyar	Modeling and Analysis of Hybrid SIM with L-PPM and MSK over Double Generalized Gamma Distribution in Free Space Optical Communication System	International Conference On Vision Towards Emerging Trends In Communication And Networking	30 - 31, Mar 2019

### **Departmental Events**

#### **FDP/Seminar/ Workshop /Conference/ Short Term Course**

S. No	Name of the Event	Date	Resource Person with designation	Organizer/Coordinator	Remarks
1	One day seminar on "Writing a Project Thesis"	11, May 2018	Dr. Kakoli Dey, Professor, Department of Humanities, GCET, Gr. Noida & Dr. R.N. Mahto, Assistant Professor,	Dr. S.P. Singh	Supported by GNIX Society

			Department of Humanities, GCET, Gr. Noida		
2	Short Term Course on "Scilab Programming"	14-18, May 2018	-	Mr. Upendra Kumar Acharya	NITTR, CHandigarh
3	Faculty Development Programme on "Reflection on the Self"	7, June 2018	Dr. Sanjay Kumar, Associate Professor, BIT, Mesra	Dr. S.P. Singh	GCET
4	Short Term Course on "Advances in OFC Technology"	18-22, June 2018	-	Dr. R.L. Yadava	NITTR, CHandigarh
5	Faculty Development Programme on "Emerging Trends in Antenna Design and Communication Technologies"	16-20, July 2018	-	Dr. R.L. Yadava	Sponsored by AKTU
6	Seminar/Webinar on "VLSI Design Technologies"	21, August 2018	Mr. Manish Singhal, Principal Engineer, True Chip Solutions, Noida	Ms. Shristi Priya	Supported by GNIX Society and True Chip Solutions, Noida
7	Workshop on "IoT Based Google Assistance Project"	24, September 2018	Mr. Amir Khan, Principal Engineer, Aprtron Solutions Private Limited, Noida	Mr. Amanpreeth Singh Saini	Supported by GNIX Society and Aprtron Solutions Private Limited, Noida
8	Workshop on "VLSI Design and Embedded - IOT Systems"	27 & 28, September 2018	Mr. Devender Khari, Mr. Chiranjeev Singhal & Mr. Vikas Sharma, DKOP Labs, Noida	Mr. Amanpreeth Singh Saini	Supported by GNIX Society and DKOP Labs Pvt. Ltd.

9	Short Term Course on "Next Generation Wireless Technologies"	26-30, November 2018	-	Ms. Rekha Rani	NITTR, CHandigarh
10	Short Term Course on "Optimization techniques with Engineering Applications"	10-14, December 2018	-	Dr. R.L. Yadava	NITTR, CHandigarh
11	Seminar on "Know Yourself"	28, January 2019	Mr. Nitin N. Nagar, Cosmic Energy Expert and Innate Evaluator	Mr. Amanpreet Singh Saini	Supported by GNIX Society
12	Short Term Course on "NBA Accreditation for Quality Assurance"	04-08, Feb 2019	-	Mr. Piyush Jain	NITTR, CHandigarh
13	Short Term Course on "Wireless Propagation"	25, February - 01, March 2019	-	Mr. Vinay Singh	NITTR, CHandigarh
14	Seminar on "Recent Advancement in the Communication System"	03 & 04, April 2019	Er. Raviprakash, Bharti Airtel IMS_Volte Network, Head for Delhi/NCR/UP West/UP East, Nokia Network and Solutions Limited, Gurugram	Mr. Amanpreet Singh Saini	Supported by GNIX Society
15	Workshop on "Basics of MATLAB"	09, April 2019	Mr. P. Vikram Kumar, Founder, PADAYI	Dr. R.L. Yadava & Mr. Piyush Jain	Supported by GNIX Society

### **Expert lectures:**

S. No.	Name of the event	Date	Resource Person with designation	Academic/Industry	Organizer
1	Lecture on "Advances in Solar Energy and LED designs"	06/03/2019	Mr. Vivek Singh, Founder and CEO, VS Energy Harmonisation & Automations Pvt. Ltd., Greater Noida	Industry	GNIX
2	Lecture on "Technology Trends"	22/11/2018	Mr. Gaurav Panwar, Senior Member of Technical Staff,	Industry	GNIX

	in Semiconductor Industry and Engineers Employability Enhancement Programme"		Mentor Graphics, Noida		
3	Lecture on "Analog Signal Processing using Basic Building Blocks"	15/11/2018	Dr. Dinesh Prasad, Professor, Department of ECE, Jamia Millia Islamia, New Delhi	Academic	GNIX
4	Lecture on "VLSI Design - Design of Arithmetic Circuits"	13/11/2018	Dr. D. Vaithiyanathan. D, HOD, Department of ECE, NIT Delhi, New Delhi	Academic	GNIX
5	Lecture on "Artificial Intelligence Revolution"	04/10/2018	Tanmay Bakshi - Youngest IBM Watson Programmer	Industry	Student Council
6	Lecture on "Research, Innovation & Start-up opportunities based on Smart Neighborhood approach and localized Abundant Circular Economy"	03/10/2018	Mr. Chandra Vikash, Global Convenor for GAIA	Industry	EEE & EE

### **Internship:**

S. No	Session	Roll Number	Name of the Student	Name of the Company/University	Duration
1	2018 - 2019	1509731013	Akshit Saxena	Shantou University, China	6 Months
2	2018 - 2019	1509731034	Atyant Jain	Shantou University, China	6 Months
3	2018 - 2019	1509731082	Saksham Chourasia	Shantou University, China	6 Months

**Industrial Visit:**

S. No	Name of the Industry	Duration/Date
1	Huawei, Sector 39, Gurgaon	10.04.2018
2	Satellite Earth Station, BSNL, Sikandrabad, Bulandshar	18.04.2018
3	Associated Electronics Research Foundation, Noida	23.11.2018
4	ST Micro Electronics, Greater Noida	12.12.2018
5	DKOP Labs, Noida	02.02.2019

**GNIX (An official club of Department of ECE, GCET)****G-care**

Caring by our seniors is the greatest responsibility they have. Those who walked before us have given so much and made possible the life we all enjoy. Without a sense of caring, there can be no sense of community.

**ZEST - A Technical & Cultural Event:**

GNIX student forum organized a two days technical fest ZEST- 2017, which includes various fascinating events (like code cracker, Spot the bug, Circuit debugging, Poster presentation, Treasure Hunt, Wire loop, Debate, Rangoli, X-factor, General Quiz, Math Quiz, Digital Quiz etc) during 15th and 16th February 2017 in association with MADE EASY.

**IETE Students' Chapter**

IETE STUDENTS' CHAPTER was started in October 2018. This society is chaired by Dr. M. Lakshmanan and Dr. S.P Singh and co-chair by Ms. Shristi Priya. Students from first year to final year are members of this society and till now there are 106 students. Apart from student members there are faculty members also.

Students have actively participated and awarded with certificates in the different events organised by IETE like

- Golden Jubilee Mid-Term Symposium on “Start-up Initiatives: IT or IOT Based Ventures” in NSUT, Dwarka, New Delhi on 5<sup>th</sup> April 2019.

**Eminent Recruiters:**

		 Cognizant	
			
			
			