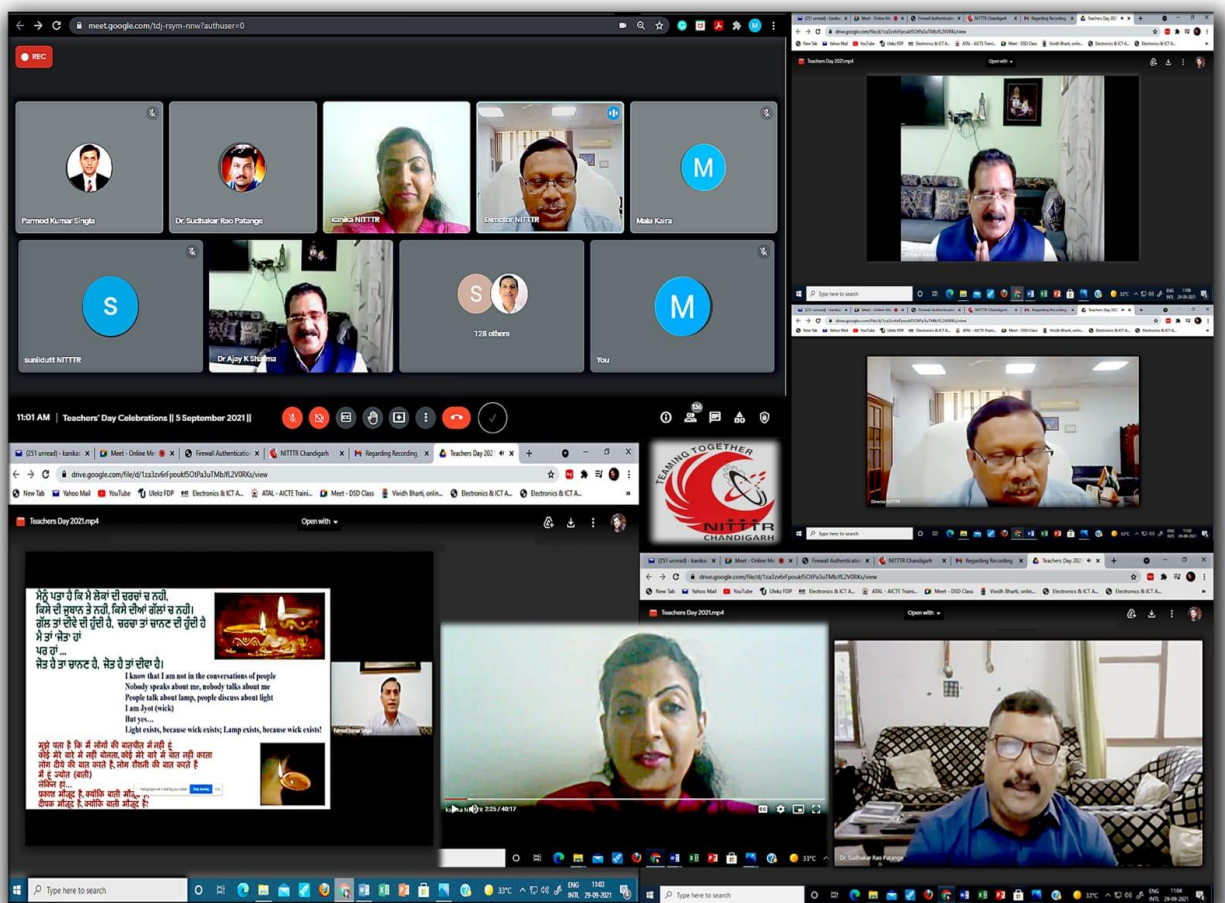




April, 2021 – September, 2021

On 5th September 2021, Teachers Day was celebrated through online mode. The Chief Guest for the occasion was Dr. Ajay Kumar Sharma, Professor NIT Jalandhar, (Former Vice Chancellor) IKG-Punjab Technical University). The occasion was celebrated with the successful journey story of our Chief Guest. The talk was well appreciated by all the students and Faculty.



ELECTRONICS AND COMMUNICATION ENGINEERING DEPARTMENT

I. Details of ME Programmes

ME Subjects	Batches	Name of the Faculty
Digital Image Processing (ECE-1202)	2020-22 Regular ECE	Dr. Amod Kumar
Computer Vision	2020-22 ECE (A1)	Dr. Amod Kumar
Digital Image Processing (ECE-1202)	2019 Modular 5 th Spell ECE	Dr. Amod Kumar
Advance Computer Networks	2020 Batch(Regular)	Dr. Balwinder S. Dhaliwal
Information Theory & Coding	2020 Batch(Modular)	Dr. Balwinder S. Dhaliwal
VLSI Design (ECE-1205)	2020 (2 nd Semester)	Dr. Balwinder Raj
Fiber Optic Communication System (ECE-1102)	2021 Ist Semester (Modular)	Dr. Balwinder Raj
Embedded System Design	2020 (Regular)	Dr. Kanika Sharma
Digital System Design	2020 (Modular)	Dr. Kanika Sharma
Wireless Mobile Communication	2020 (Regular)	Dr. Garima Saini
Advanced Digital Communicator	2021 (Modular)	Dr. Garima Saini
Advanced Digital Communicator	2019(Modular)	Dr. Garima Saini
Advanced Computer Networks	ME (ECE) 2020 Batch-Modular,2 nd Spell	Dr. Balwinder Singh Dhaliwal
Research Methodology CS 8202	ME CSE and Ph.D. Scholars dated 01/07/2021	Dr. Balwinder Singh Dhaliwal
Fiber Optic Communication(ECE-1102)	Modular 2021	Prof. SS Gill and Dr. Balwinder Raj
Digital System Design	ME Modular 2020	Dr. Kanika Sharma
Big Data Analytics	ME ECE-AI	Dr. Garima Saini, Coordinator

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STC Conducted (Contact Online Mode/ICT/Cluster Prog.)

Sr. No.	O. Plan No.	Course Title	Start Date	End Date	Venue	Course Coordinator
1.	ICT-10	Low Power VLSI Design	05.04.2021	09.04.2021	NITTTR, Chandigarh	SSG/BR
2.	ICT-12	Basic of MATLAB Programming	05.04.2021	09.04.2021	NITTTR, Chandigarh	AMK
3.	ICT-13	Antenna & wireless Communication Technologies for IoT	26.04.2021	30.04.2021	NITTTR, Chandigarh	GS/BSD
4.	ICT-40	Nanoelectronics Devices and Circuits Design	03.05.2021	07.05.2021	NITTTR, Chandigarh	BR
5.	ICT-41	Digital signal Processing using MATLAB (Two Weeks)	03.05.2021	14.05.2021	NITTTR, Chandigarh	AMK
6.	ICT-42	Recent Technologies for Mobile Broadband transformation	17.05.2021	21.05.2021	NITTTR, Chandigarh	GS
7.	ICT-43	NBA Accreditation and Examination Reforms	17.05.2021	21.05.2021	NITTTR, Chandigarh	BSD/SSG
8.	ICT-62	Artificial intelligent for Engineering Applications	07.06.2021	11.06.2021	NITTTR, Chandigarh	SSG/BR
9.	ICT-63	ECE Virtual Lab practices using Free Online Simulations	14.06.2021	18.06.2021	NITTTR, Chandigarh	BSD
10.	ICT-64	Neural Networks and Deep Learning	14.06.2021	18.06.2021	NITTTR, Chandigarh	MS
11.	ICT-77	System Designing with Embedded Processors	26.07.2021	30.07.2021	NITTTR, Chandigarh	KS
12.	ICT-92	Emerging Wireless Communication Technologies	02.08.2021	13.08.2021	NITTTR, Chandigarh	LM
13.	ICT-ECE-3	Digital Fitter Design with MATLAB	02.08.2021	06.08.2021	NITTTR, Chandigarh	AMK
14.	ICT-93	Embedded Systems and IoTs	23.08.2021	27.08.2021	NITTTR, Chandigarh	KS
15.	ICT-105	5G & Beyond	13.09.2021	17.09.2021	NITTTR, Chandigarh	GS
16.	ICT-ECE-5	Image Processing using MATLAB (Two Weeks)	13.09.2021	24.09.2021	NITTTR, Chandigarh	AMK
17.	ICT-106	Digital and Analog VLSI Design	13.09.2021	17.09.2021	NITTTR, Chandigarh	BR
18.	ICT-107	IoTs and Sensor Networks	20.09.2021	24.09.2021	NITTTR, Chandigarh	KS
19.	ICT-108	Quality enhancement in circuit Departments of Engineering Institutes	20.09.2021	24.09.2021	NITTTR, Chandigarh	SSG/BSD

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Workshops – Online

Name of Workshops	From	To	Name of Faculty
Online Industry partnered workshop on IoT & Artificial Intelligence	31/05/2021	04/06/2021	Dr. Balwinder S. Dhaliwal & Dr. Garima Saini
Mentors Training Workshop for UP State at NITTTR, Chandigarh No. of participants 13	27/09/2021	01/10/2021	Dr. Kanika Sharma
Online workshop for Developing Contents (first year) & Finalizing Study Scheme of Medical Electronics Haryana State Dr. No. of participants 148	27-08-2021	27-08-2021(One day)	Balwinder Singh Dhaliwal

➤ Research & Development: (Completed)

Sr. No	List of ME Pre-Thesis Students	List of ME Final Thesis Students
1.	Ranbirjeet Kaur	Surender Kumar
2.	Kush Singla	Ranjit Singh Chuhan
3.	Parul Sharma	Himanshu Mahatma
4.	KM Shiwani	Kamaljit
5.	Simran Malhotra	Bhupender Singh
6.	Swapneel Kapoor	Shweta Tripathi
7.	Chesta Sharma	Parul Sharma
8.	Jagriti Sharma	Shiwani
9.	Shiwani Vashist	Jagriti Kumari
10.	Parwinder Kaur	
11.	Kanika Sood	
12.	SuryaKant	

LIST OF PUBLICATIONS

A. PAPERS PUBLISHED BY THE INSTITUTE FACULTY:

SCI JOURNAL

Sr.No	Name of the Paper Published	Author (s) Name
1.	Speech Recognition using enhanced features with Deep Belief Network for Real Time application wireless Personal Communication, June 2021(SCI)	Gurpreet Kaur, Mohit Srivastava, Amod Kumar

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2.	Analysis of Wrist Pulse Signal: Emotions and Physical Pain IRBM (Elsevier), June, 2021(SCI)	N. Garg, A.Kumar H.S.Ryait
3.	“Comparative Analysis of OFETs Materials and Devices for Sensor Applications”, Journal of Silicon, Springer, Accepted in June, 2021 (SCI)	Parminder Kaur, sandeep singh Gill, Balwinder Raj
4.	“Design and simulation of Triple metal Double-gate Germanium on Insulator Vertical Tunnel Field effect Transistor, Microelectronics Journal, Elsevier accepted 20 May 2021) (SCI)	Tulika Chawla, Mamta Khosla, Balwinder Raj
5.	“ P-LUET: a prolong lines of uniformity based enhanced threshed algorithm for heterogeneous wireless Sensor Network enabled Internet of things framework in wireless personal communications	Tanvi sood, Kanika Sharma
6.	“Parametric Investigation and Design of Junctionless Nenowire Tunnel Field-effect Transistor”, Journal of Silicon, Springer (Accepted 1 Sep 2021)	Parveen Kumar, Balwinder Raj

B. PAPERS PUBLISHED BY THE INSTITUTE:

INTERNATIONAL JOURNAL OTHER THAN SCI JOURNALS

Sr.No	Name of the Paper Published	Author (s) Name
1.	“ High Accuracy Face Recognition system for Biometric Security: A Review, International Journal of Communication and computer Technologies (IJCTS), May 2021 (Scopus)	Shiwani Vashist, Sandeep Singh Gill, Balwinder Raj
2.	“PAPR Reduction in Filter Bank Multi Carrier Scheme Comparative Analysis for 5G Technology”, International Journal of Communication Networks and Information Security (IJCNIS) (Scopus) (Accepted 5 June 2021)	Jagriti Kumari, sandeep Singh Gill, Balwinder Raj
3.	“Miniaturized Wearable Fractal Patch Antenna for Body Area Network Applications,” International Journal of electronics and Telecommunications, Vol. 67, No.2.2021, pp.149-154.DOI:10.24425/ijet.2021.135957	Vikas Jain and Balwinder Singh Dhaliwal
4.	“Review of MIMO Antenna for 5G” International Journal of Advanced Research in engineering & Technology Vol. 12, Issue -7, pp.13-24,2021	Bhupender Singh/ Garima Saini

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5.	A Literature review of Ultra- Wideband Circular Polarization Antenna, PENSEE Journal, Volume 51, Issue-03, pp. 1934-1945, 2021 (Scopus Indexed)	Shweta Tripathi/Garima Saini
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C. PAPERS PUBLISHED BY THE INSTITUTE FACULTY:

NATIONAL JOURNAL

Sr.No	Name of the Paper Published	Author (s) Name
1.	“PSO based energy efficient clustering protocol for WSNs”, journal of engineering & Technology Education, Vol.14, No.2, PP.46-50, July-December,2020 (Accepted on 08-06-2021)	Amandeep Kumar, Balwidner Singh Dhaliwal and Damanpreet Singh

D. PAPERS PUBLISHED / PRESENTED IN:

INTERNATIONAL CONFERENCES/SEMINARS

Sr.No	Title of the Paper Presented/Accepted alongwith a Name of the Conference/Seminar (venue, with date)	Author (s) Name
1.	“GSA-EEHC:GSA-based multi-hop routing scheme for EEHC” has been accepted by the programme committee of the 7 th International Conference on Sensors and Electronics Instrumentation Advances (SEIA’ 2021), 22-24 September, 2021	Tanvi Sood, Kanika Sharma
2.	“Quantification of pain using EEG and Fuzzy logic”: International Conference on Emerging Technologies: AI, IoT and CPS for science and technology applications. Dept. of ECE, NITTTR Chandigarh, 6-7 Sep. 2021	Amit Kumar, Amod Kumar, Kanika Sharma
3.	Comparative Study of Biomedical based Physiological Signals for heart monitoring International Conference on Emerging Technologies: AI, IoT and CPS for Science & Technology Applications, 6 th -7 th Sep,2021, NITTTR Chandigarh	Pushparaj, Amod Kumar, Garima Saini

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4.	“Compact Flexible and Wearable Fractal Patch Antenna for Medical Body Area Network Applications”, International Journal of Microwave and Optical Technology, Vol.16 No.5, September 2021, pp.432-440. (Scopus indexed)	Vikas Jain, Balwinder S.Dhaliwal and Jayant G. Joshi
5.	“Design and Crumpling analysis of a wearable antenna for WiMAX applications,” 6 th IEEE International Conference on Communication and Communication and Electronics Systems (ICCES), 8-10 July 2021, Coimbatre, India, pp. 426- 429, doi:10.1109/ICCES51350.2021.9489259 (IEEE Explore Publication	D.Mandal, I.Bala, S.S. Pattnaik and Balwinder.S. Dhaliwal
6.	“Design & Analysis of a flexible 3D printed ring resonator antenna for Bluetooth applications,” International Conference on Emerging Technologies: AI, IoT and CPS for Science & Technology Applications, 6 th -7 th Sep,2021, NITTTR Chandigarh	Chahat Jain, Balwinder Singh Dhaliwal and Rupinder Singh
7.	“Characterization and Comparison of 3D Printed Substrate with Varying Infill Density for Antenna Design Applications,” International Conference on emerging Technologies: AI, IoT and CPS for Science & Technoloty Applications, 6 th -7 th Sep,2021, NITTTR Chandigarh	Kush Singla, Balwinder Singh Dhaliwal and Garima Saini
8.	“Systematic Review on the Technique for object detection hider behind the wall”, International Conference on emerging Technologies: AI, IoT and CPS for Science & Technoloty Applications, 6 th -7 th Sep,2021, NITTTR Chandigarh	Ashima Kaplesh, Amod Kumar, Garima Saini
9.	“Implementation of High-Speed Digital-to-Analog converter for High Bit Resolution two-step Flash Analog-to-Digital Converter Applications”, International Conference on Emerging Technologies: AI, IoT and CPS for Science & Technology Applications, 6 th -7 th Sep,2021, NITTTR Chandigarh	Banoth Krishna, Sandeep Singh Gill, Amod Kumar
10.	“Applications of OLEDs for flexible electronics, Biophotonic, Chronic, Optogenetic applications & Different ”, International Conference on Emerging Technologies: AI, IoT and CPS for science and technology applications	Bodage Sandip Vasudeo, Sandeep Singh Gill and Balwinder Raj

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Dept. of ECE, NITTTR Chandigarh, 6-7 Sep. 2021		
11.	“COMPARATIVE STUDY OF SPINTRONIC BASED STTMRAM”, International conference on Emerging Technologies: AI, IoT and CPS for science and technology applications, Department of ECE, NITTTR Chandigarh, 6-7 Sep,2021	Parul Sharma, Sandeep Singh Gill and Balwinder Raj
12	“Drain Current Analysis with Process Parameters Variations of Nanowire TFET”, International Conference on Emerging Technologies: AI, IoT and CPS for science and technology applications. Dept. of ECE, NITTTR Chandigarh 6-7 Sep, 2021	Parveen Kumar, Balwant Raj and Balwinder Raj
13.	“A paper on GSA-EEHC:GSA-based multi-hop routing scheme for EEHC”, presented online in the 7 th International conference on Sensors Engineering and Electronics Instrumentation Advances (SEIA'2021),22-24 September,2021 held at Spain by Dr. Kanika Sharma	Tanvi Sood, Kanika Sharma

4. R & D / Consultancy Activities

Sr. No.	Project Achievement/ Progress (Separated by Comma)	Research Project Submitted	Funding Agency (Separated by Comma)	Status
1.	Online workshop on IOT& Artificial Intelligence	Dr. BSD & Dr. GS	Teachers and Students	Completed
2.	Student Training	Dr. BSD & Dr. GS	Students	
3.	Antenna Testing CP-3	Dr. GS and Dr. BSD	PhD Scholars	Completed 09 testing

III. Research Projects

ELECTRONICS AND COMMUNICATION ENGINEERING DEPARTMENT

Sr. No.	Name of the Project	Activity	Coordinator / Team Member
1.			

INSTRUCTIONAL MATERIAL DEVELOPMENT

Sr. No.	Title of the Instructional Material	Faculty
1.	Video Lecture on 'Overview of Wearable and Flexible Antennas' recorded during STC session using Google Meet. Dr. Balwinder Singh Dhaliwal	Delevered the session in STC on 'Flexible and Wearable Antennas for Next Generation Applications' coordinated during August 02-06,2021
2.	10 Video Lectures (including one my own as listed above) recorded using Google MEET of sessions of STC on 'Flexible and Wearable Antennas for Next Generation Applications'' Dr. Balwinder Singh Dhaliwal	Coordinated STC during August 02-06,2021 and go recorded sessions uploaded on NITTTR Chandigarh Youtube channel through Media Engg. Deptt.

FDP/TRAINING PROGRAMMES / WEBINARS ATTENDED BY THE INSTITUTE FACULTY/STAFF

Sr. No.	Date(s) / Period	Program	Remarks
Sr. No.	Title of Training Programme	Period of Training	Venue
1.	Recent advances in Data Science and Computational Intelligence Dr. Balwinder Raj	26-30, April, 2021	Online NIT Jalandhar

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2.	Industrial Training Electronics Dr. Garima Saini	02 weeks	BEL, Panchkula
3.	Attended online 1”Indo-south Korea Joint Training School/Workshop on “Environmental Cyber Physical Systems” . Balwinder Raj	August 23-27,2021	Organized by Indo-South Korea Joint Network Center (JNC), Indian Institute of Technology
4.	Industrial Training Programme attended at GGSSTP, Ropar Dr. Kanika Sharma	2 weeks	GGSSTP

8. Curriculum Development

Sr. No.	Target Group (Curriculum Proposed)	Achievement (Curriculum Proposed)	Completed (Curriculum Proposed)
1	NSQF/NEP Aligned Curriculum Design of ECE		
2.	Diploma in Medical Electronics		

**Coordinator:
Dr. Kanika Sharma
ECE Department**