Newsletter Department of Electronics and Communication Engineering Engineering

The Department of Electronics and Communication Engineering, established in 1981, is one of the most dynamic departments of Guru

department is currently running Bachelors and Masters of Technology courses in Electronics and Communication Engineering and has around 10 scholars enrolled for doctorate in areas like Antenna Design, VLSI, Optical communication etc. Ever since its inception, the department has been the hub of academic excellence through some great teachers who have laid a sound foundation as well as the cream of students of the region, who have spread their wings all over the globe. The alumni of the department are not only excelling in

Nanak Dev Engineering College. It was the first major diversification initiative by the college, 25 years after its establishment. The

Message from HoD's Desk

India but also in the Silicon Valley and other hubs of Electronics Technology. They are at the forefront of the Telecom revolution of the last 20 years and manning pivotal positions in Telecom operators in India, South East Asia, Pacific region and Africa. In the end, I can say that we incorporate good technical skills and knowledge to each individual associated with us. Prof. Ameeta Seehra

Department at Glimpse

Dr. Harsimranjit Singh Gill(Coordinator)

Head of Department

Webinar Lecture Series on "Information Security"

Under the NPIU program, "Train-the-Trainer", 4-week job-oriented training programme titled "Webinar Lecture Series on Information

Security" sponsored by TEQIP-III was organized for the students of ECE, IT, and CSE from 02-11-2020 to 27-11-2020. The main aim of the training programme was to spread awareness and motivate students to learn, work, and contribute in the field of cyber security. Apart from discussion of theoretical concepts of information security, hands-on-training session were also conducted to comprehend the

prominent areas of field. Project on "Automatic hand sanitizer dispenser"

unique

dispenser developed

(GNDEC) have developed an automatic hand sanitiser dis-will allow the use of sanitiser

said the sanitiser dispenser was inspired by Make in was built using sturdy mate-India' initiative with parts rial and its advanced features manufactured in local mar- makes it more reliable as kets. The main features of the compared to those available unit include its capability of in the market. — TNS

Ludhiana Tribune https://epape

Faculty Achievements

Cambridge Certification Authority (CCA).

Applications. https://doi.org/10.1007/s11042-020-10223-x

Journal of Seybold Report, Vol. 15, Issue 9, September, 2020

Workshop on "E-Learning"

Modes of Teaching and Learning in Lockdown

Development through Engineering Innovations

International Congress on Sustainable

Webinar Lecture Series on Information

advantages for science and engineering

Advance training Program by NSIC for final year students: 1. 3D Core concepts-Solid

Works-CAD 2. Artificial Intelligence & Machine

Learning 3. Siemens PLC Training SIMATIC

Webinar on "IPR and Patent Filing"

students"

HR Summit 2020

Name of Faculty

Kaur, Narwant Singh Grewal, Preeti Pannu,

Singh, Harleen Kaur,

Kaur

Gurjot Kaur Walia, Navneet

Gurinder Singh, Harsimranjit

Singh Gill, Shivmanmeet

Simranjit Kaur, Harminder

Gurjot Kaur Walia, Preeti

Harleen Kaur, Simranjit

Kaur, Harminder Kaur

Kaur, Gurpurneet Kaur,

Shivmanmeet Singh

Kaur, Harminder

Pannu, Shivmanmeet Singh,

Gurjot Kaur Walia, Navneet

Gurjot Kaur Walia, Navneet

Kaur(10124), Preeti Pannu,

Gurjot Kaur Walia, Navneet

Harsimranjit Singh Gill,

Harleen Kaur, Simranjit Kaur, Harminder Kaur

Shivmanmeet Singh,

Gurjot Kaur Walia

Gurjot Kaur Walia

Gurjot Kaur Walia

November, 2020.

Publications

2020

1

2

3

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Sr.

No.

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Harsimranjit Singh

Harsimranjit Singh Gill

Harsimranjit Singh Gill

Harsimranjit Singh Gill

Gurinder Singh

Gurinder Singh

Harleen Kaur

Harleen Kaur

Harleen Kaur

Harleen Kaur

Simranjit Kaur

Simranjit Kaur

Kuldeepak Singh

Kuldeepak Singh

Daljit Singh

Harminder kaur

Harminder kaur

Harminder kaur

Harminder kaur

Expert Lecture delivered

Khanna.

Student's Corner

- Student's Achievements

Department.

BRAIN BOOMERANG

Final year students of the

(ECE) course of Guru Nanak Dev Engineering College

penser. Montekpal Singh, a

final year student of ECE,

engineering

electronics

Automatic sanitiser

and microcontroller. It includes features such as easy

trolled spray system, which

Prof Shivmanmeet Singh,

without any wastage.

Innovation is a blast whenever it is utilized in a correct way. With such a vision in mind, our final year Student, Montekpal Singh, ECE Branch, have developed 'automatic hand sanitizer dispenser' for all of us keeping in mind the Covid-19 pandemic, under the guidance of ECE Faculty members. This project is capable of detecting and cleaning the person's hands with the use of sensors and microcontroller. Furthermore, it has features like easy refillable tank and smartly controlled spray system which permits the use of sanitizer efficiently

• Either in broad daylight or at night, the sensor is able to detect the presence of hands. It gives a beeping sound while running and stops after 2 seconds of spraying to save sanitizer use. The detachable tank makes refilling and cleaning very easy.

placed in college premises to benefit everyone with its service. Features include:

All the components used in manufacturing of the Dispenser are made in India.

because of sunlight glare on its own, all has been addressed in this project.

 Daljit Singh completed Online Course on Coursera on April 20, 2020: Build Your First App (Project-Centered Course). • Daljit Singh build triviamaster.000webhost.com Quiz Website using JavaScript, developed & designed Android App "Know Your

Student: KYS" using Google's Android Studio, and completed "MATLAB Onramp" course on Mathworks on 17 Dec.2020.

Learn to Program in Java Script and on March 31, 2020: Introduction to Python Programming.

without any wastage. Moreover, the system was tested vigorously for any problems and reliability issues. The project has successfully

Every possible problem that is present in the already available dispensers in the market like sanitizer dripping leakage, running

• Harleen Kaur completed ""Python Basics" an online course authorized by University of Michigan and offered through Coursera on 29

Daljit Singh qualified Java Level-1 Exam conducted on April 03, 2020, and Java Level-2 Exam conducted on April 13, 2020, by

• Daljit Singh completed Online Courses on Sololearn on April 13, 2020: Java Course, and two courses on Udemy on Aug 10, 2019:

• Preeti Pannu, "A Compact 2-Port Ultra-Wideband MIMO Antenna With Modified Ground Plane," Fourth International Conference on

Shivmanmeet Singh, Narwant Singh Grewal (2020), "A Review on Visible Light Communication", in Proceeding of 8th International

Navneet Kaur, "Temperature Dependence of Multi-fin FinFET for Bulk and SOI Substrate at 20nm Channel "Length", International

• The intelligent Dispenser is capable of detecting the distance from the person's hands with the help of IR sensors.

Inventive Systems and Control (ICISC), included in IEEE explore, pp. 553-557, 2020. DOI: 10.1109/ICISC47916.2020.9171054 Preeti Pannu, "UWB-MIMO Antenna With Stop Band behavior and High Isolation", IEEE International Women in Engineering (WIE) Conference on Electrical and Computer Engineering (WIECON-ECE), 2020.(in print)

Conference on Advancements in Engineering and Technology, (ICAET-2020)- BGIET, Sangrur, pp.- 88-93

 Navneet Kaur, "Performance evaluation of various hybrid modulation techniques transmitted by EDFA in radio-over-fibre communication", Journal of Information and Telecommunication, 4:3, 295-313, DOI: 10.1080/24751839.2020.1732766

• Kuldeepak Singh, Harsimranjit Singh Gill, "Chaos-based joint speech encryption scheme using SHA-1". Multimedia Tools and

 Gurpreet Kaur, Simranjit Kaur, B.S. Dhaliwal, Suman Pattnaik, "Low-Cost Fractal MIMO Antenna Design for ISM Band Using ANN", Book Chapter- Advances in computational intelligence techniques, Springer, DOI: https://doi.org/10.1007/978-981-15-2620-6 15

Congress on Sustainable Development through Engineering Innovations at GNDEC, Ludhiana from 17-19 September, 2020

 Kaur H., Narwant Singh Grewal (2020), "Visible Light Communication Indoor Systems - An Overview", in Proceeding of 8th International Conference on Advancements in Engineering and Technology, (ICAET-2020)- BGIET, Sangrur, pp. 121-125

• Gurpurneet Kaur, Sandeep Singh Gill and Munish Rattan (2020), "Design and Performance Analysis of FinFET Based SRAM Cell Stability", in Proc. Of Sustainable Development through Engineering Innovations (SDEI-2020), Ludhiana, India, Sept., 2020. [a part of book series Lecture note in Civil Engineering, springer)

• Gurpurneet Kaur, Sandeep Singh Gill and Munish Rattan (2020), "Artificial Intelligence Based Nanoscale FINFET Device ",

• Gurpurneet Kaur, Sandeep Singh Gill and Munish Rattan (2020), "Impact of Lanthanum Doped Zirconium Oxide (LaZrO2) Gate Dielectric Material On FinFET inverter", International Journal on Smart Sensing and Intelligent Systems, Vol.13, issue 1, pp.1-10,

Silicon-On-Insulator FinFETs", International Journal of Artificial Intelligence, Vol.18, number 1, pp.63-81, March, 2020

Events Organized (FDPs/Conferences/STCs/SDTs/Workshops/Webinars etc.)

Gurpurneet Kaur, Sandeep Singh Gill and Munish Rattan (2020), "Whale Optimization Algorithm for Performance Improvement of

Sr. Name of Event **Faculty Coordinator** Sponsor(s) Duration Date(s) No. Dr.Navneet Kaur

(Organizing Committee

Grewal (Coordinator)

(Organizing Committee

Dr. Harsimranjit Singh Gill

Dr. Harsimranjit Singh Gill

(Organizing Committee

Dr.Navneet Kaur

member)

member)

member), Dr.Narwant Singh

One day

One day

Three

days

Four

One day

One day

Two

Date(s)

24 January, 2020

14 April, 2020 -

18 April, 2020

20 April, 2020 -

24 April, 2020

27 April, 2020 - 1

11 May, 2020 - 15

18 May, 2020 - 22

May, 2020

May, 2020

5 June, 2020

May, 2020

Duration

One day

One

One

Week

One

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Week

One Day

Week

Week

Week

weeks

24-Jan-2020

11-May-2020

September

17-19, 2020

November 2-

2-Jul-2020

4-Feb-2020

January 6-

Organizing Institute

Guru Nanak Dev

Ludhiana

Engineering College,

NITTTR, Chandigarh

NITTTR, Chandigarh

Guru Nanak Dev

Ludhiana

Engineering College,

NITTTR, Chandigarh

NITTTR, Chandigarh

Colleges, Jaipur

Rajapalayam

P.A.C. Ramasamy raja

Polytechnic College,

17, 2020

TEQIP-III

TEQIP-III

TEQIP-III

TEQIP-III

TEQIP-III

TEQIP-III

4 TEQIP-III Security (Coordinator) weeks 27, 2020 Expert Lecture on "Procedural and substantial aspects of intellectual property Rights and its 5 Simranjit Kaur One day 30-Jan-2020 TEQIP-III

Simranjit Kaur

Daljit Singh

Daljit Singh

S7-1200 **Events Attended (FDPs/Conferences/STCs/SDTs/Workshops/Webinars etc.)**

Name of Event

Workshop on "E-

FDP on "Latest Wireless

FDP on "Low Power VLSI

FDP on "MOODLE

STC on "Image &

Applications"

Webinar on

Controller"

Embedded Processing"

STC on "8051 and its

Learning Management

and Computing

Technologies"

Design"

System"

Learning"

5	Kaur, Gurpurneet Kaur, Harminder Kaur(10124), Preeti Pannu, Harsimranjit Singh Gill, Shivmanmeet Singh, Harleen Kaur, Simranjit Kaur, Harminder Kaur	Webinar on modes of Teaching and Learning in Lockdown	One Day	11 May, 2020	Guru Nanak Dev Engineering College, Ludhiana
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Poornima institute of Webinar on "Digital 8 Gurjot Kaur Walia One Day 29 May, 2020 Engineering and Transformation" Technology, Jaipur Webinar on "Be Future Deepshika Group of 9 One Day Gurjot Kaur Walia 3 June, 2020

Leader-Post COVID-19"

"Programmable Logic

webinar cum workshop M.J.P. Rohilkhand university on "Performing and Gurjot Kaur Walia, Navneet 11 10 days 8-17 June, 2020 in association with IIT Kaur Designing experiments Roorkee on virtual platform

Gurjot Kaur Walia, Navneet Kaur, Gurpurneet Kaur, Guru Nanak Dev Preeti Pannu, Simranjit Webinar on "IPR and 12 One Day 2 July, 2020 Engineering College, Kaur, Diljit Singh, Harminder Patent Filing" Ludhiana

Kaur, Kuldeepak Singh, Harminder Kaur Gurjot Kaur Walia, Navneet Webinar on "Women Guru Nanak Dev 13 Kaur, Simranjit Kaur, Safety, Rights and One Day 9 July, 2020 Engineering College,

Harminder Kaur Ludhiana Gender Equality" STTP on "Artificial Poornima institute of 5 October, 2020 -Intelligence and 5G Six days 14 Gurjot Kaur Walia Communication 10 October, 2020

Engineering and Technology, Jaipur Technology"

Guru Nanak Dev 2 November, Webinar Lecture Series Four 2020-27 15 Gurjot Kaur Walia Engineering College, on "Infomation Security" weeks November, 2020 Ludhiana FDP on "Innovative

7 December, Guru Nanak Dev Pedagogical Gurjot Kaur Walia, Narwant Two 16 Engineering College, Methodologies and Tools 2020 - 21 Singh Grewal weeks for Effective Learning in December, 2020

Ludhiana **Engineering Education**" FDP on "Scilab One 14 April, 2020 -18 Navneet Kaur Programming" Week April, 2020

17 NITTTR, Chandigarh Gurpurneet Kaur, FDP on "Research One 25 May, 2020 to 18

Harsimranjit Singh, Gurinder Trends in VLSI Design" 29 May, 2020 Week Singh, Navneet Kaur

FDP on "Data Analytics One 18 May, 2020 to Navneet Kaur, Gurpurneet 19 Week 22 May, 2020 using Python"

NITTTR, Chandigarh NITTTR, Chandigarh Workshop on "Data GGN Khalsa College, Navneet Kaur One Day 22 June, 2020 Analysis using Python" Ludhiana

20 Nanotechnology for One 15 June, 2020 to 21 Gurpurneet Kaur Electronic and Photonic Week 19 June, 2020 devices (NanoDev2020)

PEC, Chandigarh Essential tools in One 25 June, 2020 to Gurpurneet Kaur NIT, Jalandhar Week 29 June, 2020 Optimization

31 August, 2020 Intelligent Systems and NIT, Uttarakhand and SLIET One Gurpurneet Kaur to 4 September, Networks (ISN-2020) Week Longowal 2020

FDP on Academic Harminder Kaur(10124), One 4 May 2020 to 8 leadership enhancement NITTTR, Chandigarh Preeti Pannu, Harminder Week May 2020 in Technical institutions Online Professional Three 21-23 December, Navneet Kaur **IIM Raipur** 2020 **Development Training** days

One day workshop on "3 Sponsored by TEQIP-III, Preeti Pannu Magical Steps to 16 July, 2020 Consultancy Cell, One day Teaching Excellence" G.N.D.E.C

One day workshop on IP NIT, Ropar, Punjab state Preeti Pannu, Simranjit Kaur 12 Feb, 2020 commercialization and One day council fior science and **Technology Transfer** technology, GoI webinar series on Mr. Deepesh Kumar Singh, Antenna Design & Preeti Pannu Two days 29-30 June, 2020 Application Engineer of Jyoti Simulation using CST Electronics, Ahmedabad Studio

Energy Efficiency in Francis Xavier Engineering 29 Preeti Pannu 30 June, 2020 One day Wireless Sensor Network College 1-day webinar on 3D printed Antennas: Design IMPS college of Engineering 30 3 July, 2020 Preeti Pannu One day Methodology & & Technology Challenges The art and challenges in

IMPS college of Engineering 31 Preeti Pannu designing printed antenna One day 14 July, 2020 & Technology arrays Webinar on Art of writing Guru Ghasidas 32 Preeti Pannu One day 31 Oct, 2020 Research Paper Vishwavidyalaya Training of Future Skills 24 February, Two Indian Institute of 33 Harsimranjit Singh Gill Technologies: Cyber 2020 - 06 March,

Security

Gill Energy Conservation

Neural Network and CNN

Modeling and Simulation

using MATLAB

Outcome Based

Online STC on

"Technological

2020 on SOFT

COMPUTING

Interventions Using

Wireless Communication

IEEE Virtual Talk Series-

National Level Online

Learning and Research

International Webinar

with Cloud Computing

and Industry 4.0"

National webinar on

Computing Services"

FDP on "Flexible and Wearable Antennas:

Recent advancements,

fabrication techniques

Webinar on "Importance

Rights for Academia and

of Intellectual Property

TEQIP-3 Sponsored 3

day workshop on "Train

Examination Reforms"

Funding Schemes for

Institution to support

startup and incubation

India Science Festival,

Double Your Profits with

The Low Hanging Fruits

Industry Academia

with Industry 4.0

TCS Online Webniar

Intenet of Things (IoT)

MAKING MENTORING **RELEVANT: NEP 2020**

Virtual Experiments in

Mechanical Engineering

Webinar on "How to write

a good research project

WEBINAR on the topic

"SWAYAM Awareness

Development Training

experimental methods in

electrochemistry and

advanced chemical

Miscellaneous (Lab Upgradation, Infrastructure augmentation etc.)

• Purchased Vivado System License (25 users) on 16.09.2019 in Computational Laboratory(Lab Incharge: Kuldeepak Singh)

• Gurjot Kaur delivered a Guest Lecture on "VHDL" on September 11,2020 for students of ECE and EEE of Gulzar Group of Institutes,

• Navneet Kaur delivered expert lecture on "Futuristic transistor structures in VLSI industry" on 10.06.2020 during one week IEEE

• Priyanka Sroya, 2nd year student secured 2nd position in Poster making contest held from 19-21 June, 2020 organized by Civil

• Harnoor Singh, 2nd year student got 3rd prize in Western Singing solo competition in Anand Utsav 2020 held on 5-7 March, 2020.

An online inter-class quiz competition for ECE students on Zoom platform held on 22-sept, 2020 for 2nd year students, 23-sept, 2020 for

Lecture series on Technology for Sustainability organized by Electrical Engineering Department, GNDEC Ludhiana

PERSPECTIVE

proposal "

Workshop"

Professional

under Tegip-III

workshop on

analytical

engineering

Symposium

The Trainees On

and applications"

Startups

activities

Pune

"Microsoft Azure: Cloud

on"Future of Technology

FDP on "Machine

Opportunities"

Curriculum Design

Webinar Lecture Series

on Information Security

and Management

weeks

One

One

week

One

Week

One

Week

Four

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One Day

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days

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Weeks

2020

04 May, 2020 - 08

11 May, 2020 - 15

18 May, 2020 - 22

01 June, 2020 -

2 November, 2020

18 May,2020 - 22

May,2020

6 June, 2020

15-June-2020 to

19-June-2020

18 June, 2020

31 May, 2020

12 october 2020-

16 october 2020

27 November,

9-11 Jan, 2020

28-30 Dec, 2020

10-11 Jan, 2020

24 January, 2020

18 April, 2020

5 June, 2020

21 Sept, 2020

2-6 Nov, 2020

31 May, 2020

9 July, 2020

20-30 Oct, 2020

23-25 November,

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23-27 November.

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- 27 November,

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05 June, 2020

May, 2020

May, 2020

May, 2020

Technology Roorkee

Engineering College,

Curriculum Development

Mechanical Engineering,

Curriculum Development

NITTTR, Chandigarh

Centre Department,

NITTTR, Chandigarh

Engineering College,

ECE Deptt of NITTTR,

IEEE AcSIR-CSIO Student

SAPTHAGIRI COLLEGE OF

Department of Computer

under the aegis of MIC IIC

Innovation cell & IQAC cell

University, Khiala, Jalandhar

"Shivajirao Kadam Institute

Management, Indore (M.P.)"

AICTE training and learning

(ATAL) academy & NITTTR,

IPR CEII, Guru Nanak Dev

Engineering College,

KLE Technological

University Huballi,

Opex Accelerator Pvt Ltd.

PHD House, Sector-31,

Science & Engineering,

of Sant Baba Bhag

of Technology &

Chandigarh

Ludhiana

Karnataka

IISER, Pune

Chandigrah

Zoom Meet

Webex Meet

IIT Bombay

Kolkata

IIT Guwahati

university. Patiala

Guru Nanak Dev

Ludhiana

Ujjain

IIM, Kashipur

Engineering College,

NITTTR Bhopal,

Chandigarh, Chennai,

Department of ECE, punjabi

Ujjain enf=gineering college,

Branch, Chandigarh

ENGINEERING

BENGALURU-57

Guru Nanak Dev

Ludhiana

Chandigarh

Guru Nanak Dev

Centre, NITTTR,

Chandigarh

Ludhiana

• Mandip Dhaliwal, final year student got placed in Samsung Company with a package of 12Lakhs. IETE STUDENT FORUM

3rd year students and 24-sept, 2020 for final year students.