e-Vision *A quarterly newsletter of the Department of Electronics and Communication Engineering, GNDEC*
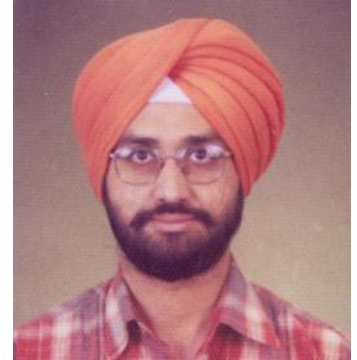
Message by HOD

The Department of Electronics and Communication Engineering, established in 1981, is one of the most dynamic departments of Guru Nanak Dev Engineering College. It was the first major diversification initiative by the college, 25 years after its establishment. The 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. Since, its inception, the department has been giving a great emphasis on the overall development and improvement of its students and staff.

IETE Students' Forum (ISF) of the department of Electronics and Communication Engineering regularly organises technical and non technical events. Under IETE-SF banner, the department also organizes a technical symposium "e-Vision" every year, in which various events like paper presentation, project presentation, technical collage making, quiz competition etc. are conducted.

IETE Student forum organised a one day Technical Symposium **e-vision'16** on 4th Nov, 2016 sponsored by TEQIP-II. The Theme of this symposium was **"Role of electronics in making smart city project a success"**, catering the different aspects related to improvement in existing systems, innovation and development. The prime intent behind this event is to enhance the students' technical merit and implant the habit of deeper learning and research. Also, it also offered a wide range of theoretical aspects, methodologies and applications in the field of Electronics and Communication Engineering and the related branches.

Dr. Harish Kumar Sardana, Chief Scientist from CSIR-CSIO, Chandigarh inaugurated the function as Chief Guest. Dr. M. S. Saini, Director, GNDEC and Brig. Mastinder Singh, Chairman of "The Institution of Engineers (India)", Ludhiana also graced the function with their presence. The guests were welcomed by Dr. S.S. Gill, HOD, Department of ECE. On this occasion, Dr. Munish Rattan, convenor of e-vision'16, said that the symposium will pave ways to a bigger and brighter future of students in the field of ever-changing world of technology.

Glimpses of e-Vision'16

Dignitaries Releasing Proceedings of eVision'16

Dr. Harish Kumar Sardana, Chief Scientist from CSIR-CSIO, Chandigarh

Dr. M. S. Saini, Director, GNDEC

Dr. S. S. Gill, HOD (ECE)

Standing L to R: Dr. M.S Saini, Dr. Harish Kumar Sardana, Dr. S. S. Gill, Prof. Arvind Dhingra

Students from various department of GNDEC participated actively in events like Paper presentation, Project display, Collage making, Quiz etc. Nearly 300 students participated in various events showcasing their talent

and knowledge in domains like technical writing, circuit making etc. Also prizes were given to all the winners and participation certificate to all the participants.

Apart from this symposium, department also motivates its students to participate in various national and international technical and cultural events, symposiums etc.

Seminar organised

The Department has conducted a **TEQIP-II** sponsored National Seminar jointly with Department of MBA in association with **PCMA (Punjab Commerce and Management Association)** on the theme ***Make in India: Challenges in Manufacturing and Engineering Industry**** on **23rd September, 2016**.

Make in India is an initiative launched by the Government of India to encourage multi-national, as well as national companies to manufacture their products in India. It was launched by Prime Minister Narendra Modi on 25 September 2014. The major features of this idea are new initiatives, FDI, IPRs & Manufacturing.

In the seminar, the faculty and students of different National Organizations were invited to contribute or present their research papers related to Marketing and Financial issues in Manufacturing and Engineering Industries, technological advancement, infrastructural development and human resource developments, Role of Education and Innovations in Building India, Digital Entrepreneurship, Challenges before Women Entrepreneurs, etc.

The seminar was inaugurated by Dr. Prem Kumar (Vice-Chancellor GNA University) and Mr. Prem Ojha (Chief Operating Officer Videocon Ltd.). Dr. M.S. Saini (Director GNDEC), Dr. S. S. Gill (HOD, ECE Deptt., GNDEC) and Dr. Sukhdev Singh (HOD, MBA Deptt., GNDEC) welcomed the worthy guests.

Dr. Ashwani Bhalla (Executive Vice-President PCMA) and other PCMA members were also present to grace this event. Dr. Sukhdev Singh served as Seminar-Chair for this event and Dr. Sandeep Singh Gill as Seminar Co-Chair. The keynote address was delivered by Mr. Prem Ojha in which he summarized the core revelation of the event.

Sitting L to R: Dr. Prem Kumar, Dr. M. S. Saini, Kumar, Mr. Prem Ojha, Dr. Ashwani Bhalla, Dr. Sukhdev Singh during inauguration of the event

The event was divided into two sessions for paper presentation. The research papers related to Challenges in Engineering Industry were included in Session I and Challenges in Manufacturing, Marketing and Financial sectors were in Session II. Staff and students worked with the great enthusiasm in organizing this seminar.

The prime intent behind this seminar was to provide an opportunity to the participants to learn and appreciate the technology options, challenges and opportunities in Engineering as well as Manufacturing industries. There were around 60 Faculty members and Research Scholars from different organizations who presented their research on new ideas, products, or theories related to the theme of seminar.

Dignitaries releasing Proceedings of National Seminar

Dr. Prem Kumar gave the brief overview about the seminar. He threw light on how new technology and challenges in industries have revolutionized the world. Mr. Prem Ojha presented the enormous opportunities that India offers as a base for manufacturing, design, research & development.

There were expert talks by Dr. Dilbag Singh (Corporate Trainer, SKD Learning Pvt. Ltd.) on the topic "Human resource challenges in Make in India" and Mr. Sanjeev Budhiraja (CEO Cheema Spintex) on the topic "Challenges and opportunities in Textile industry". They graced the event with their wonderful philosophical thoughts.

Expert talk by Dr. Dilbag Singh

Expert talk by Mr. Sanjeev Budhiraja

Presentation Session

In Valediction session, Mr. Sanjeev Budhiraja had distributed certificates of honour to the participants. Organizing Secretaries Dr. Baljeet Kaur (Department of ECE) and Prof. Amanjot Gill (Department of MBA), GNDEC gave formal vote of thanks to all guests, faculty and participants.

Collaborations/ MOU's signed by the Department and Institute

The department has set up an industry sponsored **Advanced Communication Laboratory** in collaboration with **Videocon Telcom**, for promoting industry institute interaction for the mutual benefit of both, the institution and organisation involved. It will also encourage the collaboration in project proposals and research activities of mutual interest. The inaugural ceremony was held on 9th Dec, 2016.

Jathedar Kirpal Singh Badungar, President S.G.P.C. and Mr. Arvind Bali, Director and CEO Videocon Telecom inaugurated the laboratory. S. Gurcharan Singh (Director, NSET), trustees of NSET and officials of Videocon Telcom were also present to grace this occasion. Dr. M. S. Saini (Director, GNDEC) and Dr. S. S. Gill (HOD, ECE Deptt., GNDEC), welcomed the worthy guests.

Jathedar Kirpal Singh Badungar, President S.G.P.C., congratulated the staff and students and appreciated the effort put by the institute in the direction of industry-institute interaction.

Dr. M. S. Saini (Director, GNDEC) in his address said that this collaboration shall give a fillip to advanced communication research and knowledge dissemination. He also highlighted that this initiative will help in filling the gap between institute and industry and will give an industry focussed shape to classroom teaching.

Dr. S. S. Gill and officials from Videocon Telcom educated the guests and audience about the functionality and importance of this high-tech advanced communication lab. Various aspects of GSM architecture, including the general call flow, call forwarding, handoff, traffic management, latest technologies like wifi etc. were discussed.

The department has also signed an agreement with Texas Instruments for setting up Texas Instruments (TI) Innovation Centre at GNDEC Ludhiana.

Conferences Organised

Department has also organised International Conference named "Soft Computing Applications in Wireless Communication (SCAWC-17)" which has reached to a good success. The prime objective of this conference was to provide an interdisciplinary forum for engineers, researchers and student technocrats to discuss and promote research & technology transfer on Soft Computing Applications in Wireless Communication.

SCAWC 2017 was inaugurated by **Jathedar Kirpal Singh Badungar, President S.G.P.C**., on **March 9, 2017.** In its three day deliberations, the conference witnessed the presence of researchers, engineers, students and practitioners from all over the world and served as an excellent platform for promoting exchange of research and development ideas.

SCAWC'17 is the first international conference organized by Department of Electronics and Communication Engineering technically co-sponsored by Institute of Doctors Engineers and Scientists - (IDES) with major sub

themes like multi-antenna communication, RF and Microwave Communication, Free space optical communication, VLSI/SOC/Embedded Systems for Communication Application etc.

The Proceedings of the conference were published by McGraw-Hill Education and were released by dignitaries during inaugural ceremony. Out of one fifty papers received, seventy six academicians/research scholars were invited to contribute research papers which were presented during different parallel sessions of the conference. Experts having affiliations with various renowned national and international organisations presented their talks and chaired technical sessions of the conference.

Er. H. S. Jatana (Divisional Head VLSI, Semiconductor Laboratory (SCL)); Dr. Lillie Dewan, NIT Kurukshetra; Dr. G.S. Walia, Scientist 'E' , DRDO Delhi; Er. Bhupinder Verma, Additional Dean and Head School of Electronics and Electrical Engg at Lovely Professional University Phagwara Punjab; Dr. Sumeru Sharma, Govt. Engg College, Jammu and Dr. Richa Bhatia Associate Professor at Ambedkar Institute of Advanced Communication Technologies and Research of Indraprastha University Delhi, served as session chair for various sessions held during three days of the conference.

In Valediction session, Dr. M. S. Saini (Director, GNDEC) and Dr. S. S. Gill (Conference chair and H.O.D. (ECE)) distributed certificates of honour to all the participants.

The conference was sponsored by TEQIP-II; DRDO, New Delhi; CSIR, New Delhi; Testing & Consultancy Cell, GNDEC, Ludhiana; Neotel Sales & Services, Chandigarh; Gigabyte Networks Pvt. Ltd., Ludhiana; Silicom Electronics Pvt. Ltd., New Delhi and Connect Broadband. On first day of conference a live concert by Dr. Mamta Joshi (National Award Winning Sufi Singer) was also organised during evening in college auditorium.

Workshop Organised

The department organized a workshop on "Effective Teaching Pedagogy and Research Methodology" from March 17, 2017 to March 18, 2017 in vision to go through the effective teaching strategies. The program was interdisciplinary in nature and was specifically designed for all Engineering Sciences & Management PG students and faculty. It was aimed at imparting skills for effective teaching pedagogy and research methodology.

Dr. Vidhu Mohan, Punjab University Chandigarh delivered an expert talk on Effective Teaching and discussed about Modern Teaching Tools. Dr. J. S. Saini, D. C. R. Univ. of Sci. and Tech. Murthal, Sonipat presented a lecture on Research design in context of engineering problems. Several other topics related to effecting teaching pedagogy were also talked about.

Educational tours and Industrial visits

Every session, the department organises educational tours or industrial visits for its students. This not only acts as a source of revival for students but also gives them a chance to learn and enjoy at the same time. This year tours to Doordarshan Kendra (Kasauli), All India Radio Station(Kasauli) and All India Radio Station, (Dharamshala) were organised for 2nd year, 3rd year and Final year B.Tech students. Also an industrial visit to SCL, Mohali was organised for M.Tech (ECE) students on 16th March, 2017.

List of Journal Publications by ECE Faculty - Session (July, 2016- June, 2017)

S No.	Name of Author(s)	Title of Paper	Name of the Journal	Volume No. / Issue No./ Page numbers/ ISSN	Month, Year of Publication
1	Harsimranjit Singh Gill, Kamaljit Singh Bhatia and **Sandeep Singh Gill**	Analysis of secured Optical Orthogonal Frequency Division Multiplexed System	International Journal of Optical Communications	pp. 1-5, ISSN (Online) 2191-6322, ISSN (Print) 0173-4911	August, 2016
2	**Sandeep Singh Gill ,** Jaidev Kaushik, **Navneet Kaur**	Performance Analysis of 20 nm Pentagonal and Trapezoidal NanoWire Transistor with Si and Ge Channel	International Journal of Circuits and Electronics	Vol. 1, pp. 174-184, ISSN: 2367-8879	October, 2016
3	**Navneet Kaur, Sandeep Singh Gill and Munish Rattan**	Performance Analysis of Dual Material Gate (DMG) Symmetric Dual-k Spacer (SDkS) Tri-Gate FinFET	The Institution of Engineers (India), Electronics and Telecommunication Engineering Division Board, Annual Technical Volume	pp.98-102, ISBN : 978-81-932567-1-8	24-Oct-16

4	**Gurpurneet Kaur Sandeep Singh Gill Munish Rattan**	Design and Electrical Analysis of 3-fin SOI FinFET for Si, SiGe, GaAs and InGaAs Channel Materials	The Institution of Engineers (India), Electronics and Telecommunication Engineering Division Board, Annual Technical Volume	pp.98-102, ISBN : 978-81-932567-1-8	24-Oct-16
5	Satyam Shukla, **Sandeep Singh Gill, Navneet Kaur**	Comparative Simulation Analysis of Process Parameters variations in 20nm Triangular FinFET	Active and Passive Electronic Components	pp.1-8, Vol 2017	2017
6	**Jasmeet Kaur**, **Sandeep Singh Gill, Navneet Kaur**	Optimization of CMOS Repeater Driven Interconnect RC line using Genetic Algorithm	Journal of Shanghai Jiaotong University (Science) - Springer	Vol. 22, Issue 2, pp. 167-172, ISSN: 2367-8879	March 2017
7	Chatarpratap Singh Sohi, Karamjeet Singh, Davinder K. Thakur, **Gurpurneet Kaur**	Design and Performance Analysis of different shapes of Trigate FinFET at 20nm	International Journal of Innovative Research in Electrical, Electronics, Instrumentation and Control Engineering	Vol. 4, Issue 10, pp. 72-77, ISSN (Online) 2321 – 2004, ISSN (Print) 2321 – 5527	October, 2016
8	Aakshi Sharma, **Sapanjot Kaur,** Rajan Miglani, Jagjit Singh Malhotra	Implementation of all optical full-addition module based on SOA non linearity	Journal of Optics	Vol. 46, No. 1, pp. 43 – 50	March, 2017

List of Conference Publications by ECE Faculty - Session (July, 2016- June, 2017)

S. No.	Name of Author(s)	Title of Paper	Name of Conference	Place of Conference	Date of Conference	National / International
1	**Sandeep Singh Gill ,** Jaidev Kaushik, **Navneet Kaur**	Performance Analysis of 20 nm Pentagonal and Trapezoidal NanoWire Transistor with Si and Ge Channel	7th International Conference on NANOTECHNOLOGY (NANOTECHNOLOGY '16)	Rome, Italy	October 21-23, 2016	International
2	J. Kaur, **Balwinder Singh Dhaliwal** and **Sandeep Singh Gill**	Handwritten Gurmukhi Character Recognition using PSONN	International Conference on Advancements in Engineering & Technology (ICAET-2016)	Sangrur, Punjab, India	November, 2016	International
3	**Balwinder Singh Dhaliwal**, Jaspreet Kaur and **Sandeep Singh Gill**	Offline Handwritten Gurmukhi Character Recognition using Particle Swarm Optimized Neural Network	Fourth International Conference on Recent Trends in Communication and Computer Networks, (ComNet 2016)	Bangalore, India	November, 2016	International
4	Raman Kumar and **Sandeep Singh Gill**	Design and Evaluation Of Charge Pump	IEEE PIICON 2016 7th Power India International Conference	Govt. Engineering College Bikaner, Rajasthan	November 25-27, 2016	International
5	**Navneet Kaur, Sandeep Singh Gill and Munish Rattan**	Electrical Characteristics of 14nm SiC-3C Channel SOI FinFET with Dual-k Spacer	IEEE PIICON 2016 7th Power India International Conference	Govt. Engineering College Bikaner, Rajasthan	November 25-27, 2016	International
6	Rohit Moudgil, **Sandeep Singh Gill**	Tuned Fuzzy Approach For Designing Of Pid Controller	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
7	Pulkit Jain, **Sandeep Singh Gill**	A Fuzzified Router for Multi-objective Global Routing in VLSI Physical Design	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
8	Sudarshana Jilowa, **Sandeep Singh Gill, Gurjot Kaur Walia**	Performance Analysis of Symmetric and Asymmetric 4H-SiC Based Double Gate MOSFET	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International

9	Harsimranjit Singh Gill, **Sandeep Singh Gill,** Kamaljit Singh Bhatia	Future Generation of Passive Optical Networks	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
10	Sanamdeep Singh, **Sandeep Singh Gill, Navneet Kaur**	Design and Performance Comparison of Symmetric and Asymmetric Underlap DualK Spacer FinFETs	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
11	Rohin Gupta and **Sandeep Singh Gill**	Soft Computing Techniques: A Review	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
12	**Gurpurneet Kaur, Sandeep Singh Gill, Munish Rattan**	Design and Performance Analysis of 20nm 5-Fin SOI FinFET for different channel materials	IEEE International Conference on Computing, Communication and Automation (ICCCA-2017)	School of Computing Science and Engineering, Galgotias University, UP, India	May 5-6, 2017	International
13	Pawanjot Kaur, **Ameeta Seehra**	Traffic Splitting in Hybrid Virtual-MIMO System in Wireless Sensor Networks	IEEE 4rth International Conference on Computing for Sustainable Global Development (INDIACom-2017)	Bharati Vidyapeeth's Institute of Computer Applications and Management, New Delhi	March 1-3, 2017	International
14	Kirandeep Kaur, **Ameeta Seehra**	Enhancement of network life time using fuzzy based Cluster Head Selection Algorithm	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
15	Sarpreet Kaur, **Narwant Singh Grewal** and **Sapanjot Kaur Sandhu**	Particle swarm optimization based radio over fiber system with optimized CNR and Bandwidth	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
16	Jaskaran Singh Phull, **Narwant Singh Grewal**	GNU Radio based implementation of Audio Transmission using Narrowband Frequency Modulation	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
17	Harjot Kaur Gill, Harmeet Singh Gill and **Balwinder Singh Dhaliwal**	Performance Analysis of OFDM-ODSB, OFDM-OSSB and OFDM-OVSB FSO Communication System by Employing Spatial Diversity	Fourth International Conference on Recent Trends in Communication and Computer Networks, (ComNet 2016)	Bangalore, India	November 12, 2016	International

			International Conference	Guru Nanak		
18	Jayant Chawla, **Balwinder Singh Dhaliwal, Simranjit Kaur**	An Adaptive Parameter Analysis Approach for Effective WSN Localization	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
19	Kamaldeep Kaur and **Balwinder Singh Dhaliwal**	Analysis of MIMO Antenna using Artificial Neural Network	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
20	Sahajpal Singh, **Balwinder Singh Dhaliwal**	Analysis of Hybrid fractal Antenna using Artificial Neural Network	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
21	Ramandeep Kaur**, Simranjit Kaur Josan, Balwinder Singh Dhaliwal**	Analysis of a Pentagon Fractal Antenna Using Artificial Neural Network	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
22	**Simranjit Kaur Josan** and **Balwinder Singh Dhaliwal**	Analysis of Elliptical Microstrip Patch Antenna Using Neural Network Ensemble	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
23	Mandeep Singh, **Balwinder Singh Dhaliwal**	Quad Staircase Shaped Microstrip Patch Antenna byusing ANN	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
24	Suman, H K Sardana and **Balwinder Singh Dhaliwal**	Radio Frequency Radiation Impact Analysis on ECG and HRV: A Review	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
25	Kiranjot Kaur, **Munish Rattan** and Manjeet Singh Patterh	Bat Algorithm based Optimization of a Multiuser Cognitive Radio System over Nakagami m Fading Channels	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
26	Gaurav Gupta, **Munish Rattan, Jasmeet Kaur**	A Review on Efficient data transmission in Vehicular AD-HOC network using Cognitive Radio	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
27	Deepak Papneja, **Munish Rattan** and **Jasmeet Kaur**	Multi-Coset Sampling based Wideband Spectrum Sensing in Cognitive Radio using Greedy Algorithm	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International

28	Ravinderjit Kaur, **Munish Rattan**	Design and Optimisation of Radar Absorbing Material with the help of resistor FSS	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
29	Amrit Singh, **Baljeet Kaur**	Cost Effective Approach for Suppression of Four Wave Mixing in WDM System	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
30	Avneet Kaur, **Baljeet Kaur** and **Kuldeepak Singh**	Next Generation Optical Access Networks: A Review	Proceedings of 4th International Conference on Advancements in Engineering & Technology (ICAET-2016) ISBN No. 978-81-924893-1-5		December, 2016	International
31	Prabhjot Kaur, **Baljeet Kaur**	Four Code Keying in OCDMA	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
32	Divnoor Kaur and **Baljeet Kaur**	Implementation of a seamless bidirectional communication link for longhaul networks on optical fiberfree space optics system	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
33	Rajwinder Kaur, **Harminder Kaur, Jaspreet Kaur,**	HOP optimization in Massively Dense Wireless Sensor Network	IEEE First International Conference on Power Electronics, Inteeligent Control and Energy	Delhi Technologic al University system, Delhi, India	July 4-6, 2016	International
34	Harpreet kaur, **Harminder Kaur**	New Energy Saving Routing Protocol With Modified Power Consumption Optimization In MANET	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
35	Gaganpreet Kaur, Ashish Thakur, **Harminder Kaur**	Implementation of File Transfer With GnuRadio Tool on SDR Platform	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
36	**Harminder Kaur**, Jagjit Kaur	Gateway Based Design of Network Model for WSN	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International

37	Shyna Kalra, **Harminder Kaur**	Improving Energy Efficiency of MANETs using protocol driven by CPE	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
38	**Harminder Kaur,** Harsimranjit Kaur, Jagjit Kaur	DWDM System Simulation of Design for Different Channel Spacing Using PDCF & PSMF	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
39	Samjot Kaur Aujla, **Navneet Kaur** and **Gurjot Kaur Walia**	Effective Detection of Glaucoma from Fundus Images using Computational Intelligence Technique	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
40	**Gurjot Kaur,** Kanwarpreet Kaur, **Chahat Jain, Navneet Kaur** and **Gurpurneet Kaur**	Amalgamation of NNE and Jaya Algorithm to extract the abnormal part in MRI Images	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
41	Kanwarpreet Kaur, **Gurjot Kaur, Jaspreet Kaur,** Mandeep Kaur	Detection of Brain Tumor from MRI Images: A Review Student, GNDEC, Ludhiana, India	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
42	**Gurpurneet Kaur**, Ripjeet Singh, **Gurjot Kaur Walia**	Performance Analysis of Triangular Gateall around Nanowire FETs with Si and GaAs as Channel Materials for Different Temperature values	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
43	Damandeep Kaur, Navpreet Singh Samra, **Gurjot Kaur**	Methods Of Malaria Diagnosis Using Image Processing	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
44	Saroop Singh, **Chahat Jain**, Nancy Gupta, **Gurjot Walia**	Prediction Of Resonant Frequency Of Spiralled Swastika Slotted Antenna Using ANNBFO For Wlan Applications	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
45	Ripjeet Singh, **Gurpurneet Kaur, Jasmeet Kaur**	Design and Performance Analysis of Junctionless Nanowire Transistors based Inverters Using Si and SiGe as Channel Material	IEEE 4rth International Conference on Computing for Sustainable Global Development (INDIACom-2017)	Bharati Vidyapeeth's Institute of Computer Applications and Management, New Delhi	March 1-3, 2017	International

46	Gurleen Kaur, **Gurpurneet Kaur** and Manpreet Singh Brar	Design and Performance Analysis of 20nm 7-Fin SOI FinFET	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
47	RK Singh, **Chahat Jain**	Eigen value and transmission characteristics of a disc loaded interaction structure for a Gyro-TWT amplifier	11th International conference on Industrial and Information systems	IIT, Roorkee	Dec 3-4,2016	International
48	Sandeep Singh and **Chahat Jain**	Design and analysis of the fractal antenna over mushroom type AMC in the vicinity of 25 GHz	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
49	Shashi Bhushan Kotwal, **Chahat Jain**	RSSI Based 3D Localization in Wireless Sensor Networks	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
50	R. K. Singh and **Chahat Jain**	EM Analysis of VaneLoaded RF Interaction Structure for its Potential Application in Gyrotrons	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
51	**Chahat Jain**	Metamaterial Cloaking: Making the invisibility through the visible	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
52	Sukhjeet Kaur, Ravneet Kaur, **Harminder Kaur, Kuldeepak Singh**	New Technologies of Optical wireless communications and their Applications	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
53	Ravneet Kaur, Sukhjeet Kaur, **Harminder Kaur**	An Approach to Study the Applications of Soft Computing	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
54	Shruti Sharma, Ravneet Kaur Gill, **Harminder Kaur**	Green Wireless Communication-Need & Approaches For Energy Efficient Wireless Communication	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
55	Harkirandeep Kaur, **Kuldeepak Singh**	Performance Analysis of MIMO-OFDM System for Fading Channels	International Conference on Soft Computing Applications in Wireless Communication (SCAWC-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International

56	Gurpreet Kaur, **Kuldeepak Singh**	A Robust Adaptive Beamforming Algorithm using Neural Network against a large Mismatch	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
57	Avinash Kaur, **Kuldeepak Singh**	Segmentation in the retinal blood vessel and recognition using the Gabor filter	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
58	Jasleen kaur, **Kuldeepak Singh**	Performance Comparison of NRZ, RZ And CSRZ in Isowc System For Different Optical Windows And Power Levels At 10 Gbps	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
59	Mansi Girdhar, **Kuldeepak Singh, Daljeet Singh**	Non Orthogonal Multiple Access in 5G	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
60	Amandeep Kaur, **Jasmeet Kaur**, Nishu kansal	D-EPAR: Distance-Efficient Power Aware Routing Protocol for MANETs	2nd International Conference on Next Generation Computing Technologies (NGCT-2016)	Dehradun, India	October 14-16, 2016	International
61	**Jasmeet Kaur**	Use of Evolutionary Algorithm approaches in Analog Integrated Circuit Design	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
62	Srishti, **Jasmeet Kaur**	Device Level Variability in fin shapes for 14 nm FinFET technologies	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
63	ShwetaVij , **Naazia Makkar, SapanjotKaur**	Performance Analysis Of Ofdma, Mimo And ScFdma Technology In Uplink And Downlink Channels In 4g Lte Networks	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
64	Sheenam Rattan, **Jaspreet Kaur**	Artificial Neural NetworkBased System for Lung Nodules for Early Detection of Lung Cancer	International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International

S.No.	Name of Faculty	Name of Workshop/ STTP/ FDP/ STC	Name of Organizing Department/ Institute	Place / Venue	Name of Sponsoring Organization/ Department	Date	Duration
65	Surinder Kumar, **Jaspreet Kaur**	Meta-Material Properties and Application Design		International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
66	Sumandeep Kaur, **Daljit Singh**	Early Detection and Classification Of Diabetic Retinopathy using K-Means Color Compression and Fuzzy Logic		International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International
67	**Tarandeep Singh**	IOT Based Smart Waste Management Framework		International Conference on Soft Computing Applications in Wireless Communication (SCAW C-2017)	Guru Nanak Dev Engineering College, Ludhiana	March 9-11, 2017	International

List of Faculty as Participant in Workshop/STTP/FDP/STC- Session (July, 2016- June, 2017)

S.No.	Name of Faculty	Name of Workshop/ STTP/ FDP/ STC	Name of Organizing Department/ Institute	Place / Venue	Name of Sponsoring Organization/ Department	Date	Duration
1	Sandeep Singh Gill	**National Seminar** on "Make In India: Challenges in Manufacturing and Engineering Industry"	Dept. of ECE and MBA, Guru Nanak Dev Engineering College Ludhiana, Punjab in association with PCMA	Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	September 23, 2016	One day
2	Sandeep Singh Gill	**Workshop** on "Effective Teaching Pedagogy and Research Methodolgy"	Dept. of Electronics & communication Engg.,GNDEC, Ludhiana	GNDEC, Ludhiana	**Organization : TEQIP-II**	March 17-18, 2017	Two days
3	Ameeta Seehra	**National Seminar** on "Make In India: Challenges in Manufacturing and Engineering Industry"	Dept. of ECE and MBA, Guru Nanak Dev Engineering College Ludhiana, Punjab in association with PCMA	Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	September 23, 2016	One day

4	Balwinder Singh Dhaliwal	**National Seminar** on "Make In India: Challenges in Manufacturing and Engineering Industry"	Dept. of ECE and MBA, Guru Nanak Dev Engineering College Ludhiana, Punjab in association with PCMA	Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	September 23, 2016	One day
5	Narwant Singh	**Workshop** on "Effective Teaching Pedagogy and Research Methodolgy"	Dept. of Electronics & communication Engg.,GNDEC, Ludhiana	GNDEC, Ludhiana	**Organization : TEQIP-II**	March 17-18, 2017	Two days
6	Narwant Singh	**National Seminar** on "Make In India: Challenges in Manufacturing and Engineering Industry"	Dept. of ECE and MBA, Guru Nanak Dev Engineering College Ludhiana, Punjab in association with PCMA	Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	September 23, 2016	One day
7	Munish Rattan	**Workshop** on "Effective Teaching Pedagogy and Research Methodolgy"	Dept. of Electronics & communication Engg.,GNDEC, Ludhiana	GNDEC, Ludhiana	**Organization : TEQIP-II**	March 17-18, 2017	Two days
8	Munish Rattan	**National Seminar** on "Make In India: Challenges in Manufacturing and Engineering Industry"	Dept. of ECE and MBA, Guru Nanak Dev Engineering College Ludhiana, Punjab in association with PCMA	Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	September 23, 2016	One day
9	Harminder Kaur	National Seminar on "Make In India: Challenges in Manufacturing and Engineering Industry"	Dept. of ECE and MBA, Guru Nanak Dev Engineering College Ludhiana, Punjab in association with PCMA	Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	September 23, 2016	One day
10	Harminder Kaur	**Workshop** on "Effective Teaching Pedagogy and Research Methodolgy"	Dept. of Electronics & communication Engg.,GNDEC, Ludhiana	GNDEC, Ludhiana	**Organization : TEQIP-II**	March 17-18, 2017	Two days
11	Gurjot Kaur	**National Seminar** on "Make In India: Challenges in Manufacturing and Engineering Industry"	Dept. of ECE and MBA, Guru Nanak Dev Engineering College Ludhiana, Punjab in association with PCMA	Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	September 23, 2016	One day

12	Gurjot Kaur	**Workshop** on "Effective Teaching Pedagogy and Research Methodolgy"	Dept. of Electronics & communication Engg.,GNDEC, Ludhiana	GNDEC, Ludhiana	**Organization : TEQIP-II**	March 17-18, 2017	Two days
13	Gurjot Kaur	**QIP STC** on "Research Skills and Methods in Computational Sciences with Engineering Applications"	Dept. of Applied Science & Engg. and Mathematics, IIT Roorkee, Uttarakhand	IIT Roorkee, Uttarakhand	**Organization : AICTE**	June 12-16, 2017	One week
14	Navneet Kaur	**STC** on "Nanotechnology for Electronic and Photonic Devices (NanoDev-2016) "	Electronics & Communication Engineering Department, PEC University of Technology, Chandigarh	PEC University of Technology, Chandigarh	PEC University of Technology, Chandigarh	July 11-16, 2016	One week
15	Navneet Kaur	**National Seminar** on "Make In India: Challenges in Manufacturing and Engineering Industry"	Dept. of ECE and MBA, Guru Nanak Dev Engineering College Ludhiana, Punjab in association with PCMA	Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	September 23, 2016	One day
16	Navneet Kaur	**Workshop** on "Effective Teaching Pedagogy and Research Methodolgy"	Dept. of Electronics & communication Engg.,GNDEC, Ludhiana	GNDEC, Ludhiana	**Organization : TEQIP-II**	March 17-18, 2017	Two days
17	Navneet Kaur	**QIP STC** on "Research Skills and Methods in Computational Sciences with Engineering Applications"	Dept. of Applied Science & Engg. and Mathematics, IIT Roorkee, Uttarakhand	IIT Roorkee, Uttarakhand	**Organization : AICTE**	June 12-16, 2017	One week
18	Gurpurneet Kaur	**STC** on "Nanotechnology for Electronic and Photonic Devices (NanoDev-2016) "	Electronics & Communication Engineering Department, PEC University of Technology, Chandigarh	PEC University of Technology, Chandigarh	PEC University of Technology, Chandigarh	July 11-16, 2016	One week
19	Gurpurneet Kaur	**National Seminar** on "Make In India: Challenges in Manufacturing and Engineering Industry"	Dept. of ECE and MBA, Guru Nanak Dev Engineering College Ludhiana, Punjab in association with PCMA	Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	September 23, 2016	One day

20	Gurpurneet Kaur	**Workshop** on "Effective Teaching Pedagogy and Research Methodolgy"	Dept. of Electronics & communication Engg.,GNDEC, Ludhiana	GNDEC, Ludhiana	**Organization : TEQIP-II**	March 17-18, 2017	Two days
21	Chahat Jain	**STC** on " Efficient antennas and guided systems"	E & ECE Department IIT, Kharagpur	IIT, Kharagpur	**Organization : QIP**	June 20-July 2,2016	Two week
22	Chahat Jain	**National Seminar** on "Make In India: Challenges in Manufacturing and Engineering Industry"	Dept. of ECE and MBA, Guru Nanak Dev Engineering College Ludhiana, Punjab in association with PCMA	Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	September 23, 2016	One day
23	Chahat Jain	**Workshop** on "Effective Teaching Pedagogy and Research Methodolgy"	Dept. of Electronics & communication Engg.,GNDEC, Ludhiana	GNDEC, Ludhiana	**Organization : TEQIP-II**	March 17-18, 2017	Two days
24	Chahat Jain	**QIP STC** on "Research Skills and Methods in Computational Sciences with Engineering Applications"	Dept. of Applied Science & Engg. and Mathematics, IIT Roorkee, Uttarakhand	IIT Roorkee, Uttarakhand	**Organization : AICTE**	June 12-16, 2017	One week
25	Harminder Kaur	**National Seminar** on "Make In India: Challenges in Manufacturing and Engineering Industry"	Dept. of ECE and MBA, Guru Nanak Dev Engineering College Ludhiana, Punjab in association with PCMA	Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	September 23, 2016	One day
26	Harminder Kaur	**Workshop** on "Effective Teaching Pedagogy and Research Methodolgy"	Dept. of Electronics & communication Engg.,GNDEC, Ludhiana	GNDEC, Ludhiana	**Organization : TEQIP-II**	March 17-18, 2017	Two days
27	Kuldeepak Singh	**National Seminar** on "Make In India: Challenges in Manufacturing and Engineering Industry"	Dept. of ECE and MBA, Guru Nanak Dev Engineering College Ludhiana, Punjab in association with PCMA	Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	September 23, 2016	One day

28	Kuldeepak Singh	**Workshop** on "Effective Teaching Pedagogy and Research Methodolgy"	Dept. of Electronics & communication Engg.,GNDEC, Ludhiana	GNDEC, Ludhiana	**Organization : TEQIP-II**	March 17-18, 2017	Two days
29	Jasmeet Kaur	**National Seminar** on "Make In India: Challenges in Manufacturing and Engineering Industry"	Dept. of ECE and MBA, Guru Nanak Dev Engineering College Ludhiana, Punjab in association with PCMA	Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	September 23, 2016	One day
30	Jasmeet Kaur	**Workshop** on "Effective Teaching Pedagogy and Research Methodolgy"	Dept. of Electronics & communication Engg.,GNDEC, Ludhiana	GNDEC, Ludhiana	**Organization : TEQIP-II**	March 17-18, 2017	Two days
31	Daljit Singh	**National Seminar** on "Make In India: Challenges in Manufacturing and Engineering Industry"	Dept. of ECE and MBA, Guru Nanak Dev Engineering College Ludhiana, Punjab in association with PCMA	Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	September 23, 2016	One day
32	Daljit Singh	**Workshop** on "Effective Teaching Pedagogy and Research Methodolgy"	Dept. of Electronics & communication Engg.,GNDEC, Ludhiana	GNDEC, Ludhiana	**Organization : TEQIP-II**	March 17-18, 2017	Two days
33	Simranjit Kaur	**National Seminar** on "Make In India: Challenges in Manufacturing and Engineering Industry"	Dept. of ECE and MBA, Guru Nanak Dev Engineering College Ludhiana, Punjab in association with PCMA	Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	September 23, 2016	One day
34	Simranjit Kaur	**Workshop** on "Effective Teaching Pedagogy and Research Methodolgy"	Dept. of Electronics & communication Engg.,GNDEC, Ludhiana	GNDEC, Ludhiana	**Organization : TEQIP-II**	March 17-18, 2017	Two days

35	Jaspreet Kaur	**National Seminar** on "Make In India: Challenges in Manufacturing and Engineering Industry"	Dept. of ECE and MBA, Guru Nanak Dev Engineering College Ludhiana, Punjab in association with PCMA	Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	September 23, 2016	One day
36	Jaspreet Kaur	**Workshop** on "Effective Teaching Pedagogy and Research Methodolgy"	Dept. of Electronics & communication Engg.,GNDEC, Ludhiana	GNDEC, Ludhiana	**Organization : TEQIP-II**	March 17-18, 2017	Two days
37	Naazia Makkar	**National Seminar** on "Make In India: Challenges in Manufacturing and Engineering Industry"	Dept. of ECE and MBA, Guru Nanak Dev Engineering College Ludhiana, Punjab in association with PCMA	Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	September 23, 2016	One day
38	Naazia Makkar	**Workshop** on "Effective Teaching Pedagogy and Research Methodolgy"	Dept. of Electronics & communication Engg.,GNDEC, Ludhiana	GNDEC, Ludhiana	**Organization : TEQIP-II**	March 17-18, 2017	Two days