NITTTR CHANDIGARH SPONSORED

Five Days
Online Faculty Development Program
On

Nanotechnology Enabled Wireless Communication and Internet of Things

25 April – 29 April, 2022

Organized by

Department of Computer Science and Engineering
School of Studies in Engineering & Technology

Guru Ghasidas Vishwavidyalaya

(A Central University)

Bilaspur - 495009

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Hon'ble Vice-Chancellor, GGV Bilaspur

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Head, Department of CSE, SoS (E & T), GGV, Bilaspur

COORDINATOR
Mr. Pushpendra Kumar Chandra, Assistant Professor,
Department of CSE , SoS (E & T), GGV , Bilaspur

Mr. Satish Kumar Negi, *Assistant Professor,*
Department of CSE, SoS (E & T), GGV, Bilaspur

CO-COORDINATOR
Dr. Princy Matlani, Assistant Professor,
Department of CSE, SoS (E & T), GGV, Bilaspur

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Mr. Manjit Jaiswal, *Assistant Professor*
Mrs. Ayushi Shukla*, Assistant Professor*
Ms. Deepika Ingle, *Assistant Professor*

ADDRESS FOR CORRESPONDENCE
Department of Computer Science & Engineering,
School of Studies in Engineering and Technology
Guru Ghasidas Vishwavidyalaya, Bilaspur
Mobile No: 9098505754, 9575111882
Email Id: ggvfdp@gmail.com
Website: www.ggu.ac.in

ABOUT THE UNIVERSITY

Guru Ghasidas Vishwavidyalaya is a Central University of India, located in Bilaspur C.G. State, established under Central Universities Act 2009, No. 25 of 2009. Formerly called Guru Ghasidas University (GGU), established by an Act of the State Legislative Assembly, was formally inaugurated on June 16, 1983.

GGU is an active member of the Association of Indian Universities and Association of Commonwealth Universities. Situated in a socially and economically challenged area, the university is appropriately named to honour the great Satnami Saint Guru Ghasidas (born in the 17th century), who championed the cause of the downtrodden and waged a relentless struggle against all forms of social evils and injustice prevailing in the society.

The University is a residential cum affiliating institution, having its jurisdiction spread over Bilaspur Revenue Division of the state of Chhattisgarh.

Guru Ghasidas Vishwavidyalaya, Bilaspur

ABOUT THE DEPARTMENT

The department of computer science was established in 1997. The department is committed to provide quality higher education in the field of Computer Science & Engineering With the understanding, knowledge and practical competence to participate in a long revolution. The knowledge will enable you to understand and foresee the great changes and challenges that Computer Science presents to the world, now and in the future. Besides teaching there is also a doubt removal session. The department has specialized laboratories such as NETWORKING LAB, ADVANCE PROGRAMMING LAB, DATABASE & UNIX LAB, PROJECT LAB. The department provides opportunities for carrying projects by students under the joint supervision of the faculty and experts from the industry. The department has been involved in providing training in reputed government and public sectors like DRDO Delhi, Microsoft Hyderabad, CMC Kolkata, Orbit IT Hyderabad, S.E.C.L., B.S.N.L., Indian Railways, Bokaro Steel Plant & Bhilai Steel Plant (SAIL), Software Tech & ISM Banglore. Our students are working in reputed private, public and govt. organizations. Some of them are American Express, Infosys, Gemini Solutions, Wipro, Persistent, IBM, TCS, Mahindra BT, Syntel, Satyam, BSNL, NTPC, INFLIBNET.

School of Studies in Engineering & Technology

ABOUT FDP

This FDP is aimed at imparting knowledge and training on the fundamentals of the Nano-technology, Internet of Things (IoT) and wireless communication network. The main objective is to make the participants familiar with the emerging frontiers and interesting applications of these technologies. Expert lectures & hands-on sessions will be delivered by faculty members from academia (NITTTR/NITs/IIITs/Central Universities) and practitioners from industry. The program will have a nice blend of theoretical and practical aspects of the field. More emphasis will be given to practical hands.-on exposure by solving some real-life problems using IoT and nanotechnology.

The participants of this FDP will be able to understand the underlying concepts in nanotechnology and its applications in wireless communication and IOT. They will learn how to use nano-electronics devices along with WSN in the realm of developing some interesting applications. IoT applications in smart cities, healthcare, rural development, human-computer interaction, computer vision etc, will be discussed. Experts will also discuss various issues, challenges and research directions in the field. The theme of the FDP has been chosen to be interdisciplinary so that it may benefit a large segment of researchers and faculty.

RESOURCE PERSON

Faculty experts from reputed institutes, and invited academic experts from NITTTR/NITs/IIITs/Central Universities

FDP CONTENTS

- **Nano-Technology:** Basics of Nano-Technology, flexible WSN, Nano-electronics devices and circuits.
- **Wireless Technology:** Wireless Body Area Network, Antennas for 5G Wireless Communication.
- **IoT:** Introduction to IoT, Applications in different domains; Trends in IoT Market. Protocols Introduction (MQTT, AMQP, CoAP)
- **Energy Efficiency:** How energy efficiency relates to IoT, Impact of IoT in Energy Efficiency.
- **Simulation Tools:** Hands on Practical & Simulation of WSN and IoT.
- **Cloud Computing:** Importance of cloud in IoT, Top Cloud providers, Service Models, Service catalogues, Different cloud services.
- **IoT Architecture and Communication Theory**: IoT Layered Architecture and IPV6, RF Zigbee, Wifi BLE e. LPWAN.
- **IoT Security:** How secure is IoT, Issues and vulnerabilities, Key aspects for securing IoT Solutions.
- **Wireless Security:** Security Threats in Wireless Sensor Network.

TARGET AUDIENCE

The faculty members of the AICTE approved institutions, research scholars, participants from Government and Industry.

REGISTRATION

Registration Fee - FREE

To Register, please visit NITTTR official website
http://fdp.nitttrchd.ac.in/

- Login or register as a new user
- Click in **Apply for STC**, at left hand side, select Department as **Applied Science** and select mode of course as "**online mode**" and click submit.
- Choose our FDP and Apply.
- In the next page select the venue as "**From registered remote centre**" as **Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh**
- Click on Submit button

Nanotechnology Enabled Wireless Communication and IoT
(Online Mode)
(From 25.04.2022 to 29.04.2022)
OPlan No. ICT-1
Organized by Applied Science Department, NITTTR Chandigarh

Certificate Printing details of participants

NAME OF REMOTE CENTER: DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING, GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR

NAME OF REMOTE CENTER COORDINATOR, MOBILE NO., EMAIL: MR. PUSHPENDRA KUMAR CHANDRA, 9098505754, pushpendrachandra@gmail.com

Sr. No.	Name of Participant (in capital) (Please keep same order as per the attendance sheet)	Name of the College/Institute/University	Place of College/Institute/University
1	ABHISHEK JAIN	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
2	AGNIVESH PANDEY	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
3	AKHLESH KUMAR JAIN	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
4	AMIT BAGHEL	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
5	AMIT KUMAR DEWANGAN	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
6	ANIL KUMAR SONI	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
7	ANJLI BARMAN	AADARSH COLLEGE	RAIPUR
8	ARADHANA SONI	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
9	AYUSHI SHUKLA	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
10	CHANDAN TAMRAKAR	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
11	DEEPAK KANT NETAM	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
12	DEEPIKA INGLE	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
13	DILEEP KUMAR SAHU	GOVT. VYT PG AUTONOMOUS COLLEGE	DURG
14	DR SUNIL K. JAIN	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
15	DR. MANISH SHRIVASTAVA	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
16	DR. NIKITA KASHYAP	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
17	DR. SUCHISMITA ROUT	SILICON INSTITUTE OF TECHNOLOGY	BHUBANESWAR
18	DR.JAYASHREE SHAILESH PATIL	JSM COLLEGE	ALIBAG
19	GOLDI SONI	DISHA COLLEGE	RAIPUR
20	KAWALJEET KAUR	CT GROUP OF INSTITUTIONS	JALANDHAR
21	KOMAL KASHYAP	CHOUKSEY ENGINEERING COLLEGE	BILASPUR
22	MANJIT JAISWAL	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
23	MRS AKANKSHA GUPTA	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
24	NISHANT BEHAR	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
25	NISHI YADAV	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
26	PRAVEENA RAJPUT	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
27	PRINCY MATLANI	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
28	PUSHPENDRA KUMAR CHANDRA	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
29	RAKSHA PANDEY	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
30	SANJEEV GUPTA	GOVT COLLEGE OF ENGG AND TECHNOLOGY	JAMMU
31	SATISH KUMAR NEGI	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
32	SHRAWAN KUMAR PATEL	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
33	SUDHA MISHRA	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
34	SUMIT KUMAR GUPTA	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
35	VAIBHAV KANT SINGH	GURU GHASIDAS VISHWAVIDYALAYA	BILASPUR
36	VIKRANT GUPTA	BATMOOL ASHRAM COLLEGE	RAIGARH

Verified by (Signed & Stamped):
(Local Coordinator)

Verified and Signed by:
Director/Principal/Head of the Institute
(with Seal)

HEAD
Comp. Sci. & Engg.
T. Guru Ghasidas Vishwavidyalaya
Bilaspur (C.G.)

Nanotechnology Enabled Wireless Communication, and IoT
(Online Mode)
(From 25.04.2022 to 29.04.2022)
OPlan No. ICT-1

Organized by Applied Science Department, NITTTR Chandigarh

ATTENDANCE SHEET

NAME OF REMOTE CENTER:

NAME OF REMOTE CENTER COORDINATOR: DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING, GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR

MOBILE. NO., EMAIL.: MR. PUSHPENDRA KUMAR CHANDRA, 9098505754, pushpendrachandra@gmail.com

Sr. No.	Name of the Participant	Name of the Department/ Designation	Day 1 (25.04.2022)		Day 2 (26.04.2022)		Day 3 (27.04.2022)		Day 4 (28.04.2022)		Day 5 (29.04.2022)	
			FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1	ABHISHEK JAIN	AADARSH COLLEGE	P	P	P	P	P	P	P	P	P	P
2	AGNIVESH PANDEY	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
3	AKHLESH KUMAR JAIN	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
4	AMIT BAGHEL	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
5	AMIT KUMAR DEWANGAN	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
6	ANIL KUMAR SONI	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
7	ANILI BARMAN	AADARSH COLLEGE	P	P	P	P	P	P	P	P	P	P
8	ARADHANA SONI	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
9	AYUSHI SHUKLA	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
10	CHANDAN TAMRAKAR	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
11	DEEPAK KANT NETAM	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
12	DEEPIKA INGLE	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
13	DILEEP KUMAR SAHU	GOVT. VYT PG AUTONOMOUS COLLEGE	P	P	P	P	P	P	P	P	P	P
14	DR SUNIL K. JAIN	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
15	DR. MANISH SHRIVASTAVA	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
16	DR. NIKITA KASHYAP	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
17	DR. SUCHISMITA ROUT	SILICON INSTITUTE OF TECHNOLOGY	P	P	P	P	P	P	P	P	P	P
18	DR.JAYASHREE SHAILESH PATIL	JSM COLLEGE	P	P	P	P	P	P	P	P	P	P
19	GOLDI SONI	DISHA COLLEGE	P	P	P	P	P	P	P	P	P	P
20	KAWALIEET KAUR	CT GROUP OF INSTITUTIONS	P	P	P	P	P	P	P	P	P	P
21	KOMAL KASHYAP	CHOUKSEY ENGINEERING COLLEGE	P	P	P	P	P	P	P	P	P	P
22	MANJIT JAISWAL	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
23	MRS AKANKSHA GUPTA	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
24	NISHANT BEHAR	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
25	NISHI YADAV	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
26	PRAVEENA RAJPUT	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
27	PRINCY MATLANI	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
28	PUSHPENDRA KUMAR CHANDRA	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
29	RAKSHA PANDEY	GOVT COLLEGE OF ENGG AND TECHNOLOGY	P	P	P	P	P	P	P	P	P	P
30	SANJEEV GUPTA	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
31	SATISH KUMAR NEGI	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
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33	SUDHA MISHRA	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
34	SUMIT KUMAR GUPTA	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
35	VAIBHAV KANT SINGH	GURU GHASIDAS VISHWAVIDYALAYA	P	P	P	P	P	P	P	P	P	P
36	VIKRANT GUPTA	BATMOOL ASHRAM COLLEGE	P	P	P	P	P	P	P	P	P	P

Verified by (Signed & Stamped):
(Local Coordinator)

Verified and Signed by ....
Director/Principal/Head of the Institute
(with Seal)

HEAD
Comput. Sci. & Engg.
Guru Ghasidas Vishwavidyalaya
Bilaspur (C.G.)

Valedictory Function Report of Five-Day Online FDP

on

"Nanotechnology Enabled Wireless Communication and Internet of Things"

29/04/2022

The five-day (25/04/2022 to 29/04/2022) online FDP sponsored by NITTTR, Chandigarh on "Nanotechnology Enabled Wireless Communication and Internet of Things" successfully conducted by Guru Ghasidas Vishwavidyalaya. This FDP is organized by the Department of Computer Science & Engineering, Guru Ghasidas Vishwavidyalaya, Bilaspur.

In this FDP, experts are from reputed institutions of the country, like NITTTR Chandigarh, IIIT, NIT and Central and Regional Universities, Institutions. The participant learned about the advanced technologies such as nanotechnology for advanced antennas, solutions to various problems through wireless sensors, Artificial Intelligence based applications, fundamentals of nanotechnology, importance of Internet of Things in social life etc.

Vice Chancellor Prof. Alok Chakrawal sent best wishes for the successful organization of FDP. Registrar Prof. Shailendra Kumar advised to ensure more such events in department of computer science and Engineering. Dean and Chief Convener Prof. T. V. Arjunan appreciated the FDP program being conducted continuously by the Department of Computers Science & Engineering. At the end of the program, department head in-charge Mr. Amit Baghel expressed his gratitude to everyone. Many subject experts and all participants and teachers of various departments were present on this occasion.

The Course coordinators of this national level FDP was Prof. Ashok Kumar, NITTTR Chandigarh, co-coordinators Mr. Pushpendra Kumar Chandra, Mr. Satish Negi and Mrs. Princy Mitlani.

The program outline and the subject material were selected under the direction of Dr. Alok Kumar Singh Kushwaha, head of the department, Computers Science & Engineering, Guru Ghasidas Vishwavidyalaya, Bilaspur.