



Report on
AICTE : AICTE - Training and Learning (ATAL) Academy
Sponsored
Faculty Development Program
on
“ Internet of Things (IoT) ”
(19th July – 23rd July, 2021)

FDP Coordinator

Dr. Vaibhav Neema


Assistant Professor , E&TC Dept.,

IET-DAVV, Indore

9174738874

vneema@ietdavv.edu.in

Faculty Development Program (FDP) on Internet of Things

- *AICTE Sponsored FDP program on IoT under ATAL scheme was conducted through online mode during 19th - 23rd July , 2021 at E&TC Dept. of IET-DAVV, Indore.*
 - *Total 199 participants are approved for this course out of that 127 participants got certificate as per the AICTE criteria of 80% Attendance and 60% minimum marks in test conducted during the program.*
 - *The program was scheduled for 5 days and as per the guideline of AICTE and total 14 session was conducted. Duration of each session is planned as 2 hrs. was taken by the experts. The experts are from industry and academician. The experts are pioneer in the file of IoT and most of them from Indian Institute of Technology, Indore. The Industry expert from NXP Semiconductor , Trevatron Tech Noida, and Scientech Technologies Pvt. Ltd, Indore has demonstrated real time product design in the IoT field.*
 - *Few lab session and hands-on session are also conducted during the FDP program.*
- 



Welcome You All,

**Inaugural Session of AICTE sponsored Faculty Development Programme
under “AICTE Training And Learning (ATAL) Academy” Scheme:**

Topic of the FDP Programme : “Internet of Things from Hardware Prospectives”

Duration of the course : 19th -23rd July 2021



Prof Renu Jain,
Hon'ble Vice-Chancellor,
DAVV, Indore



Prof Sanjiv Tokekar,
Hon'ble Director,,
IET- DAVV, Indore



Dr. Vaibhav Neema,
Coordinator,,
IET- DAVV, Indore

Devi Ahilya Vishwavidyalaya (DAVV), Indore

Devi Ahilya Vishwavidyalaya (DAVV), Indore, is a premier State University of Madhya Pradesh, established in 1964, and awarded with “A+ ” grade by NAAC.

It caters to about 11,000 students in the 33 University teaching departments and Centers, and about 3,00,000 more students in various affiliated colleges, spread in seven district of Madhya Pradesh

“Institute of Engineering & Technology (IET-DAVV) popularly known as IET-DAVV is one of the University Teaching Department of Devi Ahilya University, Indore.

Institute of Engineering & Technology (IET-DAVV) established in 1996 and about 2600 students admitted for UG, PG and doctoral programs.

IET-DAVV offers undergraduate programs in six disciplines: Civil, Computer Science & Engineering, Electronics & Telecommunication, Electronics & Instrumentation, Information Technology, Mechanical Engineering.

IET-DAVV also offers six postgraduate master’s of engineering programs and doctoral programmes in various disciplines of engineering

IET_DAVV is best known for quality of education and committed for presenting state-of-the-art technology.



Highlights of the Programme

1

As per the guidelines provided by the AICTE, the FDP programme is scheduled for 5 Days (19th-23rd July 2021).

In this five days of FDP total 14 sessions will conduct and each session will be of 2hr Long.

3

The course contents of the FDP is design in such a way that it cover Basic to advance IoT and IOT Systems.

It provides you the basic knowledge and skills to design your own IoT system.

All the experts are from IITs , IIITs and industry, and having vast experience in the field of IoT and IoT system design.

2

Session Timings are as follows :

- I. Session I : 10:00 to 12:00 noon
(10 Min Tea Break)
- II. Session II : 12:10 to 02:10 pm
(20 Min Lunch Break)
- III. Session III : 02:30 to 04:30 PM

All participants must join each session on time.

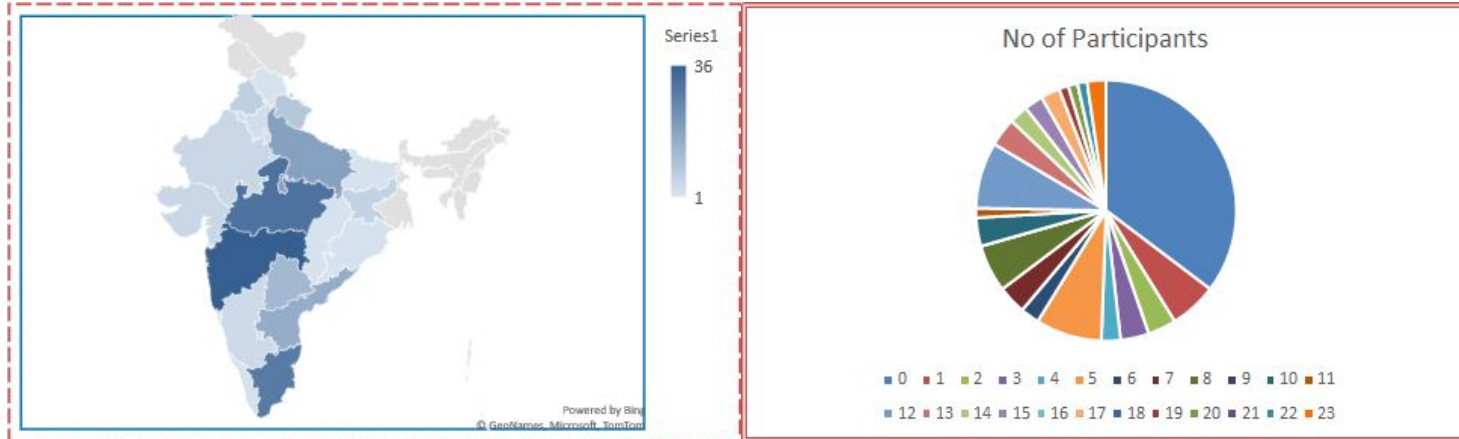
4

Daily attendance is compulsory for the participant.

At the last day of FDP a quiz will conduct, that cover entire session syllabus and as per the guideline each participant must score minimum 60% marks to get the certificate.

Highlights of the Programme

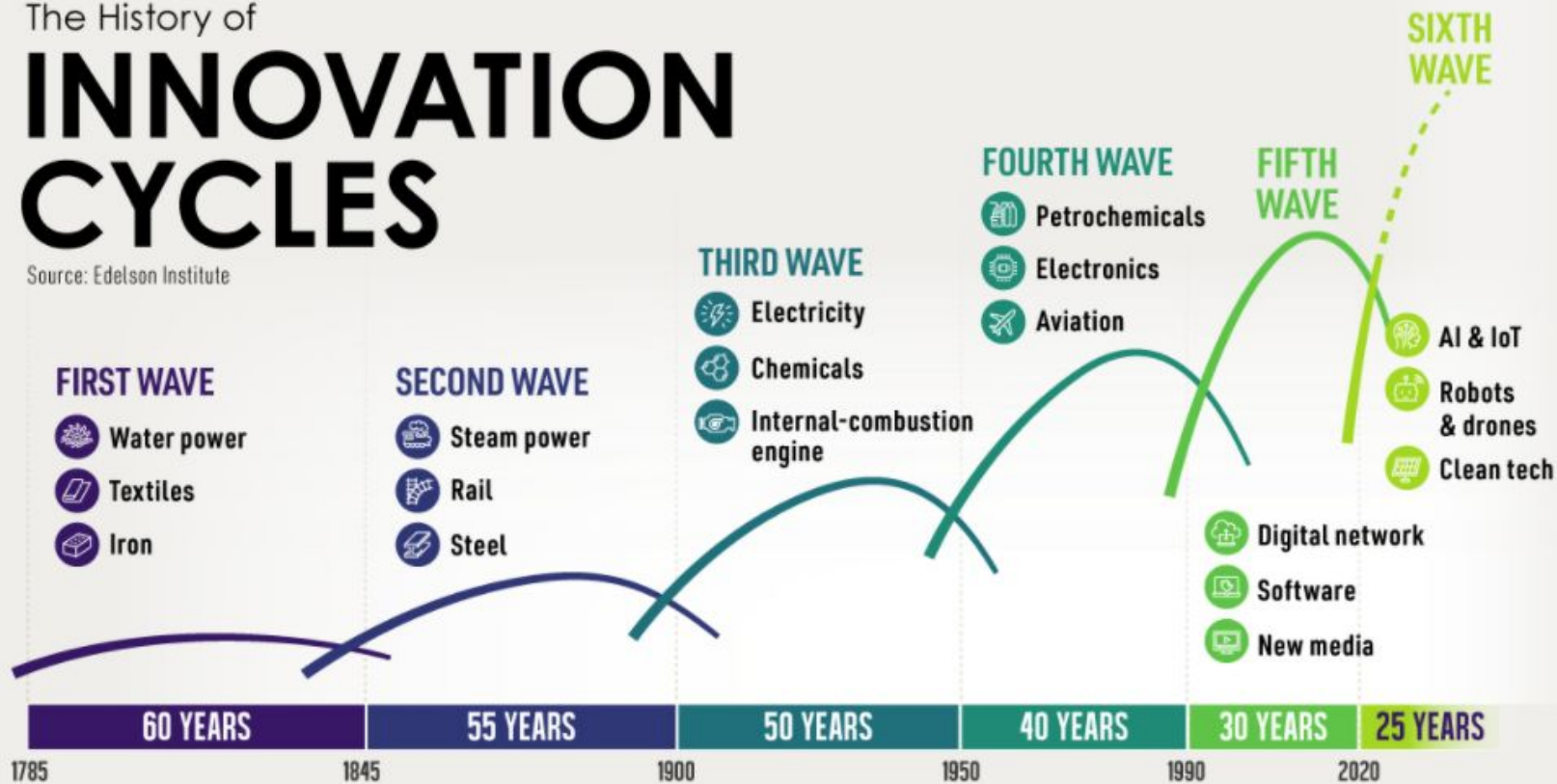
- Participants for this programme are mainly
 - ❖ Assistant Professors
 - ❖ Industry people
 - ❖ School teachers
 - ❖ Research Scholars and Students



The History of

INNOVATION CYCLES

Source: Edelson Institute



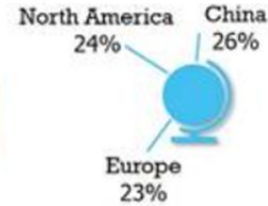
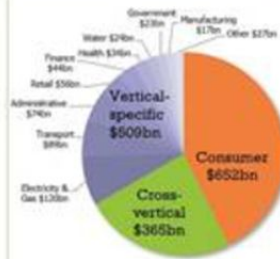
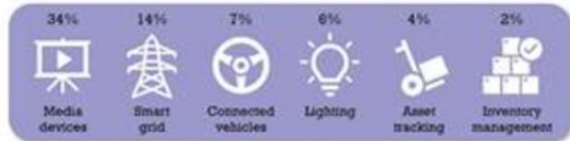
The Internet of Things (IoT) Market 2019-2030

24.1 billion

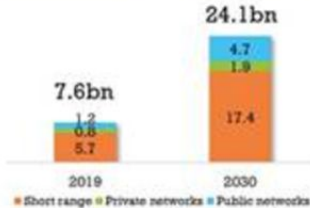
IoT connected devices in 2030 (7.6bn 2019)

\$1.5 trillion

IoT revenue in 2030 (\$465bn 2019)



TRANSFORMA
INSIGHTS
transformainsights.com
@transformatweet



*Source : webpage of Transforma Insight



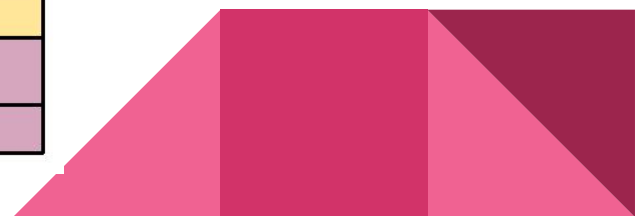
Institute of Engineering and Technology, Devi Ahilya University, Indore

Schedule for AICTE Sponsored FDP Program on "IoT form Hardware Prospective"



19th - 23rd July 2021

Day / Timing	Session I		Session II		Session III	
	10:00 am -12:00 Noon		12:10 noon- 02:10pm		2:30pm- 4:30pm	
19-07-2021	Dr Vaibhav Neema, IET-DAVV, Indore	TEA BREAK	Mr. P. W. Dandekar, Co-Founder at a startup building smart electric vehicles, Indore	Lunch Break	Dr. Anirban Sengupta, IIT Indore	
	Introduction and overview of the IoT		Introduction to ESP-32 Microcontroller as an edge device		Biometrics Authentication for Hardware Security and Trust	
20-07-2021	Dr. Sudeb Dasgupta, IIT Roorkee		Dr. S. K. Vishvakarma, IIT Indore		Dr. Shailesh Singh Chouhan, Luleå University of Technology, Sweden	
	IoT Applications		Edge AI Computing for IOT		Journey of IoT hardware from Prototype to Production	
21-07-2021	Dr. Puneet Gupta, IIT Indore		Dr. Sachin Chaudhari, IIIT Hyderabad		Dr. Sachin Chaudhari, IIIT Hyderabad	
	Heart rate monitoring using non-contact face videos for IoT		Communication Technologies for IoT		Signal Processing and Machine Learning for IoT	
22-07-2021	Mr. Preet Yadav , NXP Semiconductors, Noida		Mr. Aditya Dubey, Scientech, Indore		Mr. Abhishek Gupta, Tevatron Tech., Noida	
	IoT Security Acumens		IOT Product Design Life Cycle		Challenges & opportunities in emerging Technologies	
23-07-2021	Session for Meditation		Dr. Vaibhav Neema, IET-DAVV, Indore			
			Edge Technology for IoT Applications			



Session II & III : Day 1

- * **Engineer, Inventor:** Embedded systems designer with 35+ years of product design experience.
- * **Academic:** Visiting faculty at IITs; Ex-professor and head of CS dept at SGSITS Indore
- * **Entrepreneur:** Built and ran a business building industrial IoT devices
- * **Leader:** Senior leadership positions at Tata Technologies, Impetus Infotech, etc



P. W. Dandekar

(Co-Founder at a startup building smart electric vehicles)

-
- ★ **Fellow:** Institution of Engineering & Technology (IET) and British Computer Society (BCS)
 - ★ **Senior Member, IEEE**
 - ★ **Author of 4 Books in 'Hardware Security/IP Protection/CAD-VLSI' field**
 - ★ **Author of over 242 Publications and awarded with more than 10 US Patents**
 - ★ **Deputy Editor-in-Chief, IET Computers and Digital Techniques (CDT)**
 - ★ **Chair, IEEE CTSoc Technical Committee on Security & Privacy | Board Member, IEEE CTSoc Technical Committee**



DR. ANIRBAN SENGUPTA

(ASSOCIATE PROFESSOR,
CSE, IIT INDORE)

Session I & II : Day 2

- ★ **Area of research : Low Power System design and its application**
 - ★ **Membership :**
 - EDS, Member
 - ISTE, Member
 - Institute of Nanotechnology, Associate Member
 - ★ **He has completed 6 research projects.**
 - ★ **He has published more than 100 research papers**
-
-



Dr. Sudeb Dasgupta

(PROFESSOR)
ECE, IIT Roorkee

- ★ **Topic : Edge AI Computing for IOT**
- ★ **Awarded DAAD Bilateral Exchange Fellowship**
- ★ **Awarded Marie-Curie Fellowship from European Union**
- ★ **He has completed 5 research projects and working on 4 International projects.**
- ★ **He published more than 70 research articles, he received 6 patents and 10 PhD students received PhD Degree under his guidance.**



Dr. S. K. Vishvakarma

Associate Professor, EE Dept.
IIT Indore

Session III : Day 2 (02:30 to 4:30)

- ★ **Topic : Journey of IoT hardware from Prototype to Production**
- ★ **D.Sc. (Tech) - Honors (PhD) : From Aalto University, Finland**
- ★ **Research Projects : He has completed 7 research projects.**
- ★ **He has published more than 53 research articles.**



Dr. Shailesh Singh Chouhan

Associate Senior Lecturer,
Luleå University of Technology, Sweden

Session I , II and III : Day 3

- ★ Topic : Heart rate monitoring using non-contact face videos for IoT
 - ★ Expertise : Computer Vision, Deep Learning, Image Processing
 - ★ He did Post-doctoral fellowship from Tampere University, Finland.
 - ★ He also worked as Scientist at TCS Innovation Labs, INDIA.
 - ★ He has published more than 30 research articles.
-
-



Dr. Puneet Gupta,
Assistant Professor, CE Dept.
IIT Indore

- ★ Topics : Communication Technologies for IoT and Signal Processing and Machine Learning for IoT.
- ★ He did his PhD degree from Aalto University, Finland
- ★ He has completed more than 4 research projects.
- ★ Ongoing Research Projects: "IoT Enabled Smart Cities: Pollution, Health and Governance"



Dr. Sachin Chaudhari
Assistant Professor,
IIIT Hyderabad

Session I, II and III : Day 4 (Industry Experts)

- ★ Topic : IoT Security Acumens
- ★ Presently He is working as R & D SOC Technical Program Manager at NXP Semiconductors for Automotive Business.
- ★ He has 16 + years of Research & Development experience in the diversified semiconductor industry.



Mr. Preet Yadav ,
NXP Semiconductor, Noida

- ★ Topics : IOT Product Design Life Cycle
- ★ He is working as Senior R&D Engineer (Embedded Systems) at Scientech Technologies Pvt. Ltd, Indore



Mr. Aditya Dubey,
Scientech, Indore

- ★ Topics : Challenges & opportunities in emerging Technologies
- ★ He is Founder & CEO @ Hex N Bit technology and CEO of Tevatron tech, Noida
- ★ He has 7+ years of experience of product development in the field of Artificial Intelligence & Machine learning , Embedded System & Internet of Things.



Mr. Abhishek Gupta,
Tevatron Tech., Noida

Session I & II : Day 5

- ★ **Topic : Achieve Effectiveness in Life.**
- ★ Meghna Singh (MA (Psychology, IGNOU), PGD in Counselling Psychology, M.Sc (Electronics, DAVV), PGDBA (IMT GZB)).



Mrs. Meghna Singh

Peaceofmind Counseling Services, Noida

- ★ **Topic : Knowledge as a tool to convert fear into courage : interactive session on COVID-19.**
- ★ Assistant Professor @ School of Biotechnology, DAVV, Indore
- ★ He did PhD, MSc from DAVV, Indore



Dr. Hamendra Singh Parmar

- ★ **Topic : Edge Technology for IoT and its applications**
- ★ Assistant Professor , E&TC Engg Dept. IET-DAVV, Indore



Dr. Vaibhav Neema

Thanks to AICTE for providing financial support for conduction of faculty development program (FDP) on an emerging area of research and academic “Internet of Things” (IoT).