ORGANIZING TEAM

Patron and Advisor
Prof. Pramod K Jain, Director, IIT (BHU)

Chairman
Prof. Rajiv Prakash, Dean (R&D) IIT (BHU)

Coordinator	**Co-Coordinator**
Dr. N. S. Rajput	Dr. Ajay Pratap
Electronics Engg.	Comp. Sc. & Engg.

IIT (BHU) Varanasi

Organizing Committee
Prof. P.K Roy; Prof. Vikash Dubey;
Dr. R. K Singh; Dr. Ankit Gupta

NM-ICPS and IDAPT

The National Mission on Cyber-Physical Systems (NM-ICPS) is identified as one such emerging field to have a significant impact on health care, urban transportation, water distribution, energy, urban air quality, manufacturing and governance. The activities envisioned under this Mission will give a impetus to Indian manufacturing via the invention of new products, services and the creation of skilled young human resource from technicians to, researchers and entrepreneurs. It will have modernization and digitalization of socio-technical systems and services. The Interdisciplinary Data Analytics and Predictive Technologies (IDAPT) has been regarded as one of the most prominent fields whose progress will add significant impact on various socio-economic issues. At IIT (BHU) five verticals namely Telecommunications, Power, Road Transport and Highways, Defense Research and Development, and Health and Family Welfare have been identified under IDAPT. The endeavor shall catalyze the creation of skilled young engineers, researchers, technicians, and entrepreneurs, together with human resource at all levels, besides becoming a key contributor to realizing the vision of "Digital India", "Innovate in India", and "Make in India".

KEY SPEAKERS

Suhas Mansingh
VP (Engineering),
Cisco Systems

Prof. Shiho Kim
Director
Yonsei Institute of Convergence technology, South Korea

Prashant Anand
Distinguished Engineer
NGN, Cisco Systems

Laxmi Mukund
Distinguished Engineer
NGN, Cisco Systems

Raghu Kulkarni
Technical Leader
Security, Cisco Systems

Prof. Dhananay Singh
CTO, Vestella Inc.
Hankuk University of Foreign Studies (HUFS), Seoul, South Korea

6 more distinguished speakers are scheduled.

Next Generation Networks (NGN) & AI for Data Analytics and Predictive Technology Applications

(NGN & AI for DAPT)

One Week
Online Short-term Course
With live hands-on

(March 22-27, 2021)

Hosted by

CELEBRATING CENTENARY
100 years
IIT (BHU) VARANASI

in support with

CISCO

DST@ 1971-2021
DEPARTMENT OF SCIENCE & TECHNOLOGY

and

A TECHNOLOGICAL INNOVATION HUB ON INTERDISCIPLNARY DATA ANALYTICS AND PREDICTIVE TECHNOLOGY

(IDAPT)

COURSE THEME

Next Generation Networks (NGN) & AI for Data Analytics and Predictive Technology Applications is a One Week (6-Day) online course that includes invited lectures and tutorials pertaining to a wide range of topics intersecting NGN and AI for Data Analytics and Predictive Technologies. Attendees would be able to better understand the relevant tools and technologies and how they are integrated in a complete end to end solution for industrial and societal applications. The topic would range from Data Science, Optimizations, Communication Engineering and Data Analytics, Modelling, Prediction, Feature Extraction and Estimation, Machine Learning Techniques, Sensors, Actuators for complete cyber physical system design along with variety applications, and Case Studies demonstrating the power of Data Analytics and Prediction using NGN and AI. The course will also include hands-on sessions, tutorials and will be organized in interactive mode.

CERTIFICATE

E-Certificate will be provided to Attendees

INDIAN INSTITUTE OF TECHNOLOGY (BHU)

Indian Institute of Technology (BHU) Varanasi is an Institute of national importance created by an Act of the Parliament through the Institutes of Technology (Amendment) Act, 2012. Previously, it was known as IT, BHU. Founded in 1919 as the Banaras Engineering College, it became the Institute of Technology, Banaras Hindu University in 1968. IIT (BHU) Varanasi has 14 departments And 3 inter-disciplinary schools. IIT(BHU) Varanasi has been able to build up the necessary infrastructure for carrying out advanced research and has been equipped with state-of-the-art engineering and scientific instruments. The city of Varanasi is well connected by road, rail and air with all the important places of India. Regular flights are there from Varanasi to Delhi, Mumbai, Chennai, Bangalore, Kolkata, Khajuraho and Lucknow. The IIT(BHU) campus is only 10 Km from Varanasi railway station, 20 Km from Deen Dayal Updhayay (old name Mughalsarai) railway station and 35 Km from the Varanasi airport.

ELIGIBILITY

The Short-term Course is open to faculty members, engineers and consultants, scientists, research scholars, and students perusing careers in any discipline requiring the development of cyber physical systems for application control using AI, NGN, Computer Science or Data Analytics.

REGISTRATION FEE

- **For faculty, scientist and post doctoral fellow**: Rs. 1000/- (non-refundable)

- **Industry**: 4000/- (non-refundable)

- **For UG and PG students** : No Registration Charge

Payment may be made by one of the following methods:

1) Demand draft In favor of I-DAPT-HUB-FOUNDATION Payable at SBI, IIT(BHU), Varanasi.

2) Online payment to:
   Branch: SBI, IIT(BHU) Varanasi
   IFSC Code: **SBIN0011445**
   Name: I-DAPT-HUB-FOUNDATION
   Account No: **39818711510**

Note: Please *Mention payment details in the registration form*

IMPORTANT DATES

Opening of Registration: **March 01, 2021 (Monday)**
Last Date of Registration: **March 21, 2021 (Sunday)**

CONTACT

Dr. N. S. Rajput
Department of Electronics Engineering
Indian Institute of Technology (BHU)
Varanasi, UP-221005
nsrajput.ece@iitbhu.ac.in

Next Generation Networks (NGN) & AI for Data Analytics and Predictive Technology Applications
March 22-27, 2021

REGISTRATION FORM

(Online Link)

1. Name (in block letters):

Pin: Mobile. No:

Fax no: E-mail:

5. Academic Qualifications:

6. What is the relevance of this course in your academic/professional life?

7. Payment details (DD Number/Online payment reference with amount and date):

Place:

Date:

Signature of the applicant

NOTE

- Please send the soft copy of the completed form to nsrajput.ece@iitbhu.ac.in and CC idapt.telecom@gmail.com, mentioning "**NGN & AI for DAPT" in the subject line by March 21, 2021**
- Photocopy of the form may also be used.
- The decision about the final selection is by course convener/organizing committee. Program schedule and other details will be sent on your registered mail itself. We encourage large scale participation, so please feel free to share the information further.
- E-Certificate will be provided to Attendees

DISTINGUISHED SPEAKERS

Nitin:

Nitin is an intrapreneur with over 11 years of experience in Network Security. He currently works as a Technical Leader with Cisco Customer Experience Team. He is passionate about learning and creating new things, customer transformation and engagement, leading transition of technologies, architecting customer solutions, driving automation and innovation and spearheading product serviceability to deliver high quality customer centric services, solutions and products. His focus areas include cryptography and enterprise security.

Bhavik:

Bhavik Shah currently works in Cisco Security TAC and assists in Security Deployments in large Enterprise Networks. He has delivered training on IOT Hacking in Null Bangalore and also OWASP Seasides. His interests lie in IOT, and Digital Forensics and also delivered a talk on Network Forensics in Null . He has also conducted the first CTF for Cisco by contributing challenges on reversing and Binary Exploitation. He has been a Speaker for different Universities like SSN, Thapar, CUSAT by delivering talks on IOT and Application Security. He has keen Interest on Cyber Security and tries to explore new avenues by doing self learning and Research.

Raghu:

Technical Leader - Customer Delivery and Engineering (Security) - at Cisco Bangalore
Closely involved in solving some of the most complex security challenges Cisco's customer face. Also part of the Cisco Team which develops security training content for our employees as part of Ninja Program. Co-Architect of the Security Experience Center (which is first of its kind in Cisco). His topics include Network Security, IoT Security, Container Security, Zero Trust Architecture and Blockchain.

Prof. Madhusudan Singh

Madhusudan Singh is an Assistant Professor/Director of ReBlockchain Group at ECIS, Woosong University, South Korea. He is actively involved in entrepreneurial endeavours in Blockchain Technologies with Artificial Intelligence, Information Security, and Autonomous vehicles. And in his career, he has worked as a senior engineer in the R&D division at Samsung Display, Korea, and Research Professor in YICT, Yonsei University, Korea. He serves as a series editor of the Blockchain Technologies in Springer Nature, IEEE Computer Society and ACM Distinguished speaker, a senior member of IEEE societies.

Prof. Shiho Kim

Prof. Shiho Kim is directing Seamless Transportation Lab http://sites.google.com/site/shihoyonsei/home and VR Lab (vr.yonsei.ac.kr) in Yonsei Institute of Convergence Technology. His main research interest includes intelligent vehicles, Reinforcement learning, and virtual reality. Shiho Kim found RAVERS (Research center for Advanced Hybrid Electric Vehicle Energy Recovery System), which is a government-supported IT research center(ITRC) in 2009. He is also serving as the technical adviser of Grew Creative Lab, a company developing and providing technologies for mitigating simulator sickness of VR Headset and VR contents.

Prof. Dhananjay Singh

Dhananjay Singh is a Full Professor/Director of ReSENSE Labs in the Department of Electronics Engineering and also served as Chair/ Head in the Division of Global Information Technology at Hankuk University of Foreign Studies (HUFS), Seoul, South Korea. He is the co-founder/CTO of Vestellalab.Inc. and MtoV.Inc., that are providing innovative solutions based on AI, Blockchain, IoT for Smart City. Before joining HUFS. He is the recipient of 2019 U.P. NRI award (Apravasi Bharatiya Ratna Puraskar) for the outstanding work in the field of Technology .

Online Registration Link

Short Term Course (with live Hands-on) on
Next Generation Networks (NGN) & AI for
Data Analytics and Predictive Technology Applications
(*A National Mission of Interdisciplinary Cyber Physical Systems (NM-ICPS) Initiative*)

(March 22 – 27, 2021)

Organized by

Dr. N. S. Rajput (Coordinator), Associate Professor and **Dr. Ajay Pratap (Co-Coordinator), Assistant Professor**
Department of Electronics Engineering, IIT(BHU) **Department of Computer Science & Engineering, IIT (BHU)**

Day/Time	9:00 – 11:00 Hrs	11:00 – 13:00 Hrs		14:00 – 16:00 Hrs	16:00 – 18:00 Hrs
Monday 22.03.2021	Short Inauguration and Keynote Address By Prof. Shiho Kim	Keynote Address Mr. Suhas, VP (Engineering), Cisco & IITBHU Alumni		Cryptography for Networked Communication (Raghu and Nitin, Cisco)	
Tuesday 23.03.2021	Quantum Resistant Cryptography (Nitin, Cisco)			IoT Protocol Stack – Bluetooth Security and Sensor Networks (Bhavik, Cisco)	
Wednesday 24.03.2021	Data Analytics & Predictive Technology	Time Sensitive Networking (Prashant, Cisco)		Future Internet Architecture: Perspective, Challenges and Possible Solutions (Prof. DS, Korea)	
Thursday 25.03.2021	AI-Driven 5G and Beyond Radio Access Networks. . (Prof. Vijay Shah, Virginia Tech)			Smart IoT: Healthcare and Vehicle Data Monitoring and Analysis (Prof. DS, Korea)	
Friday 26.03.2021	Blockchain for Connected Vehicles (Prof. MS, Korea)	Industrial Management 4.0 and Hands-on (Prof. MS, Korea)		Mac Address Randomization for IoT Nodes (Laxmi, Cisco)	Computing Paradigms in NGN - Edge, Fog, Mist and Cloud (Sudhir, Cisco)
Saturday 27.03.2021	AI for Autonomous Vehicles (Prof. Shiho Kim, Korea)			Panel Discussion	Valedictory