

FACULTY DEVELOPMENT PROGRAM

EMERGING TRENDS AND ADVANCES IN COMPUTATIONAL INTELLIGENCE- 2022

REPORT

FDP Scheme and Schedule



BABU BANARASI DAS
INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(FORMERLY KNOWN AS BABU BANARASI DAS NATIONAL INSTITUTE OF TECHNOLOGY AND MANAGEMENT)

DEPARTMENT OF INFORMATION TECHNOLOGY
ONE-WEEK FACULTY DEVELOPMENT PROGRAM
ON
EMERGING TRENDS AND ADVANCES IN
COMPUTATIONAL INTELLIGENCE
TCS (ETACi-2022) BBDITM acm

IN COLLABORATION WITH TCS & ACM
28th Feb-05th Mar 2022



REGISTRATION DETAILS

Last Date of Registration: 26 Feb
Note: No Registration Fee
Participation e-Certificate will
be given to all participants

Please Scan for Apply



RESOURCE PERSONS



Dr. Surya Prasad
Professor
General Chairman, University of Connecticut, USA



Dr. Saikat Kumar
Full Professor, IIT, Kharagpur, India
Top 1% Scholarly (2018-2021)
IIT Kharagpur, India
Graduate, Postdoc, Professor in Australia



Dr. Pratik Kumar
Associate Professor
Professor, University of Colorado, Colorado



Dr. Prabhat K. Rai
Associate Professor, Indian Institute of Information
Technology, India



Dr. Sajal K. Prasad
Professor
Professor, University of Connecticut, USA
IIT Kharagpur, India



Dr. C. Nishu Kumar Baidya
Associate Professor
Faculty, School of Information Technology
IIT Kharagpur, India



Dr. Collette Jourd'heuil
Professor
School of Information Technology
IIT Kharagpur, India



Prof. Shekha Krishna
IIT Kharagpur, India
IIT Kharagpur, India
IIT Kharagpur, India
IIT Kharagpur, India



Dr. T. Sujata
Associate Professor
School of Information Technology
IIT Kharagpur, India



Mr. Kiran Kumar
Associate Professor
IIT Kharagpur, India



Dr. Ranjay S
Associate Professor
IIT Kharagpur, India

CHIEF PATRON

Smt. Alka Das
Hon'ble Chairperson, BBDEG, Lucknow
Mr. Viraj Sagar Das
Hon'ble President BBDEG, Lucknow
Ms. Sonakshi Das
Hon'ble Vice President, BBDEG, Lucknow

PATRON

Prof.(Dr.) Shailendra Singh Chauhan
Director, BBDITM, Lucknow

CHIEF CONVENER

Dr. Manuj Darbari (Head-R&D)
Dr. Anurag Tiwari (Head-IT)

CO-ORDINATORS

Mr. Gyanendra Dixit Mr. Ankit Kumar
Ms. Eram Fatima

TECHNICAL COMMITTEE MEMBER

Mrs. Richa Sharma Mrs. Dalley Srivastava
Mr. Ankur Srivastava Mr. Asit Gahalaut
Mrs. Shailja Pandey Mrs. Nida Hasib
Mr. Sandeep Mishra Mr. Hemant Kumar
Mr. Girjesh Mishra Mr. Abhinav Singh

STUDENT COMMITTEE MEMBERS

Diwakar Tripathi Anil Shukl
Subhanga Kumar Swinit Agrahari
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FDP Theme and Institution

ABOUT THE INSTITUTE

Babu Banarasi Das Institute of Technology & Management, Lucknow established in the year 1998. Babu Banarasi Das Institute of Technology & Management, Lucknow (BBDITM) is one of the efforts to Cherish the memory of the great and noble soul Babu Banarasi Das Ji, Ex. Chief Minister, Govt. of Uttar Pradesh. The College is affiliated with Dr. A.P.J. Abdul Kalam Technical University, Lucknow. BBDITM offers education in various courses at UG and PG level. The cause of Education, based on the ideals of "Babu ji" is being nourished by various Educational Institutions, under the umbrella of Babu Banarasi Das Educational Group, that have come together to pool in their resources and intellectual capital, creating a Campus full of synergy and meaningful learning. The Institutions take full advantage of collective efforts and optimization of resources while still maintaining their distinct identities in a spirit of camaraderie and healthy competition. The students gain greater exposure through interaction with their counter parts from other streams, which leads to holistic learning. The institute was established with the purpose of providing quality education to the students in the field of Engineering. It aims at providing an open opportunity to the young generation for evolving their core competencies and builds their career as world class professionals with broad-based foundation, in-depth knowledge and versatile personality to meet the challenges of Global Economy.

DEPARTMENT OF INFORMATION TECHNOLOGY

Department of Information Technology was established in 1999. The department emphasizes on proactive learning coupled with various organization to abreast the students with new Technology and the concepts in the market. Strong emphasis is also given to industrial training so as to make the students ready to face major challenges the fast placed technology. The department has qualified and experienced faculty and technically competent supporting staff on its rolls.

The department conducts bridge courses for the students during the regular working hours of the institution to keep the students abreast with technological developments. The department has an established capability to advice and carries out research projects in the areas of Software Engineering, Data warehousing, Storage Area Networks and Distributed Databases. The department also interacts with the industries on a regular basis to develop the capabilities in latest technologies.

FDP THEME

Computational Intelligence is the theory, design, application and development of biologically and linguistically motivated computational paradigms. An Emerging Trends in Computational Intelligence present the latest issues surrounding related to the data implementation using AI systems used by management for Information Technology in organizations. This program provides the platform to the researchers, experts, students and private sector parties from all over the world to show not only the original research work performed by them but also give an excellent opportunity to share the ideas, latest trends, innovation, findings regarding this area.

This FDP will be provides knowledge related to the latest trends and challenges dealing with all aspects of Computational Intelligence & its application.

HOW TO APPLY ?

The applicants can register through this link :
<https://forms.gle/6DYNjpe481u3jWRA>

VISION & MISSION

INSTITUTION VISION

To become a leading institute of providing professionally competent and socially responsive technocrats with high moral values

DEPARTMENTAL VISION

Vision of the department to transform the students to be skilled IT professionals, innovative leaders, and environmentally receptive citizens.

INSTITUTION MISSION

To create an eco-system for dissemination of technical knowledge, to achieve academic excellence.

To develop technocrats with creative skills and leadership qualities, to solve local and global challenges.

To impart human values and ethics in students, to make them socially and Eco-friendly responsible.

DEPARTMENTAL MISSION

To develop and deliver quality academic programs in emerging and innovative fields of engineering to empower the students to meet industry standards.

To provide students with the ethical and professional tools to become productive & become continuous Learners.

To inculcate professional behaviour, positive attitude, and communication skills.



BBD City, Faizabad Road, Lucknow Uttar Pradesh- 226028 India

Website: www.bbditm.ac.in

Guest Speakers

Program Scheduler		
Inaugural Session 9:15 -9:20 AM 28 Feb,2020		
28-Feb	<p style="text-align: center;">Session Start Time: 9:30 to 11:00 AM Dr. Prashant R.Nair, Vice-Chairman, Internal Quality Assurance Cell (IQAC), Associate Professor, Dept. of Computer Science & Engg, Amrita School of Engineering, Amrita Vishwa Vidyapeetham Nodal Officer, University Grants Commission (UGC),</p>	<p style="text-align: center;">Session Start Time: 02:00 PM to 03:30 PM Dr C Kishor Kumar Reddy , Associate Professor at Stanley College of Engineering and Technology for Women Hyderabad, Telangana, India</p>
01-Mar	<p style="text-align: center;">Session Start Time: 10:30 AM to 12:00 PM Dr. Sudeep Tanwar World's Top 2% Scientists (2020, 2021), Full Professor and PG Coordinator (CSE), Nirma University, Ahmedabad, India SMIEEE Associate Editor of IJCS-Wiley, COMCOM-Elsevier, CSA- Elsevier, Frontiers in Blockchain</p>	<p style="text-align: center;">Session Start Time: 02:00 PM to 03:30 PM Dr. Sunil Kr Pandey Professor & Director (IT & UG Campus) I.T.S, Mohan Nagar, Ghaziabad - 201007</p>
02-Mar	<p style="text-align: center;">Session Start Time:9:30 to 11:00 AM Dr.Praba Karan, Associate Professor at Pontificia Universidad Javeriana Cali, Colombia.</p>	<p style="text-align: center;">Session Start Time: 02:00 PM to 03:30 PM Prof.Siva Rama Krishna , B. M. S. College of Engineering, Bangalore Urban, Karnataka, India Incharge, B S Narayan Centre For Advanced Learning and Software Development , BMSCE , TechBharat Organizing Committee member (Government of India)</p>
03-Mar	<p style="text-align: center;">Session Start Time:9:30 to 11:00 AM Dr.Surya Prasath Professor, Cincinnati Children's, University of Cincinnati, USA</p>	<p style="text-align: center;">Session Start Time: 02:00 PM to 03:30 PM Dr. Ramya Govindaraj School of Information Technology and Engineering, Vellore Institute of Technology-Vellore campus Tamilnadu.</p>
04-Mar	<p style="text-align: center;">Session Start Time: 10:30 AM to 12:00 PM Mr. Kiran Kinnera Senior Technical Officer 2 at CSIR-IICT AI Researcher</p>	<p style="text-align: center;">Session Start Time: 02:00 PM to 03:30 PM Mr. Anshu Dixit Tata Consultancy Services</p>
05-Mar	<p style="text-align: center;">Session Start Time: 10:30 AM to 12:00 PM Mr. Anshu Dixit Tata Consultancy Services</p>	<p style="text-align: center;">Session Start Time: 03:00 PM to 04:30 PM Celestine Iwendi Professor School of Creative Technologies University of Bolton, United Kingdom</p>

FDP Objectives:-

- The Faculty Development Programme (FDP) intends to provide financial assistance to facilitate up-gradation of knowledge, skill and intends to provide opportunities for induction training to teachers employed in disciplines Engineering & Technology, AI, Machine learning and the related technologies.
- A award Faculty Development Programme (FDP) to cover areas such as technical education policy, new concepts, methods and techniques, theory and skills development and up gradation of pedagogy educational technology, motivation, communication skills, management and other relevant issues to keep pace with the changing scenario in Technical Education.
- The scheme is designed to enhance the teaching and other skills of the faculty. And to make them aware about modern teaching tools and methodologies. It provide an opportunity to acquire knowledge about current technological developments in relevant fields. It will not only promote the professional practices relevant to technical education but also motivates the faculty to achieve competitive teaching and learning environment, thus channelizing development with respect to academic qualifications and personal matters.

FDP Outcomes:-

- After attending FDP, participants will get in depth understanding of research and its implications in decision making process.
- Gain better understanding on how to design a valid research project to answer specific research questions.
- Use descriptive and predictive statistical tools using robust analytical softwares.
- To make the participants familiar with univariate, bivariate and multivariate statistical Techniques.
- The participants able to clear their doubts and challenges they face in using emerging technologies.
- All the speakers have shared his deep experience in emerging computational paradigms and also discussed the challenges inside it.
- Speakers discussed the implementation of emerging AI based technologies and its applications. Speakers also interacted with various participants and cleared their doubts.

Scope:-

- The organized FDP has its academics and industrial scope. The FDP on emerging technology has scope in government sector also.

- The FDP on emerging computational trends can be used to conduct big projects of government to develop smart system.
- The FDP is significant in the development of smart algorithms for robotic devices.
- The FDP on emerging trends in computation paradigm takes a role in multi-disciplinary sector including electronics, mechanical, aeronautics, environment engineering etc.
- The FDP on ETACi2022 is significant in elevating faculty knowledge which can be used to minimize the gap between academic institutions and the academics.
- The FDP on ETACi2022 is significant of students to get good placement opportunities in various industries.

Topic and discussion by various guest speakers:-

Dr. Prashant R.Nair:-

Agile Software Development Methodology. Dr. Prashant R.Nair discussed about digital transformation, Industry 4.0, remote work, javascript, python, micro services, kubernetes and the related emerging technologies. He discussed the design, development and the deployment of the various AI based software. He also discussed the various tools used in agile software development methodology.

Dr. Sudeep Tanwar

Emerging trends on Block chain and its Applications. Dr. Sudeep Tanwar has discussed that how the block chain technology is really sophisticated and emerging in the latest research based application. The significance of block chain technology is its decentralized structure and security. He also describe that the technology is interdependent on various host rather depending on a single host. In his presentation, he has described the various applications and security norms of the block chain technology.

Dr. Sunil Kr Pandey

Machine Learning and its Applications. Dr. Sunil Kr Pandey has discussed about machine learning and its various application. He has discussed the implementation of machine learning algorithms on various real time projects and innovations. In his presentation, he discussed various advantages of machine learning applications.

Prof. Shiv Rama Krishna

Python and stock market. Dr Praba Karan has discussed the various applications based on python programming language. He also discussed about stock market prediction using python and machine learning techniques. In his presentation, he presented the significance of python programming language over other tools.

Dr. Surya Prasath

AI, Image Processing and its Application in Biomedical sector. Dr. Surya Prasath has discussed the use of AI technology in biomedical images. He discussed the relevance of image processing for the feature extraction from the biomedical radiographic images. He discussed about the identification and classification of diseases of human body from his/her radiographic images such as X-ray, CT scan etc using computational algorithms. He has also discussed the challenges in the recognition of diseases by neural network and other AI based technologies.

Mr. Anshu Dixit

Artificial Intelligence and Machine Learning. Mr. Anshu Dixit discussed his working experience on AI in IT Industry. He has also discussed his worked on programming languages like C#, Java and on various tools like IBM Integrator, etc. He has discussed the various challenges coming in developing AI based product. He discussed supervised learning, unsupervised learning, deep learning, neural networks etc. In his presentation, he cumulate the design and the implementation of AI based model.

Dr. Celestine Iwendi :-

Next Generation Artificial Intelligence: Security Issues and Industry 5.0. Dr. Celestine discussed various emerging artificial intelligence based technologies and discussed its challenges and application in industrial purpose. He discussed the design principles of AI based industry. He also reveals the AI 2.0 for sustainable future. In his presentation, he discussed the various best practices involved in industry 5.0.

Few glimpses of the events

This screenshot shows a Zoom meeting in progress with 64 participants. The main window displays a grid of 20 video thumbnails. The top row includes Gauri, Harshita Virwani, Keerti Mishra (with a large 'K' icon), Mariyam Kidwai, and Prachi Raval. The bottom row includes Asit Gahalaut, Rk, Dr. Nupur Soni, Sana Afreen, and Dr. ADARSH N G... The interface includes a top bar with 'Recording LIVE on Facebook' and 'Speaker View' options, and a bottom toolbar with 'Mute', 'Start Video', 'Participants', 'Chat', 'Share Screen', 'Record', 'Reactions', and 'Leave' buttons. A 'Participants (64)' sidebar on the right shows a search bar and a list of participants with their names and status icons. Below the participant list is a 'Zoom Group Chat' window showing messages from various participants, including 'thank you sir' and 'Thank you sir'. The Windows taskbar at the bottom shows the search bar, system tray, and the date/time '3:23 PM 3/2/2022'.

This screenshot shows a Zoom meeting in progress with 63 participants. The main window displays a grid of 20 video thumbnails. The top row includes Prof. Girjesh M..., Ankit, Anurag Tiwari, srk, and Vineet Agarwal. The bottom row includes suraj srivastava, Dr.R.Selvaraj, Dr.Anshu srivast..., Ajeet Singh, and SAURABH BHUT... The interface includes a top bar with 'Recording LIVE on Facebook' and 'Speaker View' options, and a bottom toolbar with 'Mute', 'Start Video', 'Participants', 'Chat', 'Share Screen', 'Record', 'Reactions', and 'Leave' buttons. A 'Participants (63)' sidebar on the right shows a search bar and a list of participants with their names and status icons. Below the participant list is a 'Zoom Group Chat' window showing messages from various participants, including 'thank you sir' and 'Thank you sir'. The Windows taskbar at the bottom shows the search bar, system tray, and the date/time '3:22 PM 3/2/2022'.

Zoom Meeting

Recording LIVE on Facebook

Prof. Girjesh M...	Ankit	Anurag Tiwari	srk	Vineet Agarwal
Purna Ch Sethi	Manish Maurya	Kripa Shankar ...	Bhanoo Pratap...	Mr. Abhinav Pr...
Eram Fatima	SHOBHIT MANI...	SCSE surendra si...	VIDHYA S	Archana Dwivedi
MOHIT MISHRA	Dr. Vijay Prata...	IT_VIVEK KESHARI	Deepak Sahu	PRERNA GUPTA
suraj srivastava	Dr.R.Selvaraj	Dr.Anshu srivast...	Ajeet Singh	SAURABH BHUT...

Participants (63)

Find a participant

- Ankit (Me)
- Anurag Tiwari (Host)
- Ankur Srivastava IT 88... (Co-host)
- Mr. Abhinav Pratap Si... (Co-host)
- srk (Co-host)

Zoom Group Chat

From 92- Prachi Raval to Everyone: thank you sir

From Bhanoo Pratap Singh to Everyone: thanku sir

From Amit kumar Tewari to Everyone: thank u sir

From Prof. Girjesh Mishra to Everyone: Thank you sir

To: Everyone

Type Message here

Windows
Go to Settings to activate Windows.

Type here to search

29°C Haze 3:22 PM 3/2/2022

Zoom Meeting

Recording LIVE on Facebook

Speaker View

Harshita Virwani	Keerti Mishra	Mariyam Kidwai	Prachi Raval	Syed Rashid An...
MAGESWARI K	ASHISH SRIVAS...	KIT SARANYA CSE	Gopi	SANDEEP SINGH
Chetana Prakash	RAJESH M	sangeeta sharma	Dr. C. Deepa	Dr. Mahesh Ku...
Sravanthi Laks...	Dr. Vipin Rai	vartika bhadana	Samson	Ankur Srivastav...
Asit Gahalaut	Rk	Dr. Nupur Soni	Sana Afreen	Dr ADARSH N G...

Participants (63)

Find a participant

- Ankit (Me)
- Anurag Tiwari (Host)
- srk (Co-host)
- Ankur Srivastava IT 88... (Co-host)
- Mr. Abhinav Pratap Si... (Co-host)

Zoom Group Chat

From 92- Prachi Raval to Everyone: thank you sir

From Bhanoo Pratap Singh to Everyone: thanku sir

From Amit kumar Tewari to Everyone: thank u sir

From Prof. Girjesh Mishra to Everyone: Thank you sir

To: Everyone

Type Message here

Windows
Go to Settings to activate Windows.

Mute Stop Video Participants Chat Share Screen Record Reactions Leave

Type here to search

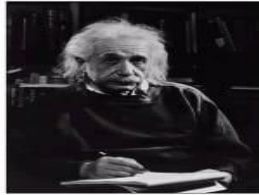
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REC LIVE



Image Processing/Computer Vision

What we see



What a computer sees

0	5	2	5	4	7	6	9	9
3	0	1	2	3	4	5	6	7
2	1	0	3	2	5	4	7	9
5	2	3	0	1	2	3	4	5
4	3	2	1	0	3	2	5	4
7	4	5	2	3	0	1	2	3
6	5	4	3	2	1	0	3	2
9	0	7	4	5	2	3	0	1
8	7	6	5	4	3	2	1	0

Surya Prasath's screen



2:03 PM

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LIVE



OUR EMINENT SPEAKER



C Kishor Kumar Reddy

Associate Professor, Dept. of Computer Science and Engineering,
Stanley College of Engineering and Technology for Women, Hyderabad.
published more than 50+ research papers in National and International Conferences, Book
Chapters, and journals indexed by Scopus and Web of Science

Ankit Kumar's screen

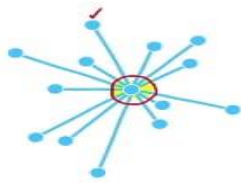




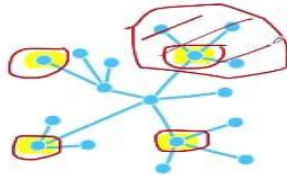
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Centralized vs Decentralized vs Distributed



Complete reliance on single point
(Cloud Computing)
If CC fails then all nodes fail
Not scalable



Multiple points of coordination
(Blockchain)



Everyone collectively execute the job
No central controller
Intranets, Internet, WWW, email

Dr. Sudeep is presenting



Dr. Sudeep



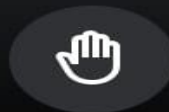
Adarsh

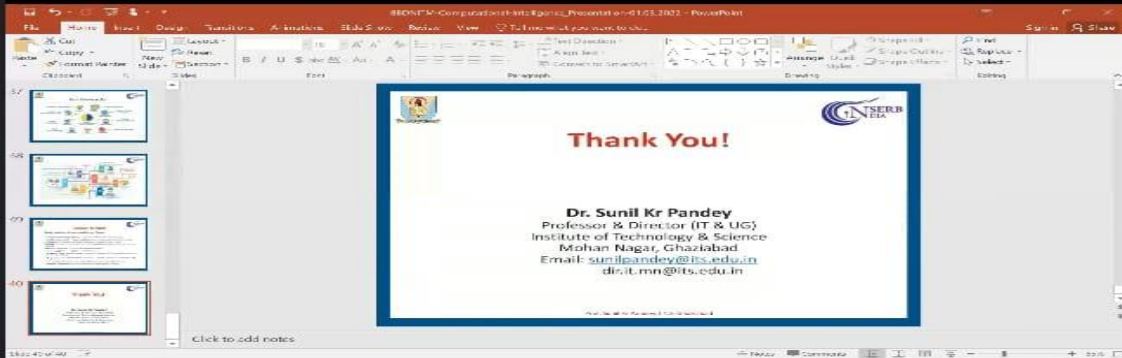


You

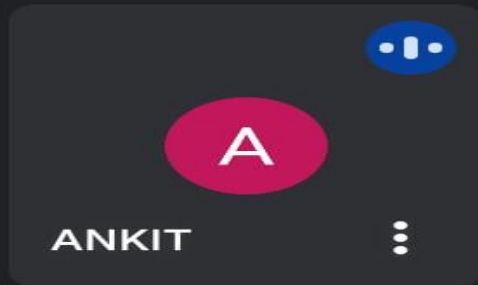


Eram 62 others

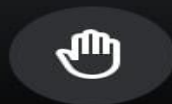




Sunil is presenting



Sunil Pandey joined



2:30 PM

VoWiFi 79

REC

LIVE

