



REPORT

One week Online Faculty Development Program (FDP)

On

Soft Computing Techniques (SCT-2020)

25 – 30 July' 2020

Sponsored by TEQIP-III

(Order No.: NIT/SRI/TEQIP-III/383, dated 17.07.2020)

Submitted By:

Prof. Abdul Hamid Bhat
Professor & Head, EED
(Coordinator, FDP on SCT-2020)

Dr. Asadur Rahman
Assistant Professor, EED
(Convener, FDP on SCT-2020)

Organized by:

Electrical Engineering Department
National Institute of Technology Srinagar
(An Institute of National Importance under Ministry of HRD, Govt. of India)
Hazratbal, Srinagar, Jammu & Kashmir – 190006

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I. About the course:

Soft computing, as opposed to traditional computing, deals with approximate models and gives solutions to complex real-life problems. Unlike hard computing, soft computing is tolerant of imprecision, uncertainty, partial truth, and approximations. In effect, the role model for soft computing is the natural evolution, human intelligence and human mind. Soft computing is based on techniques such as fuzzy logic, genetic algorithms, artificial neural networks, machine learning, and expert systems. Although soft computing theory and techniques were first introduced in 1980s, it has now become a major research and study area in all fields of research and design.

One week Online Faculty Development Program (FDP) On Soft Computing Techniques - 2020 (SCT-2020) (Sponsored by TEQIP-III) 25-30 July' 2020	Organized by: Department of Electrical Engineering National Institute of Technology Srinagar Hazratbal, Srinagar, Jammu & Kashmir, India (An Institute of National Importance under Ministry of HRD, Govt. of India)	
Invited Speakers		
 Prof. Kalyanmoy Deb Koenig Endowed Chair Professor, Electrical and Computer Engineering, Computer Science and Engineering Mechanical Engineering Michigan State University (USA) Keynote Speaker	 Prof. Debasis Samanta Associate Professor, IIT Kharagpur	
Prof. Deepak Sharma Associate Professor, IIT Guwahati 	Mr. Asif Iqbal Founder & C.E.O Piro Technologies, New Delhi 	
Organizing Committee		
<ul style="list-style-type: none">Patron & Chairman: Prof. Rakesh Sehgal, Director NIT Srinagar 		<ul style="list-style-type: none">Co-Chairman: Prof. M. F. Wani, TEQIP-III Coordinator
<ul style="list-style-type: none">Co-Chairman & Coordinator: Prof. Abdul Hamid Bhat, Prof. & Head, EED 		<ul style="list-style-type: none">Convener: Dr. Asadur Rahman, Asst. Prof., EED (asadur@nitsri.net)

Program Aim and Objective:

- ✓ Impart knowledge about Emerging Technologies and Advances in Soft Computing Techniques.

Program Outcome:

- ✓ The program reflects inter-disciplinary scope for applications of Soft Computing Techniques.

II. Organizing Committee:

- Patron & Chairman:

Prof. Rakesh Sehgal,

[Director NIT Srinagar](#)



- Co-Chairman:

Prof. M. F. Wani,

[TEQIP-III Coordinator](#)



- Co-Chairman & Coordinator:

Prof. Abdul Hamid Bhat,

[Prof. & Head, EED](#)



- Convener:

Dr. Asadur Rahman,

[Asst. Prof., EED](#)

[\(asadur@nitsri.net\)](mailto:asadur@nitsri.net)



III. Schedule



One week Online Faculty Development Program (FDP) on **Soft Computing Techniques (SCT-2020)**
25 – 30 July' 2020

Sponsored by: TEQIP-III

Organized by: Electrical Engineering Department, NIT Srinagar, J&K – 190006
(An Institute of National Importance under Ministry of HRD, Govt. of India)

Schedule

Keynote Speaker: Prof. Kalyanmoy Deb

Koenig Endowed Chair Professor, Michigan State University, East Lansing, USA

25th July' 2020 8:00 – 9:00 AM (IST), Topic: Evolutionary Computation: Single-objective Methods and Applications

26th July' 2020 8:00 – 9:00 AM (IST), Topic: Evolutionary Computation: Multi-objective Methods and Applications

Inaugural Program: 25th July' 2020 (9:30 – 10:00 AM, IST)

Guest Speakers:

• **Prof. Deepak Sharma**

Associate Professor, Mechanical Engineering Department, Indian Institute of Technology Guwahati

25th July' 2020 10 AM – 12 PM (IST), Topic: Genetic Algorithms: Concept, Algorithm, and Case Studies

26th July' 2020 10 AM – 12 PM (IST), Topic: Multi-Objective Optimization: Concept, NSGA-II, and Simulations

• **Mr. Asif Iqbal**

Founder & CEO, Piro Technologies, New Delhi

27th July' 2020 10 AM – 12 PM (IST), Topic: Artificial Intelligence: A Mathematical Perspective

28th July' 2020 10 AM – 12 PM (IST), Topic: Practicality of Artificial Neural Networks (ANN)

• **Prof. Debasis Samanta**

Associate Professor, Computer Science Engineering Department, Indian Institute of Technology Kharagpur

29th July' 2020 10 AM – 12 PM (IST), Topic: Fuzzy Logic Control: Introduction & Relations

30th July' 2020 10 AM – 12 PM (IST), Topic: Fuzzy Logic Controllers

Valedictory Function: 30th July' 2020 (12:00 – 12:30 PM, IST)

Abstract for Keynote Speech:

25th July' 2020 8:00 – 9:00 AM (IST)

Topic of Discussion: Evolutionary Computation: Single-objective Methods and Applications.





Abstract: Optimization is not a new term for engineers and scientists. In 300 BC, Euclid introduced the concept of minimum and maximum. However, major algorithmic developments and applications of optimization started during and after the Second World War. In this first lecture, we shall outline a broad scope of optimization in practical problem solving tasks. Thereafter, we shall discuss two different optimization methodologies: point-based and population-based optimization. Participants will be introduced a few representative methods of each class (such as, gradient-based algorithms and evolutionary algorithms) with case studies taken from industries. An example of solving a billion-variable industrial problem will also be presented.

26th July' 2020 8:00 – 9:00 AM (IST)

Topic of Discussion: Evolutionary Computation: Multi-objective Methods and Applications.

Abstract: Most practical engineering and societal problems involve more than one and often conflicting objectives, such as simultaneous minimization of cost and maximization of quality in an optimal product design task. These problems give rise to multiple Pareto-optimal solutions trading-off the objectives. In this lecture, we shall present point and population-based algorithms for solving multi-objective optimization problems with numerical and industries case studies. A list of current research topics, including a knowledge discovery procedure, will be highlighted.

IV. List of Invited Speakers

<u>Sl. No.</u>	<u>Name & Affiliation of the Speaker</u>	<u>Photograph</u>
1.	Prof. Kalyanmoy Deb (Keynote Speaker) Koenig Endowed Chair Professor, Department of Electrical and Computing Engineering Michigan State University, East Lansing, USA	
2.	Dr. Debasis Samanta Associate Professor, Computer Science Engineering Department, Indian Institute of Technology Kharagpur	
3.	Dr. Deepak Sharma Associate Professor, Mechanical Engineering Department, Indian Institute of Technology Guwahati	
4.	Mr. Asif Iqbal Founder & CEO, Piro Technologies, New Delhi	

V. Participants from various Organization (Academics / Industry)

Sl. No.	Name of the Organization	Sl. No.	Name of the Organization
1	A D J Dharmambal Polytechnic College	31	I. K. G. Punjab Tech. University, Punjab
2	Acharya Nagarjuna University	32	I.U.S.T, Awantipora J&K
3	AL FALAH UNIVERSITY FARIDABAD	33	IIT MANDI
4	Anjuman-E-Islam Polytechnic Gadag	34	Institute of Technology, Zakura
5	Ashoka Institute of Engg. Tech.	35	J&K Power Development Corporation
6	Aurora's Technological & Research Institute	36	J. N. Govt. Engg. College Sundernagar
7	B V Raju Institute of Technology Narsapur	37	JIS College of Engineering, Kalyani WB
8	Bengal College of Polytechnic Durgapur	38	Jk bank
9	Bhagalpur College of Engineering Bhagalpur	39	JNTUH College of Engineering Sultanpur
10	BTKIT DWARAHAT	40	Jorhat Engineering College
11	CBIT Hyderabad	41	Jorhat Institute of Science and Technology
12	Central University of Kashmir	42	Jyothishmathi Institute of Technological Sciences
13	CIT Sandwich Polytechnic College, Coimbatore	43	Kamaraj College of Engg. And Technology
14	COAL INDIA LIMITED	44	KARAIKAL POLYTECHNIC COLLEGE
15	College of Technology and Engineering, Udaipur	45	Kashmir University
16	Darbhangha College of Engineering	46	KPR Institute of Engineering and Technology, Coimbatore
17	DRIEMS AUTONOMOUS ENGINEERING	47	Krishna Engineering College, Bhilai
18	G.I.M.T. Guwahati	48	LRG govt. Arts College for Women, Tirupur
19	G.S.M. Polytechnic Bardhaman W.B	49	Madhav Institute of Technology and Science, Gwalior
20	GGSESTC, Bokaro	50	Maharishi Dayanand University, Rothak
21	GLOBAL College of Pharmacy, Hyderabad	51	Maratha Mandal Engineering College
22	Government College of Technology, Coimbatore	52	MATURI VENKATA SUBBA RAO ENGINEERING COLLEGE
23	Government Polytechnic, Araria	53	Megha Institute of Engineering & Technology for Women
24	Govt Boys School Leh	54	Mewar University, Chittorgarh Rajasthan
25	Govt Polytechnic, Medak Telangana	55	MIETW, Hyderabad
26	Govt. Girls' HSS Magam Budgam	56	MNNIT ALLAHABAD
27	Govt. Polytechnic College, Arakandanallur	57	Murugappa Polytechnic College, Chennai
28	Govt. Polytechnic College, Sendhwa	58	Muthiah Polytechnic College, Annamalai nagar
29	Guntur Engineering College	59	Nachimuthu Polytechnic College, Pollachi
30	Guru Gobind Singh Educational Society's Technical Campus	60	NALBARI POLYTECHNIC

Contd.

TEQIP-III sponsored One week Online Faculty Development Program (FDP) on
Soft Computing Techniques (SCT-2020) from 25 – 30 July' 2020

Contd.

Sl. No.	Name of the Organization	Sl. No.	Name of the Organization
61	Naraina College of Engineering & Technology, Kanpur	79	Royal Global University, Guwahati
62	Nirma University	80	Shri Mata Vaishno Devi University, J&K
63	NIT CALICUT	81	Shri Sai College, J&K
64	NIT HAMIRPUR	82	Shro Ram group of Colleges, Muzaffarnagar
65	NIT JAMSHEDPUR	83	Siddaganga Institute of Technology, Tumkur
66	NIT MEGHALAYA	84	Sikkim Manipal Institute of Technology
67	NIT PATNA	85	Sinhgad Institute of Technology and Science, Pune
68	NIT SIKKIM	86	SKIT Jaipur
69	NIT SRINAGAR	87	SKIT, M&G, Jaipur
70	NIT WARANGAL	88	Sri Sairam Engineering College, Chennai
71	NPA CENTENARY POLYTECHNIC COLLEGE	89	Sri Venkateswara University College of Engineering Tirupati
72	PDA COLLEGE OF ENGINEERING, KALABURAGI	90	Sridevi women's Engineering college, Hyderabad
73	Poornima Institute of Engineering and Technology, Jaipur	91	Templecity Institute of Technology & Engg., Bhubaneswar
74	Prasad V Potluri Siddhartha Institute of Technology, Vijayawada	92	TKR COLLEGE OF ENGINEERING & TECHNOLOGY
75	Presidency Univerisity , Bangalore	93	University of Kashmir
76	Rawafid Engineering Consultancy	94	Valivalam Desikar Polytechnic College
77	Regional Institute of Education (NCERT), Bhubaneswar	95	Veer Surendra Sai University of Technology
78	Roland Institute of Technology, Orissa	96	Women's Polytechnic College, PUDUCHERRY

A total of 250 participants were registered from the above mentioned organizations for the program. The participant number had to be restricted due to limited seats availability in online platform Google Meet.

VI. Program Structure

The program deliveries are as follows:

25th July 2020

Inaugural:



One week Online Faculty Development Program (FDP) on
Soft Computing Techniques - 2020 (SCT-2020)
25 – 30 July' 2020

Sponsored by: TEQIP-III

Organized by: Electrical Engineering Department, NIT Srinagar, J&K – 190006
(An Institute of National Importance under Ministry of HRD, Govt. of India)

Agenda

Inaugural Program 25th July' 2020 (9:30 – 10:00 AM, IST)

<u>Welcome:</u>	Dr. Asadur Rahman, Convener of the Program Assistant Professor, Electrical Engineering Department, National Institute of Technology Srinagar, J&K
<u>Introduction:</u>	Prof. Abdul Hamid Bhat, Coordinator of the Program Professor & Head, Electrical Engineering Department, National Institute of Technology Srinagar, J&K
<u>Guest of Honour:</u>	Prof. G. A. Harmain, Dean (Research & Consultancy) Professor, Mechanical Engineering Department, National Institute of Technology Srinagar, J&K
<u>Guest of Honour:</u>	Prof. M. F. Wani, TEQIP-III Coordinator, NIT Srinagar Dean (Faculty welfare) & Professor, Mechanical Engineering Department, National Institute of Technology Srinagar, J&K
<u>Chief Guest:</u>	Prof. Rakesh Sehgal, Director, NIT Srinagar Professor, Mechanical Engineering Department, National Institute of Technology Srinagar, J&K

- Convener of the FDP, Dr. Asadur Rahman, started the Inaugural program with welcoming the Honorable Director, Prof Rakesh Sehgal; TEQIP-III Coordinator, Prof M.F Wani; Dean (Research & Consultancy) Prof. G. A. Harmain; Head of the EE Department, Prof Abdul Hamid Bhat; Faculty members of EE Department and all the Participants.
- Coordinator of the FDP, Prof. A.H. Bhat, introduced the FDP and EE department to everyone.
- Guest of Honour, Prof. G.A. Harmain (Dean, R&C) and Prof. M.F. Wani (TEQIP-III Coordinator) emphasized the importance of this program.
- Honorable Director of NIT Srinagar, Prof. Rakesh Sehgal, was the chief guest and highlighted the significance of an online program in this pandemic situation and encouraged other departments to take such initiatives.

TEQIP-III sponsored One week Online Faculty Development Program (FDP) on Soft Computing Techniques (SCT-2020) from 25 – 30 July' 2020



The Inaugural program for the FDP on SCT-2020 was published in 'Rising Kashmir' newspaper dated 28 July 2020

Rising Kashmir News
Srinagar, Tuesday 28 July 2020
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ed spots: SMC

for which water sprinkling vehicle will be availed," Bandy said.

He said people of Srinagar are requested to contact CSO and concerned Ward Officers for identification of bad spots so that they can be cleared at the earliest.

Bandy said it was the responsibility of each citizen to ensure sanitation in their respective colonies and areas, apart from their homes.

"Everybody should actively participate to ensure Srinagar remains healthy and clean," he said.

DC Kupwara reviews Eid-ul-Adha arrangements, revenue issues

Kupwara, July 27: Deputy Commissioner (DC) Kupwara, Anshul Gang Monday took stock of the arrangements put in place for the ensuing Eid ul Adha, besides he also took a review of issues pertaining to the Revenue Department.

During the meeting, the DC directed the concerned officers to implement already issued orders regarding Eid ul Adha in letter and spirit and ensure that during 3-day partial relaxation from July 28 to July 30 only fifty per cent shops remain open as per local-level market arrangements in consultation with members of respective Traders Federations. He said COVID-19 test has been made mandatory for every shopkeeper who opens a shop beside the usage of masks and maintaining social distance should also be monitored. Reviewing the COVID-19 measures, the Deputy Commissioner asked the Tehsildars and Kaib Tehsildars to submit recommendations for de-notification of Red Zones following qualifying criteria. He asked Revenue officers of the district to play a proactive role in the field by providing better service to the public.

The Nodal Officer COVID-19 informed the meeting that out of 24 Red Zones, 5 have already been de-notified and by now only 19 Red zones are active in the district.

The DC reviewed the process of displaying of boardings regarding COVID-19 awareness and it was informed that 23 boardings have been displayed in Kupwara, Handwara and Langate towns besides at all block headquarters, he also directed for displaying boardings at all Tehsil headquarters to ensure greater awareness regarding COVID-19. The meeting also discussed identifying state and Kachharai land in Municipal Committees of the district, settlement issues, land acquisition and mutation process cases.

The Deputy Commissioner stressed upon the officers to speed up the disposal of all pending cases and ensure that all cases are resolved within 10 days.

Among others, Additional Deputy Commissioner, Kupwara, Additional Deputy Commissioner, Handwara, Assistant Commissioner Revenue attended the meeting.

Action Plan for Jal Jeevan Mission finalised for Anantnag

Anantnag, July 27: District Development Commissioner (DDC) Anantnag, KK Sidha Monday convened a meeting of officers and Engineers of Jal Shakti Department to finalise the Action Plan for Anantnag district.

He said to address the issue of water supply in the country flagship programme has been launched by the Ministry of Jalshakti, Govt. Of India to provide the drinking water facility to every household under the slogan 'Har number of households, 5622 stands connected to water supply while the remaining 7022 number of households are to be connected besides raising the service level of already connected households and addressing quality issues of the existing schemes through retrofitting.

He also said that PRIs are to be fully involved in the planning, execution and maintenance of the schemes. The DDC said that all 359 number of schemes are

One-week faculty development prog held at NIT Srinagar

Srinagar, July 27: Department of Electrical Engineering, National Institute of Technology Srinagar, J&K is organizing an online one-week Faculty Development Program/Webinar on "Soft Computing Techniques (SCT-2020)" from 25 – 30 July 2020, sponsored by Prof. A.H. Bhat (Dean, EED and Coordinator). In the inaugural session of the programme, the keynote speech was delivered by Prof. Kalyanmoy Deb, Michigan State University (USA). The inaugural function was held online on 25th July, 9:30-10 AM, with a welcome speech by Dr. A. Rahman (AP, EED and Convener). The introduction speech was delivered by Prof. A.H. Bhat (Dean, EED and Coordinator). Guest of Honour: Prof. G.A. Harmain (Dean, R&C) and Prof. M.F. Wani (TEQIP-III Coordinator) also attended the program and emphasised its importance. Director of NIT Srinagar, Prof. Rakesh Selgal was the Chief Guest and highlighted the significance of an online program in this pandemic situation. There are around 250 registered participants.

Electrical Engineering Department - National Institute of Technology Srinagar

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25th July 2020

Keynote Speaker: Prof. Kalyanmoy Deb (Michigan State University, USA)

Topic of Discussion: Evolutionary Computation: Single-objective Methods and Applications.

Abstract: Optimization is not a new term for engineers and scientists. In 300 BC, Euclid introduced the concept of minimum and maximum. However, major algorithmic developments and applications of optimization started during and after the Second World War. In this first lecture, we shall outline a broad scope of optimization in practical problem solving tasks. Thereafter, we shall discuss two different optimization methodologies: point-based and population-based optimization. Participants will be introduced a few representative methods of each class (such as, gradient-based algorithms and evolutionary algorithms) with case studies taken from industries. An example of solving a billion-variable industrial problem will also be presented.

The screenshot shows a Google Meet interface. The main window displays a presentation slide titled "Optimization is Omni-Present" with the subtitle "Design & Manufacturing". The slide is divided into several sections: "Modeling" (with a diagram of a steelmaking process), "Scientific Experiments" (with a diagram of a person in a lab), "Supply Chain" (with a flowchart), "Placement" (with a diagram of a car chassis), "Control" (with a factory control room), "Prediction" (with a line graph), "Intelligent Systems" (with a person in a red shirt), "Data Mining" (with a bar chart), and "Optimize: Environment Revenue" and "Optimize: Profit Production" (with various charts). The Meet interface shows a grid of participant avatars, with the presenter's name "Kalyanmoy Deb" visible. The system tray at the bottom shows the time as 08:24 on 25-07-2020.

Guest Speaker: Dr. Deepak Sharma (Indian Institute of Technology Guwahati, India)

Topic of Discussion: Genetic Algorithms: Concept, Algorithm, and Case Studies.

26th July 2020

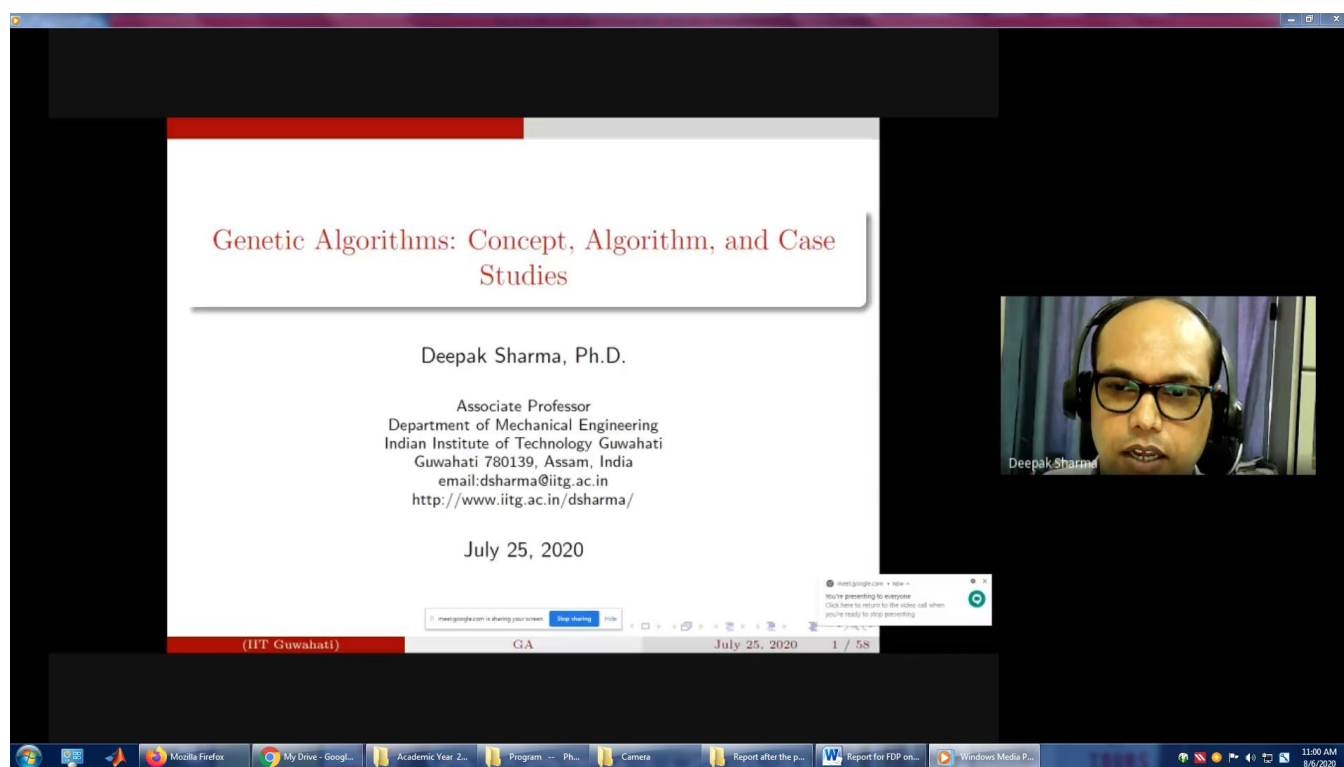
Keynote Speaker: Prof. Kalyanmoy Deb (Michigan State University, USA)

Topic of Discussion: Evolutionary Computation: Multi-objective Methods and Applications.

Abstract: Most practical engineering and societal problems involve more than one and often conflicting objectives, such as simultaneous minimization of cost and maximization of quality in an optimal product design task. These problems give rise to multiple Pareto-optimal solutions trading-off the objectives. In this lecture, we shall present point and population-based algorithms for solving multi-objective optimization problems with numerical and industries case studies. A list of current research topics, including a knowledge discovery procedure, will be highlighted.

Guest Speaker: Dr. Deepak Sharma (Indian Institute of Technology Guwahati, India)

Topic of Discussion: Multi-Objective Optimization: Concept, NSGA-II, and Simulations.



The screenshot shows a Zoom meeting interface. The main window displays a presentation slide with the following text:

Genetic Algorithms: Concept, Algorithm, and Case Studies

Deepak Sharma, Ph.D.

Associate Professor
Department of Mechanical Engineering
Indian Institute of Technology Guwahati
Guwahati 780139, Assam, India
email: dsharma@iitg.ac.in
http://www.iitg.ac.in/dsharma/

July 25, 2020

At the bottom of the slide, it says "(IIT Guwahati) GA July 25, 2020 1 / 58".

On the right side of the meeting window, there is a video feed of the speaker, Dr. Deepak Sharma, wearing glasses and a headset. A small notification box above the video feed says "Zoom Meeting: You're presenting to everyone. Click here to return to the video call when you're ready to stop presenting."

The Windows taskbar at the bottom shows the following applications: Mozilla Firefox, My Drive - Google..., Academic Year 2..., Program - Ph..., Camera, Report after the p..., Report for FDP on..., and Windows Media P... The system tray shows the time as 11:50 AM on 8/6/2020.

27th July 2020

Guest Speaker: Mr. Asif Iqbal (Piro Technologies, New Delhi, India)

Topic of Discussion: Artificial Intelligence: A Mathematical Perspective.

The screenshot shows a Zoom meeting interface. On the left, a list of slides is visible. The main window displays a PowerPoint slide titled "BASIC SETUP OF LEARNING PROBLEM" from the Department of Informatics at the University of Oslo. The slide includes a "Learning diagram" with the following components:

- UNKNOWN TARGET FUNCTION** $f: X \rightarrow Y$
- TRAINING EXAMPLES** $(x_1, y_1), \dots, (x_n, y_n)$
- LEARNING ALGORITHM** \mathcal{L}
- FINAL HYPOTHESIS** $g = f$
- HYPOTHESIS SET** \mathcal{H}

The diagram shows the flow from the unknown target function and training examples through the learning algorithm to the final hypothesis. A hypothesis set \mathcal{H} is also shown as an input to the learning algorithm. The slide also lists:

- The Hypothesis Set** $\mathcal{H} = \{h\}$ $g \in \mathcal{H}$
- The Learning Algorithm** – e.g. Gradient descent

A note states: "The hypothesis set and the learning algorithms are referred to as the Learning model".

On the right side of the Zoom window, there is a video thumbnail for "Asif Iqbal" with a large letter 'A' in a circle, indicating that the video is muted.

28th July 2020

Guest Speaker: Mr. Asif Iqbal (Piro Technologies, New Delhi, India)

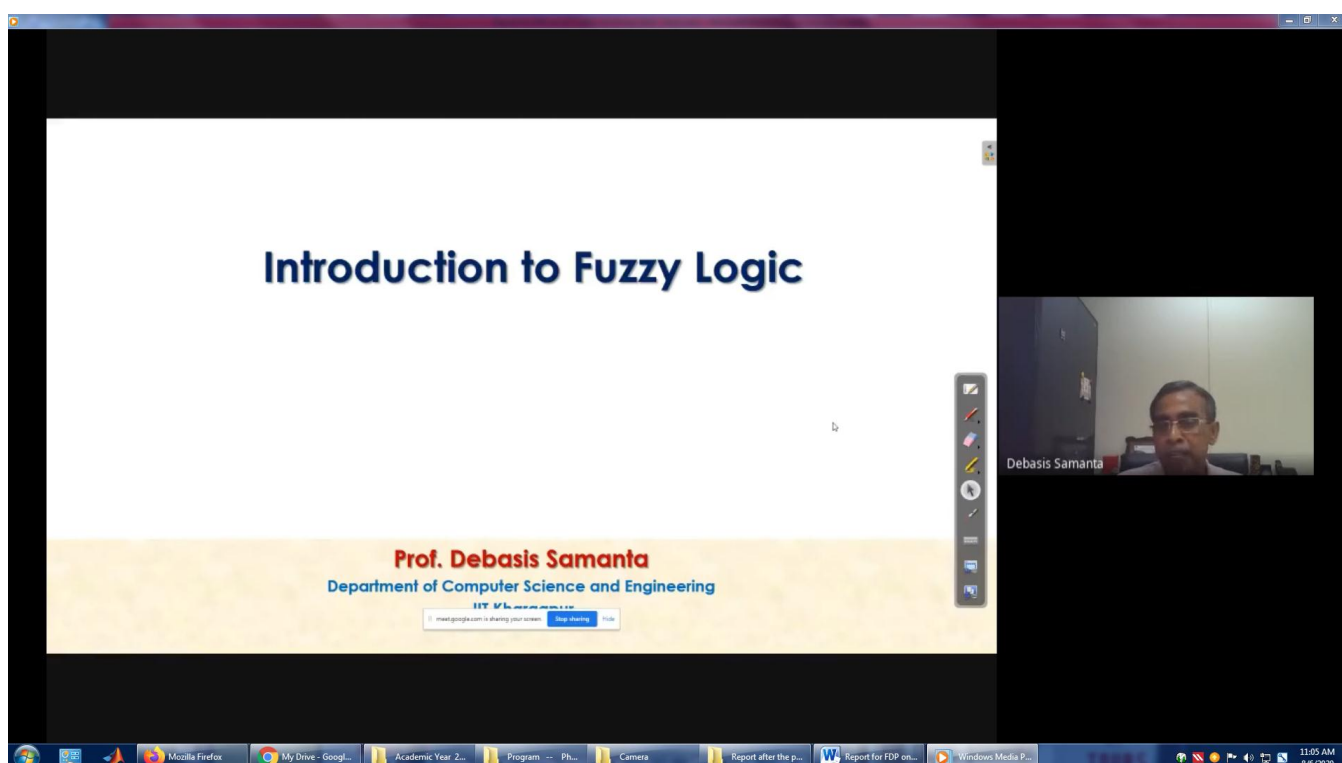
Topic of Discussion: Practicality of Artificial Neural Networks (ANN).

29th July 2020

Guest Speaker: Dr. Debasis Samanta (Indian Institute of Technology Kharagpur, India)

Topic of Discussion: Fuzzy Logic Control: Introduction & Relations.

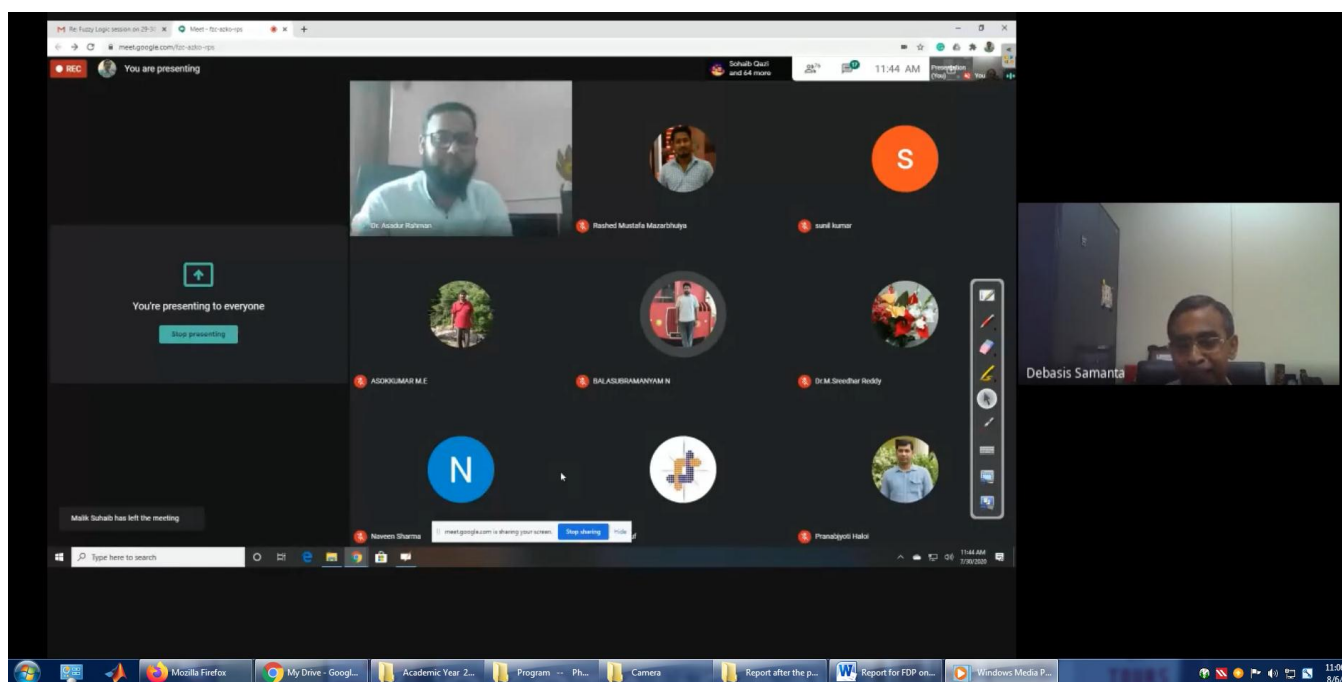
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30th July 2020

Guest Speaker: Dr. Debasis Samanta (Indian Institute of Technology Kharagpur, India)

Topic of Discussion: Fuzzy Logic Controllers.



30th July 2020

Valedictory Function:



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Sponsored by: TEQIP-III

Organized by: Electrical Engineering Department, NIT Srinagar, J&K – 190006
(An Institute of National Importance under Ministry of HRD, Govt. of India)

Valedictory Function 30th July' 2020 (12:00 – 12:30 PM, IST)

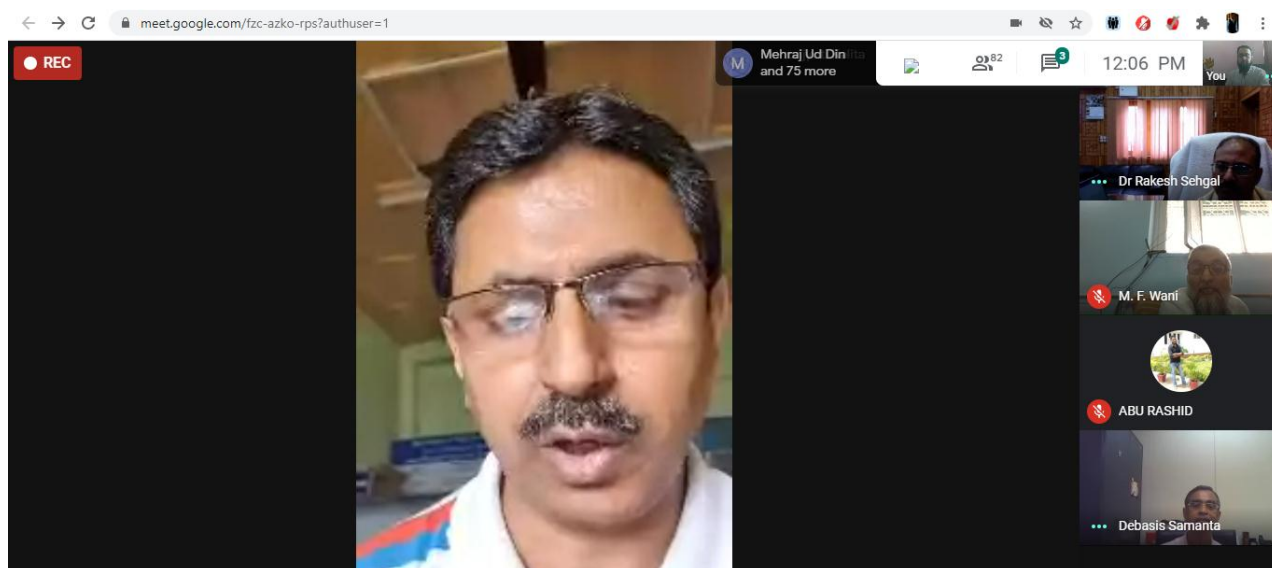
- Program Closing:** **Prof. Abdul Hamid Bhat**, Coordinator of the Program
Professor & Head, Electrical Engineering Department, National Institute of Technology Srinagar, J&K
- Guests of Honour:** **Prof. Debasis Samanta**, Invited Speaker
Associate Professor, Computer Science and Engineering Department, Indian Institute of Technology Kharagpur
- Prof. M. F. Wani**, TEQIP-III Coordinator, NIT Srinagar
Dean (FW) & Professor, Mechanical Engineering Department, National Institute of Technology Srinagar, J&K
- Prof. G. A. Harmain**, Dean (Research & Consultancy)
Professor, Mechanical Engineering Department, National Institute of Technology Srinagar, J&K
- Chief Guest:** **Prof. Rakesh Sehgal**, Director, NIT Srinagar
Professor, Mechanical Engineering Department, National Institute of Technology Srinagar, J&K
- Feedback:** Participants can share their program experiences and feedback.
- Vote of Thanks:** **Dr. Asadur Rahman**, Convener of the Program
Assistant Professor, Electrical Engineering Department, National Institute of Technology Srinagar, J&K

- The Valedictory function was attended by the Honorable Director, Prof Rakesh Sehgal; Invited speaker Dr. D. Samanta (IIT Kharagpur); TEQIP-III Coordinator, Prof M.F Wani; Dean (R&C) Prof. G. A. Harmain; HoD EE, Prof A.H. Bhat; EED Faculty members and all the Participants.

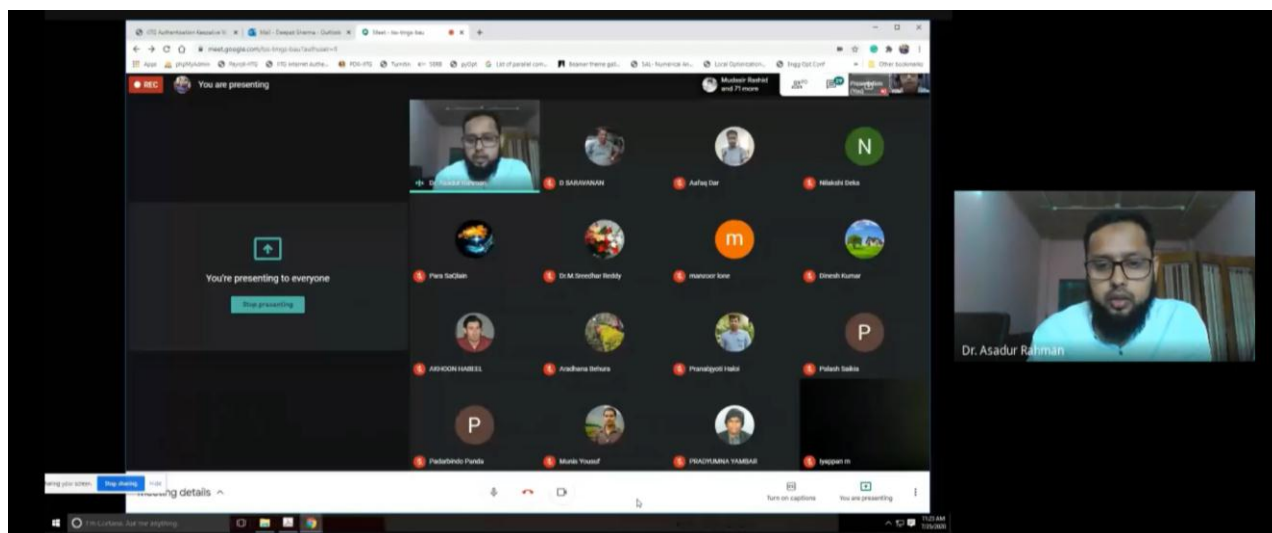


TEQIP-III sponsored One week Online Faculty Development Program (FDP) on
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- Coordinator of the FDP, Prof. A.H. Bhat, addressed the gathering with a summary of all the events during this one week program.



- Guest of Honour, Dr. D. Samanta (IIT Kharagpur); Prof. G.A. Harmain (Dean, R&C) and Prof. M.F. Wani (TEQIP-III Coordinator) highlighted the key points and congratulated the organizers for successfully completing the program.
- Chief Guest, Prof. Rakesh Sehgal, Honorable Director of NIT Srinagar, was delighted about the FDP and found the program a need of the hour. Prof. Sehgal, once again, encouraged other departments to take such initiatives and congratulated the organizers.
- Few participants expressed their views regarding the program and were overwhelmed about such a program. All the participants expressed their view through Feedback form using Google form.



- Vote of Thanks was delivered by Dr. Asadur Rahman, Convener of the FDP.

VII. Funding Agency

Technical Education Quality Improvement Programme – III (TEQIP – III):

The funding for this STC was provided by TEQIP-III, NIT Srinagar. We are grateful to TEQIP-III Coordinator Prof. M. F. Wani for providing the funding for this course. Third phase of Technical Education Quality Improvement Programme (TEQIP-III) is integrated with the Twelveth Five-year Plan objectives for Technical Education to improve the quality of engineering education in existing institutions with a special consideration for Low Income States and Special Category States (SCS). Its main focus is to improve quality and equity in engineering institutions, system level initiatives to strengthen sector governance and performance which include widening the scope of Aliating Technical Universities (ATUs), and twinning arrangements to build capacity and improve performance of institutions and ATUs participating in focus states.



VIII. Plan

A total of 250 participants with a mix of Faculties, Researchers, Scholars and Industry persons registered for the FDP program. The FDP was well received by the participants. The motivation appeared to organize more nos. of such courses incorporating Hands-on session and topic specific discussion. This entails additional funds and technical expertise, which we are hopeful to receive.

IX. Acknowledgements

It is indeed needful to thank Prof. A.H. Bhat, Head, EED for providing his whole-hearted support and motivation to organize such an event. Honorable Director, Prof. Rakesh Sehgal, with his online presence has made the program very motivating and interesting. We are thankful to him for his continuous

guidance. We are thankful to Prof. G.A. Harmain, Dean (R&C) for his support and highlighting the need for Soft Computing Techniques in the present era of Research. Funding from TEQIP-III has made the FDP worked out and we are thankful to Prof. M. F. Wani, Coordinator TEQIP-III and his office team. The course has got its due success because of the active involvement of the Administrative office staff taking care of all the administrative arrangements, such as Office Order/Approval, etc.

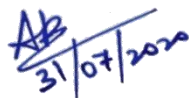
X. Feedback

Participants expressed their enthusiasm in the feedback forms for programme of such nature and topic. They enquired for future programs of this nature to be held in regular intervals.

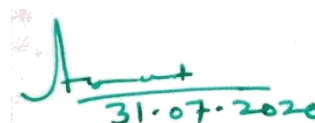
XI. Outcome

External participants from Academia and Industry from all across the country attended the FDP on SCT-2020 program. Recent trends of Soft Computing Techniques were discussed and few important research scopes pertaining to the topic were highlighted.

With Regards,



(Dr. Asadur Rahman)
Assistant Professor, EED
Convener, FDP on SCT-2020



(Prof. Abdul Hamid Bhat)
Professor & Head, EED
Coordinator, FDP on SCT-2020