ABOUT THE INSTITUTE

Named after the tenth Sikh Guru, Shri Guru Gobind Singhji (SGGS) Institute of Engineering and Technology, Vishnupuri, Nanded is established in 1981 has grown to the level of being recognized as a leader in the area of technical education and research. Started with just two undergraduate programs, it now offers 10 undergraduate and 10 postgraduate programs. It offers PhD program under its affiliating Swami Ramanand Teerth Marathwada University and Quality improvement program of Ministry of HRD, Government of India. It is a recognised research center of SRTMU, Nanded for Ph. D. program. One of the unique features of the institute is its faculty strength. It is one of the premier institutes having More than 70% faculty with Ph.D. Qualifications. Four of the institute's departments have FIST sponsored laboratories. Faculty research abilities have led to the establishment of a "Center of Excellence" in area of Signal and Image Processing under TEQIP. The research culture of the institute has been proven through publication in thousands of research contributions with good citation record in peer reviewed prestigious national / international journals and reputed international conferences. The institute has collaborations with a number of premier institutes including foreign universities and industries through which opportunities like internships, credit transfers, industry relevant projects, etc. are made available for students.

HOW TO APPLY

1. Draw a Demand Draft of any nationalized bank in favour of "Director, SGGSIE&T, Nanded" payable at Nanded.
2. Fill online application form which is available at Events Section of **www.sggs.ac.in**.
3. To confirm participation please send scanned copy of Demand Draft to **gmgalshetwar@gmail.com**.
4. Write down your **Name** and **Contact No.** on the back side of Demand Draft and submit it along with the hard copy of Registration Form.

Course Coordinator

Dr. Anil B. Gonde,

(Associate Professor)
Department of Electronics and Telecommunication Engg.

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One Week

Faculty Development Program

on

"Deep Learning: Concepts and Applications"

Dec 16 – 21, 2019

Under
Technical Education Quality Improvement Programme (TEQIP III)

Coordinator

Dr. Anil B. Gonde

Organised by

Department of Electronics and Telecommunication Engg.

Shri Guru Gobind Singhji Institute of Engineering and Technology,
Vishnupuri, Nanded, 431606 (MS).

SCOPE

The era of Deep Learning got a kickstart after the famous ImageNet Challenge held in 2012. After that there has been enormous developments in the field of signal and image processing using different Deep Learning methods introduced in recent years. Deep Learning approaches have proven very efficient and gave outstanding performance in varied applications such as Image classification, Image Segmentation, Image Fusion etc. The Deep Learning methods provide avenues for proper understanding of real-world problems. The fundamental idea behind Deep Learning is to enable computers with the learning ability using neural networks. This workshop will introduce the participants with the basic concepts of Deep Learning as well as explore new directions in the field so that participants would be oriented towards different applications of this technology of Deep Learning. The workshop will be *tutorial flavor and practically hands on experience for* participants who are new entrants as well as those who are working on developing new Deep Learning systems. It will also provide a timely update on the most recent developments in this area. As a result, we expect the research work to be later molded in a more polished form. The field of Deep Learning in Signal and Image Processing is expanding rapidly with ever-new developments and applications. The applications of Deep Learning in Signal processing and image processing encompass the fields of Communication, Industrial automation, Multimedia, and medical imaging etc. Active research is being conducted in various R & D organizations and academic institutes. Hence it has become important for the educators, practicing engineers and the students, to continuously update their knowledge and skills in Deep Learning and its applications. This workshop is mainly focusing on the specialized topics of Deep Learning and its practical applications. It will help participants to update their knowledge and widen their horizon.

COURSE PARTICIPANTS

Faculty, students from engineering colleges (preferably for the benefit of the new entrants in this field) and Practicing Engineers from Industries.

IMPORTANT DATES

Duration of FDP: 16th Dec. to 21st Dec. 2019.

Last date of registration: 14th Dec. 2019.

Participants will be informed about their selection through Email.

(Limited Seats are available. Selection will be done on First come First Served basis.)

REGISTRATION FEES

Faculty from Engineering Colleges: Rs. 3,000.
Research scholars from Engineering Colleges:
Rs. 1,500
Industrial participants: Rs. 7,000.
(Amount in Rupees/participant.)
No TA/DA will be admissible to any participant.
Faculty, Research Scholars, UG and PG Students from SGGS: Free.
Faculty, Research Scholars, UG and PG Students from CoT Pantnagar: Free.

ACCOMODATION

No accommodation will be provided for the participants. Participants have to make their own arrangements for lodging as well as food.

HOW TO REACH NANDED

By Train: As Nanded is divisional headquarters of southern central railway, travellers can easily get direct trains from cities like Delhi, Patna, Pune, Mumbai, Aurangabad, Nagpur, Amritsar, Srinagar, Howrah, Hyderabad to Nanded.

By Road: There are plenty a of state transport/private deluxe buses travel regularly to and from Nanded to all the major cities in the state.

COURSE FACULTY

Faculty members from IIT Ropar, MNIT Jaipur, and PEC Chandigarh will deliver the lectures as well as will conduct the hands-on sessions.

FDP COURSE CONTENTS

- Introduction to Machine learning.
- Introduction to Neural Networks.
- Deep Learning.
- Optimization and Regularization Techniques.
- Introduction to CNN.
- CNN Architectures.
- Deep learning hardware and software.
- CNN for object detection and character recognition.
- Motion estimation in Videos.
- Recurrent neural network.
- Video analysis in the context of human Action recognition in videos.
- Autoencoders.
- Generative adversarial network.
- Image dehazing using autoencoders and GAN.