High-End Workshop

On

Applications of Intelligent Transportation Systems and Drone Technology for Traffic Engineering Studies

04th July 2022 (Mon) – 08th July 2022 (Fri)

Organized by:

Department of Civil Engineering,
Visvesvaraya National Institute of Technology, Nagpur

***Funded by*:**

Science & Engineering Research Board (SERB) under the Accelerate Vigyan Scheme

Advisory Board

Chief Patron:

Dr. Pramod M. Padole, Director, VNIT Nagpur

Chairman:

Dr. Y. B. Katpatal, Head, Civil Engg., VNIT Nagpur

Principal Convener:

Dr. V.S.Landge, Professor, Civil Engg., VNIT Nagpur

About the Institute

Visvesvaraya National Institute of Technology, Nagpur is one of the thirty National Institutes of Technology in the country. It is an Institute of National Importance, named after Bharat Ratna Sir M. Visvesvaraya. Earlier, the Institute was known as Visvesvaraya Regional College of Engineering (VRCE). It was established in the year 1960 under the scheme sponsored by Govt. of India and Govt. of Maharashtra. The vision of institute is to contribute effectively to the national endeavor of producing quality human re- source of world class standard by developing a sustainable technical education system to meet the changing technological needs of the country incorporating relevant social concerns and to build an environment to create and propagate innovative technologies for the economic development of the nation.

About the Department

The Department of Civil Engineering is one of the finest and oldest engineering department of the Institute and stands with an immortal reputation. The department was formed along with the Institute itself and therefore is as old. The Department has highly educated and well experienced faculty members who endeavor to produce finest engineers, contributing incredibly to the nation. The alumni of the department are widespread in India and abroad, occupying high positions in their respective fields. The Department has an intake of 120 students per year under UG Course and 100 students per year under PG Courses.

About the Course

This course will be conducted under Accelerate Vigyan scheme intended towards "**Abhyaas**" mission to understand data collection and extraction of different traffic and transportation facilities and the practical applications of the same for young and passionate researchers. Data collection is necessary for designing traffic facilities, analyzing current traffic related issues, developing, and implementing possible solutions to the existing problems. All types of traffic engineering studies require field data, and it can be collected and extracted using various methods. Trivial knowledge of data collection and extraction of different traffic facilities is of utmost importance in today's emerging India. **The course shall be conducted in physical mode. No participation fee will be charged from the participants.**

Target Participants

Motivated Doctoral & Master's students from Tier-I, Tier-II & Tier-III level institutes as defined under the Scheme 'Accelerate Vigyan' by DST-SERB.

Workshop Coordinators / Event Organizers

Dr. Arpita Saha.
Assistant Professor,
Department of Civil Engineering,
Visvesvaraya National Institute of Technology,
Nagpur- 440 010
Ph: 0712 - 2802258
Email: arpitasaha@civ.vnit.ac.in

Dr. Udit Jain
Assistant Professor,
Department of Civil Engineering,
Visvesvaraya National Institute of Technology,
Nagpur- 440 010
Ph: 0712 – 2802259
Email: uditjain@civ.vnit.ac.in

Support Team

- Mr. Sandeep Manthirikul, VNIT Nagpur
- Ms. Priyanka Diwakar, VNIT Nagpur

Programme Schedule

Topics	Speaker	Topics	Speaker
Introduction to Traffic Data & Conventional Techniques of Traffic Data Collection	Dr. Satish Chandra, IIT Roorkee	Un Signalized Intersection Traffic Data Collection & Extraction Techniques	Dr. Mithun Mohan, NITK Surathkal
Pedestrian & Mid-Block Traffic Data Collection and Extraction Techniques	Dr. Shriniwas S. Arkatkar, SVNIT Surat	Application of ITS Data I - Vehicle Trajectory Data and its New-age Mobility Applications	Dr. Caleb Ronald, RBEI
Traffic Data Collection and Extraction Using Drone Technology	Dr. Ashish Dhamaniya, SVNIT Surat	Application of ITS Data II – Surrogate Safety Measures for Conflicting Pedestrian/Vehicle Movements	Dr. Ankit Kathuria, IIT Jammu
Intelligent Transportation System approach to road accident data collection and Extraction	Dr. Caleb Ronald, RBEI	Application of ITS Data III – Use of Image Processing Techniques for Traffic Data Collection	Dr. Avijit Maji, IIT Bombay
Driver Behavior Data Collection and Extraction using Driving Simulator	Dr. Pushpa Choudhary, IIT Roorkee	Traffic Data Simulation using Software I – Traffic Simulation at Mid-block & Intersections using VISSIM	Mr. Manraj Bains, Unitrans
Signalized Intersection Traffic Data Collection & Extraction Techniques	Dr. Arpita Saha, VNIT Nagpur	Traffic Data Simulation using Software II – Pedestrian Movement Simulation using VISWALK	Mr. Manraj Bains, Unitrans

Objective of the Course

- ✓ As desired by DST-SERB **KARYASHALA**', the course is intended towards "Abhyaas" mission.
- ✓ This course aims to introduce students to the importance of traffic data collection.
- ✓ By going through this course, students are likely to be able to collect and extract traffic data using traditional and advanced automated methods for their research work in the field of Traffic Engineering.
- ✓ This course exposes students to the complex scenarios involved in traffic data analysis and equips them with the tools to handle and utilize the most out of their traffic data for their research.

Key Features

- ✓ Overview of traffic data collection.
- ✓ Applications of traffic data.
- ✓ Traditional techniques of traffic, accident, and pedestrian data collection.
- ✓ Intelligent Transportation System based traffic, accident, and pedestrian data collection techniques.
- ✓ Conventional data extraction techniques of different traffic and pedestrian facilities.
- ✓ Automated Traffic Data Extraction Techniques.
- ✓ Drone data collection and Extraction Techniques.
- ✓ Simulation of traffic and pedestrian data.
- ✓ Use and application of software for vehicular and pedestrian traffic simulation.

Registration & Guidelines

- **The course will be completely free of cost for the shortlisted participants.**
- The participants will be limited to 100 candidates (as per SERB norms). The applicants shall produce an endorsement letter from their Head of the department indicating their enrolment with the institute and "No Objection Certificate (NOC)" for permitting to undergo training in the workshop, if selected.
- VNIT reserves the right to devise a well-defined shortlisting criteria for selection of candidates based on the basic eligibility criteria laid out by SERB and as per formulated guidelines for this workshop.
- Please fill Google form for Registration: https://forms.gle/CcSwaiC2GzUE3UVN9

SCAN ME

Scan to Register

Course Assessment & Feedback

Active participation in lectures & discussion/interaction sessions along with a basic level evaluation shall fetch the participant the KARYASHALA Course Completion Certificate.

As per SERB guidelines, mandatory anonymous course feedback shall be taken in the stipulated format.

Important Dates

Last date for registration : 25-06-2022
Notification to selected participants : 27-06-2022