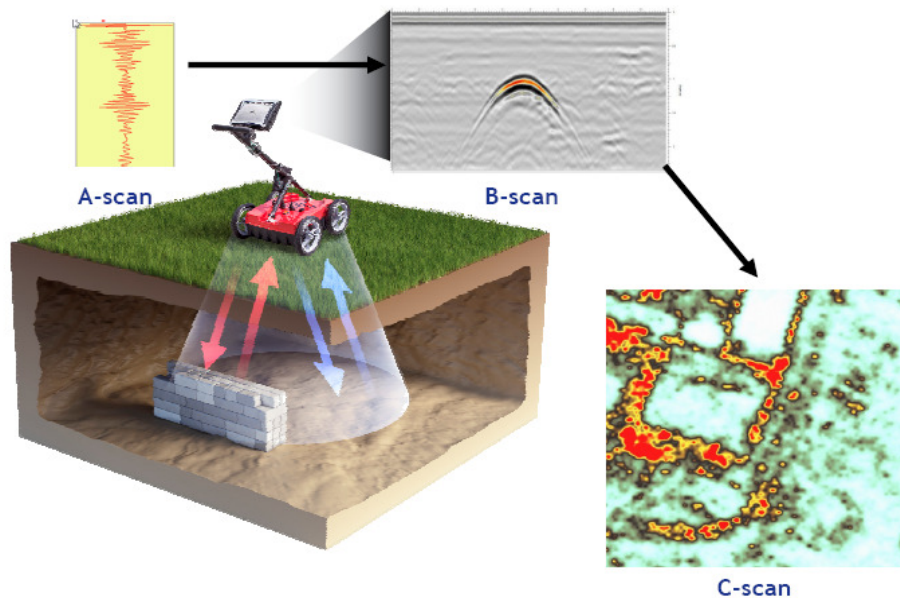


Training Workshop:
Ground Penetrating Radar- Data Acquisition,
Processing & Advanced 3D Processing
(Including Training on GPR-SLICE)

12 – 13 August 2015, Hotel The Hans, New Delhi, India



Introduction:

Ground Penetrating Radar, also known as GPR, Georadar, Subsurface Interface Radar, Geoprobng Radar, is a totally non-destructive technique to produce a cross section profile of subsurface without any drilling, trenching or ground disturbances. Ground penetrating radar (GPR) profiles are used for evaluating the location and depth of buried objects and to investigate the presence and continuity of natural subsurface conditions and features.

This training workshop is designed to train participants on many advanced features for processing of radar data. The course is expedited using real world examples and specially chosen project folders in which a variety of advanced topics are covered by example. **The highlight of workshop is inclusion of training on GPR-SLICE to create 3D volumes and create time/ depth slices. The course also covers training on GPR-SIM to simulate response of various subsurface features.**

Objectives:

The incorrect and inappropriate use of GPR has over the years caused a great deal of damage to its reputation as a bona fide and reliable technology. The objective of advanced course on GPR is to make the participants familiar with advanced data processing and interpretation techniques to derive maximum amount of information from data collected. After completing this course, user should be able to collect the GPR data, carry out basic as well as advanced processing of data and interpret the results in a range of application areas. **Thorough training will be provided on use of GPR-SLICE software to create 3D volumes and depth slices. GPR-SIM training will enhance interpretation capabilities of users.**

Who Should Attend:

This 02 day training program will help professionals, engineers and geo-scientists dealing with shallow sub-surface investigation. The program is designed for new as well as experienced users of GPR equipment. The program will also help project owners hiring services of GPR surveys, enabling them understand capabilities and limitations of the method and derive maximum return on their investment on a GPR survey.

Benefits:

The program will enable the participant to derive maximum information from GPR data and help them design the right GPR investigation program for a particular project requirement. It will also enable them to choose the right combination of antennas for varied geological conditions and resolution requirements. **3D data visualization and time/ depth slice generation is critical in certain projects, and user will receive complete training on this aspect. GPR-SIM training will enable participants simulate response of various buried features and thus enhancing their interpretation accuracy.**

Key Elements:

- Introduction to Ground Penetrating Radar Method
- Field Procedure and Approaches for GPR Surveys
- Antenna selection, frequency v/s depth
- Various Antenna Configurations in various applications
- Data acquisition, data handling
- Data Processing
 - High pass, low pass filters
 - Ormsy bandpass filtering
 - Notch Filters
 - AGC, Move Out Correction, Terrain Correction
 - Migration, energy envelopes
 - Time-depth conversion
- **3D & time/ depth slice generation using GPR-SLICE**
- **GPR response simulation using GPR-SIM**

Facilitator:

Dr. Sanjay Rana is a geophysicist working in the field of engineering geophysics for last 25 years. Dr Rana passed out in 1990 from University of Roorkee, now IIT Roorkee, in M Tech (Applied Geophysics), as Gold Medallist. He also holds MBA and Doctorate qualifications.

He is member of various working committees for development of Code of Practices and Standards. He is member of International Group of Geophysicists working on development of GPR technology, including Modelling, Spectrum Analysis and Data Libraries for Signature Modelling. He has conducted 58 training programs on GPR for various organizations in different countries. He has Experience of working with most of the available GPR models like GSSI, Mala, Sensor & Software, Pipe Hawk, and Zond. His geographic GPR experience includes India, Canada, Singapore, Saudi Arabia, Oman, Afghanistan and Bahrain. Till date he has conducted more than 500 GPR projects for various applications. He has used Ground Penetrating Radar for a wide range of applications including utility mapping, archaeology, cavity detection, concrete scanning, pavement analysis, vadose zone study, water resources, landmine detection, contaminant study etc.

Venue:

Hotel The Hans , 15 Barakhamba Road, Connaught Place, New Delhi-110001

Fee Structure:

Rs 14,000 + Service Tax or USD 400 per participant, inclusive of training notes, morning & evening tea & Lunch. A discount of 20% for students and 10% discount on group booking of 04 or more participants from a single organization is applicable.

Registration Process:

Prior registration is must by sending email to info@aquafoundation.in. Fee to be paid through DD in favour of Aqua Foundation payable at Delhi. It can also be deposited in following account:

Name of the Bank: ICICI Bank Ltd

Address of the Bank: ICICI Bank, 9 A, Phelps Building, Connaught Place, New Delhi- 110001

Name of the Account holder: AQUA FOUNDATION

A/C no : 000701260885; **IFSC Code:** ICIC0000007; **Swift code:** ICICI NBB CTS

**Contact Details: Secretary General, Aqua Foundation, C-24, 1st Floor, Soami Nagar (North), Panchsheel Enclave, New Delhi 110 017 (India), Mobile: +91-9818568825
info@aquafoundation.in**